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# International Entrepreneurial Orientation: Conceptual Considerations, Research Themes, Measurement Issues, and Future Research Directions

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**The amount of research conducted on the topic of international entrepreneurial orientation (IEO) has grown exponentially in recent years, thus inviting an analysis of the scholarly conversations taking place. This paper is a review and commentary on how the construct of entrepreneurial orientation (EO) has been leveraged within the international entrepreneurship literature. The possible distinctiveness of the EO and IEO constructs are considered, and the major themes of IEO research are summarized. Several measurement-related issues particularly pertinent to the assessment of EO as a generalizable/universalistic phenomenon are considered. The paper concludes with the identification of research foci whose pursuit promises to advance IEO knowledge along productive paths.**

## Introduction

The construct and manifestations of entrepreneurial orientation (EO) have garnered considerable attention from researchers over the years, prompting a recent meta-analysis (Rauch, Wiklund, Lumpkin, & Frese, 2009), literature reviews (e.g., Edmond & Wiklund, 2010; Wales, Gupta, & Mousa, 2011), and an *Entrepreneurship Theory and Practice* special issue (Covin & Lumpkin, 2011) on the topic. Although the concept of

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*Submitted to the Entrepreneurship Theory and Practice Special Issue, High Potential Concepts, Phenomena, and Theories in International Entrepreneurship Research*

entrepreneurship as a firm-level phenomenon—that is, EO—has been variously depicted in the academic literature, most scholars (see the reviews of Basso, Fayolle, & Bouchard, 2009; Edmond & Wiklund) agree that the interest in EO can be traced to the pioneering and foundational writings of Mintzberg (1973), Khandwalla (1976/1977), and Miller (1983). Thus, the EO conversation has been occurring within the scholarly literature for well over three decades. As noted by Covin and Lumpkin, the number of published research papers on the topic of EO now exceeds that of papers on the broader topic of corporate entrepreneurship *per se*.

A more recently emerging focus of entrepreneurship scholars' attention is the domain of international entrepreneurship (IE). The distinctiveness of IE within the broader domain of entrepreneurship theory and research was first acknowledged in the late 1980s (McDougall, 1989), and the seminal article of Oviatt and McDougall (1994) is often credited (see Autio, 2005; Keupp & Gassmann, 2009) with spurring research interest in the topic. The relevance of the EO concept to theory and practice in the IE domain has been recognized by IE scholars from the earliest years of the field's development. Research by Knight (1997), for example, explored whether EO is manifested and can be measured similarly across firms operating in different cultures. Notably, the phenomena typically associated with EO—including risk taking, proactiveness, and innovative behaviors—have been incorporated into the well-cited definition of IE proposed by McDougall and Oviatt (2000, p. 903): "... a combination of innovative, proactive and risk-seeking behaviour that crosses national borders and is intended to create value in organizations." While more recent definitions of the IE concept focus less explicitly on EO's elements and more on international opportunities and the actors who recognize and exploit them (see Oviatt, Maksimov, & McDougall, 2011), the centrality of EO to the exhibition of IE is, nonetheless, widely acknowledged (see, for example, Joardar & Wu, 2011; Jones & Coviello, 2005; Weerawardena, Mort, Liesch, & Knight, 2007). Moreover, the scholarly conversations pertaining to EO—or international entrepreneurial orientation (IEO)—within the domain of IE research are many and varied.

Given the rapid evolution of the field of IE and the diversity of conversations taking place on the topic of EO/IEO, we believe it is time to review how the concept of EO has been embraced within the IE literature and offer suggestions for advancing knowledge on this topic. Toward these ends, the current paper explores the essential nature of the EO construct as it has been understood and employed by IE scholars, including the matter of whether it is more meaningful to conceive of IEO as a construct distinct from EO or, alternatively, to conceive of international as a context in which EO can be manifested. The need for thoughtful discourse on two additional conceptual matters involving EO is directly suggested by writings in the IE domain. These matters, discussed in the next section, include the relationship of new entry to EO/IEO and the level of analysis to which the concept of EO/IEO applies. A review section then summarizes seminal as well as more recent studies within the two major themes of IEO research, namely international performance and culture. The third section of this paper takes a closer look at measurement issues relevant to EO/IEO research, including scale validity and the dimensionality of IEO, tautological concerns in IEO research, and the value of conceptually "mixed" EO/IEO measures—i.e., ones that agglomerate diverse indicators of the phenomena. The final section of this paper proposes that several topic areas be explored in future IEO studies, including the various forms in which new entry can occur, the drivers of new entry as culture-specific phenomena, the unrecognized elements of EO/IEO that ought to be represented in future measures and conceptual models of the phenomena, the promise of EO/IEO for understanding new international ventures, and theories and methods pertinent to EO/IEO knowledge advancement.

## IEO: Conceptual Considerations

### Definitional Matters: IE, EO, and IEO

IE “is the discovery, enactment, evaluation, and exploitation of opportunities—across national borders—to create future goods and services” (Oviatt & McDougall, 2005, p. 540). IE research can be divided into two streams (see, for example, Dimitratos & Jones, 2005; Lu & Beamish, 2001; Williams & Lee, 2009): that focused on international new ventures (INVs) or “born globals” and that focused on the IE activities of established companies. As noted in the IE literature review by Keupp and Gassmann (2009), the majority of empirical IE research has focused on small new ventures. As will be discussed later, the concept of EO is relevant to both streams.

Relative to IE, EO is less consistently defined within the literature. Most scholars view EO as a phenomenon associated with corporate entrepreneurship. As observed by Antoncic and Hisrich (2001, 2003), the corporate entrepreneurship construct has commonly been conceptualized as either a set of firm activities that includes new business/venturing activity, innovativeness, and self/strategic renewal (as initially suggested by Guth and Ginsberg [1990] and exemplified in Zahra’s [1991, 1993] research) or as a firm’s EO (as initially suggested by Miller [1983] and exemplified in Covin and Slevin’s [1989] and Lumpkin and Dess’s [1996] research). As originally proposed, the concept of EO was advanced as an answer to the question of what it means, in a practical or behavioral sense, for a firm to “be entrepreneurial” (Miller, 2011).

The two dominant perspectives on EO view the concept either as a composite construct—one in which EO is represented by the qualities that risk taking, innovative, and proactive behaviors have in common (see Covin & Slevin, 1989; Miller, 1983)—or as a multidimensional construct in which risk taking, innovativeness, proactiveness, competitive aggressiveness, and autonomy are treated as independent behavioral dimensions that define EO’s conceptual space (see Lumpkin & Dess, 1996). As observed by Covin and Lumpkin (2011), the composite and multidimensional views of EO represent distinct constructs rather than competing perspectives on the same construct.

Notably, both EO constructs are implicit in definitions of IEO offered by IE scholars. According to Freeman and Cavusgil (2007, p. 3), “‘International entrepreneurial orientation’ refers to the behavior elements of a global orientation and captures top management’s propensity for risk taking, innovativeness, and proactiveness.” Thus, Freeman and Cavusgil implicitly adopt the three-element conceptualization of EO, as originally proposed by Miller (1983), in their definition of IEO. By contrast, Sundqvist, Kylaheiko, and Kuivalainen (2012, p. 205) define IEO as “a set of behaviors associated with the potential creation of value, which manifest themselves as proactive and innovative methods, risk-taking activity, autonomous actions, and an emphasis on outperforming rivals, all variously aimed at discovering, enacting, evaluating, and exploiting opportunities across national borders.” This definition of IEO is consistent with the five-dimension conceptualization of EO originally proposed by Lumpkin and Dess (1996). To date, as reviewed in a later section, empirical IEO research has largely employed IEO measures that assess only the three elements of risk taking, innovativeness, and proactiveness.

The preceding discussion begs the question of whether EO and IEO are treated as distinct constructs within the IE literature or, alternatively, whether “international” is simply a context in which EO research has been pursued. Inasmuch as researchers design and employ measures to be consistent with their conceptualizations of constructs, it is useful to answer this question by reviewing how EO has been assessed in IE studies. While EO has occasionally been assessed using objective indicators (e.g., Miller & Le

Breton-Miller, 2011; Williams & Lee, 2009), empirical research on the topic of IEO commonly explores the relationship between EO as operationalized using the Miller/Covin and Slevin (1989) scale (M/C&S scale, see Appendix),<sup>1</sup> or slight variations thereon, and various internationalization (i.e., international new entry) outcomes (e.g., Frishammar & Andersson, 2009). Typical internationalization outcomes observed in research include the extent or degree of internationalization, the breadth or scope of internationalization, and the speed of internationalization (Zahra & George, 2002). Notably, much of this IEO research is simply EO research that employs an internationalization-related dependent variable (e.g., Dimitratos, Lioukas, & Carter, 2004; Jantunen, Puumalainen, Saarenketo, & Kyläheiko, 2005; Knight, 2001; Kuivalainen, Sundqvist, Puumalainen, & Cadogan, 2004; Mostafa, Wheeler, & Jones, 2006; Zhang, Ma, & Wang, 2012). As such, in this research, IEO is not treated as a construct distinct from EO. Rather, “international” is simply a context in which the EO phenomenon is explored.

By contrast, other IEO research employs EO scale items or instructions that explicitly mention “export markets” (e.g., Boso, Cadogan, & Story, 2012; Ibeh, 2003), “in this foreign country” or “in the marketplace of this foreign country” (Dimitratos, Voudouris, Plakoyiannaki, & Nakos, 2012), “international operations” (Zahra & Garvis, 2000), or international verbiage of various specific types (e.g., abroad, international markets, international business, international decision-making situations) (Knight & Cavusgil, 2004, 2005; Kuivalainen, Sundqvist, & Servais, 2007; Sundqvist et al., 2012; Zhang, Sarker, & Sarker, 2012; Zhou, 2007). In this latter body of research, IEO is measured as a distinct “international” construct, albeit one reflected in the same dimensions typically associated with the more general EO construct (i.e., innovativeness, risk taking, proactiveness, competitive aggressiveness, and/or autonomy). As such, the IEO construct in this body of IE research illustrates the phenomenon of “concept traveling” (see George & Marino, 2011). IEO is, in essence, a subcategory of EO that shares the core elements of the broader EO construct yet includes an additional distinguishing element—namely, an “international” emphasis.

In summary, IEO research includes both studies that employ broad or traditional EO measures (like the M/C&S scale) in an international context as well as studies in which IEO is conceptualized and operationalized as a subcategory of the EO construct. Neither body of research is inherently superior to the other as far as the validity of the research designs is concerned. Moreover, it is important for scholars to recognize the differences in what is being assessed in studies that employ EO versus IEO measures and avoid drawing inappropriate comparisons and generalizations.

## **IEO and New Entry**

From both theoretical and methodological perspectives, one of the most—if not *the* most—important considerations in the overall EO conversation is how the dynamic of new entry is thought to relate to the EO phenomenon. Still, aside from Lumpkin and Dess’s (1996) definition of EO—that is, “EO refers to the processes, practices, and decision-making activities that lead to new entry” (p. 136)—and Basso et al.’s (2009) commentary on how Lumpkin and Dess’s definition changed the EO conversation, little

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1. This 9-item scale includes two items originally proposed by Khandwalla (1976/1977). We acknowledge and are appreciative of his foundational contributions to the EO construct and this measure. The label “Miller/Covin and Slevin (1989) scale” is adopted here simply because this is the label most commonly employed throughout the EO literature.

has been done in the interest of clarifying the relationship between new entry and EO. Conceptual ambiguities surrounding this matter are particularly evident in the IE/IEO literatures. Relevant questions include: “What is new entry?” and “Is EO an antecedent to new entry, or does EO imply/include the dynamic of new entry?”

Regarding the first question—what is new entry?—the new entry dynamic is described by Lumpkin and Dess (1996, p. 136) as “the essential act of entrepreneurship.” This perspective is consistent with the early entrepreneurship-focused writings of Schumpeter (1942) as well as with the observation that “emergence-related” activities, such as organization formation and innovation, are core to the entrepreneurship construct and differentiate between what is entrepreneurial and what is not (Covin & Miles, 1999; Gartner, Bird, & Starr, 1992; Stevenson & Gumpert, 1985). As described by Lumpkin and Dess (p. 136), “[n]ew entry can be accomplished by entering new or established markets with new or established goods and services.” As such, new entry is evidenced through new market development activity, new product development activity, or new product-market development activity (aka, new business activity or diversification), as traditionally defined in the strategic management literature (see, for example, Ansoff, 1965).

The preceding description of what new entry implies is noteworthy for two reasons. First, new entry into international markets has long been discussed as an inherently entrepreneurial act (e.g., Ripollés-Meliá, Menguzzato-Boulard, & Sánchez-Peinado, 2007; Thorelli, 1987). Indeed, Miller (2011, p. 877) recently wrote that globalization “is all about ‘new entry’—the content of entrepreneurship.” Perhaps because IE, by common definition, involves entry into new, international markets, the founders of INVs are often discussed as having IEOs. That is, they can be understood as possessing an EO by dint of the fact that they have pursued entry into international markets. Thus, within the INV context, IEO is often discussed as an attribute of the international entrepreneur that drives him or her to engage in international new entry activity. However, an IEO is not commonly (if ever) measured as an individual attribute *per se* that drives international new entry. Rather, the presence of an IEO is simply inferred from and correspondingly reduced to the simple act of new entry. That is, because international new entry occurred, an EO must have existed to drive that act. Thus, IEO is a simple dichotomous variable at the level of the individual entrepreneur, and not inherently the continuous variable, it is more commonly understood to be when viewed as a firm- or strategic business unit (SBU)-level phenomenon.

A second reason why the aforementioned description of new entry proposed by Lumpkin and Dess (1996) is noteworthy relates to how scholars think of EO, particularly with regard to how innovativeness is conceptualized and measured as an element of EO. Innovativeness is a component of both the composite and multidimensional conceptualizations of the EO construct. Whereas innovativeness is appropriately conceptualized as an *ability* to produce innovations, the strength of this ability is typically assessed through the existence of particular innovation process outcomes, such as new product introductions. Indeed, as shown most explicitly in the second item (EO2) of the M/C&S scale (see Appendix), the introduction of new products by a firm is used as an indicator of its innovativeness. The key point here is that these new product introductions *are* acts of new entry, as defined by Lumpkin and Dess. Thus, while Lumpkin and Dess argue that EO *leads to* new entry, thus implying that new entry *per se* is not included within the EO construct,<sup>2</sup> the most widely employed EO scale—the M/C&S scale—includes new entry in the operationalization of the EO construct.

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2. A criticism of Lumpkin and Dess’s (1996) conceptualization of EO is that it includes dimensions that are not generally recognized as inherent to entrepreneurship—that is, inherent to “being entrepreneurial.”



As a practical matter, we argue that the assessment of acts of new entry as indicators (versus consequences/effects) of EO is not a problem. This is because, consistent with the behavioral approach to entrepreneurship (Gartner, 1988), entrepreneurial entities (individuals, firms, or other units of analysis) can only truly be known as such if they engage in entrepreneurial acts; that is, acts of new entry. This is not meant to imply that EO can or should be reduced or equated to new entry as a conceptual matter. There is merit, as we will discuss in a later section, in conceptualizing and operationalizing EO as a broadly manifested phenomenon revealed through *both* the processes that lead to new entry and the acts of new entry *per se*. The value of assessing both aspects of EO is directly suggested by IEO research wherein it has been suggested that the processes that lead to new entry may be culture-specific. Thus, in response to the question posed earlier—“Is EO an antecedent to new entry, or does EO imply/include the dynamic of new entry?”—there are, we believe, compelling conceptual and practical reasons to link leading processes to new entry acts within the EO construct. New entry and EO are inseparable constructs in a practical sense, with new entry being implied by EO and potentially being driven by different leading processes in cross-cultural contexts.

The preceding discussion highlights why it would be counterproductive to equate EO to new entry, and why the processes that lead to new entry are useful to consider and assess as part of the EO construct. Additionally, the preceding discussion recognizes that the new entry in an IEO sense implies new *market* entry. This is important to acknowledge because, as mentioned previously, the form of new entry assessed in the M/C&S scale is new *product* entry. In fact, new market entry is not inherent to any item of this scale. As such, while IE scholars have embraced the EO concept, recognizing its importance in explaining new market entry, the traditional operationalization of the EO construct is focused on a different form of new entry. Future research possibilities following from this distinction are discussed later.

## IEO as an Individual-Level Versus Firm-Level Construct

In their review of the INV literature, Aspelund, Madsen, and Moen (2007, p. 1435) observe “[m]ost authors mention international entrepreneurial orientation as being a decisive factor for the establishment of INVs,” where INVs are defined as business organizations that “from inception, [seek] to derive significant competitive advantage from the use of resources and the sale of outputs in multiple countries” (Oviatt & McDougall, 1994, p. 49). Notably, the espoused unit of analysis for the IEO construct within much of the INV literature is not the firm or SBU but, rather, the individual founding entrepreneur or the founding entrepreneurial team. The founders or founding

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Specifically, the inclusion of the autonomy and competitive aggressiveness dimensions to those previously recognized by Miller (1983) and Covin and Slevin (1989) as common to entrepreneurial firms—i.e., risk taking, innovativeness, and proactiveness—has been questioned in literature (see, for example, Morris, Coombes, Allen, & Schindehutte, 2007). Two points on this matter are noteworthy. First, Lumpkin and Dess’s (1996) conceptualization of EO is, in fact, consistent with their theoretical definition of the construct. That is, while it may be true that autonomy and competitive aggressiveness are not generally recognized as inherent to “being entrepreneurial,” these factors can indeed lead to new entry, which is how Lumpkin and Dess (1996) define the EO construct (i.e., “EO refers to the processes, practices, and decision-making activities that lead to new entry” [p. 136]). Second, if one adopts Lumpkin and Dess’s (1996) definition of EO as, in essence, factors that are *antecedents to new entry*, then the list of EO’s possible dimensions could be greatly expanded by scholars seeking to more comprehensively operationalize the construct. Why not also include, for example, dimensions that relate to prior learning or resource assembly? The problem here, of course, would be that the identification of additional antecedents to new entry changes what EO means in a practical sense.

teams of INVs are often assumed to possess knowledge, capabilities, and preferences *represented by their IEOs* that lead them to launch INVs. As such, within the INV literature, IEO is often understood as a nonbehavioral factor in that the IEO precedes actual entrepreneurial behavior; that is, IEO represents a disposition toward entrepreneurial behavior—the act of international new entry—rather than entrepreneurial behavior *per se*.

Much of the IE literature which contends that IEO can be conceptualized as an individual-level construct is ambiguous regarding whether IEO is truly being conceptualized and assessed as such. For example, Joardar and Wu (2011) are among those writing in the IE literature who argue that IEO can be viewed as an individual-level phenomenon, but they argue this point based on their observation that “the entrepreneurs’ values, tendencies, and orientation, will be embedded in the entrepreneurial orientation of *the organization* [italics added].” Thus, Joardar and Wu are, in fact, focused on the organization as the entity exhibiting an IEO; they are simply relying on upper-echelons logic (Hambrick & Mason, 1984) to argue that INVs are reflections of their founding entrepreneurs. Joardar and Wu further observe that the same dimensions of EO commonly discussed at the firm level—namely, risk taking, innovativeness, and proactiveness—are relevant and essential to the concept of EO as an individual-level phenomenon. Weaver, Dickson, Gibson, and Turner (2002) also argue that EO can be conceptualized as an individual-level phenomenon within the context of IE research. Weaver et al. used the (unmodified) M/C&S scale as an indicator of the EO of the sampled firms’ *key managers*, defined as the firms’ owners or general managers. Their rationale, again grounded in upper-echelons logic, was as follows: “We base this action on the argument that for firms of the size included in this research [i.e., 6–500 employees], the key manager acts as the brain of the organization and is the key determinant of the strategic posture of the firm” (Miller, 1983, p. 94).

Notably, whereas both studies mentioned in the preceding paragraph are positioned by their authors as research on individual-level IEO, it is the organization that is identified—conceptually, empirically, or both—as the entrepreneurial actor.<sup>3</sup> The “entrepreneur” or “key manager” is simply the reason why the organization behaves entrepreneurially. In short, IEO is *not* consistently depicted or assessed in these studies as an attribute of the individual.

It is meaningful to ask whether there is merit in trying to assess IEO as an individual-level phenomenon. Conceptually, the notion that international entrepreneurs possess an IEO is well accepted. Weerawardena et al. (2007, p. 299), for example, note that “[i]n born global firms, we conceptualize that the owner-manager profile is characterized by an international entrepreneurial orientation, a geocentric or global mindset, significant prior international experience, and a learning orientation.” Similarly, Thai and Chong (2008, pp. 77–78) observe that “[m]anagerial attitude, vision, and orientation are . . . critical in the firm’s decision to internationalize.” However, as demonstrated earlier, the attribution of an IEO to international entrepreneurs may simply occur because those individuals have founded firms that have engaged in international new entry. That is, the presence of the

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3. Curiously, Keupp and Gassmann (2009, pp. 613–614) conclude that in the IE literature “the construct of entrepreneurial orientation is used a lot to analyze performance differences among individual entrepreneurs during the early stages of venturing, it is restricted almost exclusively to analyzing individuals on a micro level of analysis (e.g., Lumpkin & Dess, 1996; Wiklund & Shepherd, 2003).” However, the current authors were unable to identify a single study published in the IE literature, including the studies on which Keupp and Gassmann based their aforementioned conclusion, in which EO was operationalized as an individual-level phenomenon.

new entry act is taken as evidence that the international entrepreneur possesses an IEO (and IEO need not be directly assessed, it can be inferred to exist). Moreover, the preceding discussion demonstrates that even when IEO is described in empirical research as an individual-level construct, it may be assessed at the firm level.

An answer to the question of whether there is merit in trying to assess IEO as an individual-level phenomenon might be arrived at through asking what an individual-level IEO construct would look like—that is, how might it be conceptually and operationally defined? To define it in manners other than those found in the firm-level conversation—specifically, as represented by the composite construct initially proposed by Miller (1983) and Covin and Slevin (1989) or the multidimensional construct initially proposed by Lumpkin and Dess (1996)—would be to engage in questionable concept stretching (see George & Marino, 2011); individuals are not the class of entity for which the construct of EO was originally proposed. Moreover, if one assumes, consistent with the aforementioned arguments of Joardar and Wu (2011), that risk taking, proactiveness, and innovativeness are all essential and relevant elements of EO at the individual level (just as they are taken to be at the firm level), then one might ask what indicators of those elements should be at the individual level. A problem here is that there may be few obvious and meaningful indicators of, for example, an individual's innovativeness or proactiveness that link directly to new entry as is necessary to claim the presence of an EO. This reality is presumably why IE research that has occasionally claimed or attempted to measure IEO as an individual-level attribute has, in fact, employed more traditional EO indicators reflecting firm-level behavior and innovation outcomes.

Overall, while IEO is often discussed within the IE literature as a trait or attribute of individual international entrepreneurs, there is little, if any, evidence that it is, can, or should be measured as such. The IEO construct *is* applicable and relevant to international entrepreneurs, but only in the sense that *their ventures* can exhibit varying degrees of this attribute as a reflection of the entrepreneurs' behavioral dispositions. In the final analysis, the exhibition of new international market entry, as is necessary to claim the existence of an IEO, is an organizational outcome, not a personal characteristic.

## Dominant Themes in IEO Research

Research on IEO has greatly expanded in recent years and covers a wide variety of specific topics.<sup>4</sup> As suggested by Slevin and Terjesen (2011), most research in the area can be sorted into three broad and overlapping categories or themes: EO/IEO and international performance, EO/IEO and culture, and measurement issues involving EO/IEO. The following subsections summarize many of the seminal as well as more recent studies relating to the first two themes. In the interests of clarity, if the study being summarized employed a traditional EO measure, like the M/C&S scale—not an EO scale modified using international verbiage—the acronym EO will be used in describing the study and its measure. If the study in question employed an EO scale modified using international verbiage, that scale will be referred to as an IEO measure. Given the broad scope and theoretical significance of issues suggested in the EO/IEO “measurement” studies, a separate section of this manuscript is dedicated to coverage of this theme. The following is not offered as

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4. A computer database search conducted on September 19, 2012 using *Google Scholar* revealed that 217 writings (articles, working papers, book chapters, etc.) have used the exact phrase “international entrepreneurial orientation,” and 147 of these have appeared since 2008.



a comprehensive review.<sup>5</sup> Still, we believe that it fairly represents the conversations taking place within the identified research themes.

## **EO/IEO and International Performance**

Much of the research that links EO/IEO and international performance has been conducted on samples including, or solely limited to, Chinese firms. In general, research based on these samples has revealed strong, positive relationships between EO/IEO and various indicators of international performance. An example of such research is Liu, Li, and Xue's (2011) study of ownership structure, strategic orientations, and internationalization outcomes among 607 Chinese firms. Among other findings, Liu et al. observed that EO is positively associated with internationalization, operationally defined as the extent to which the firm aggressively seeks foreign markets, sells its products or services in foreign markets, and enters into overseas locations via foreign direct investment. In other research based on Chinese firms—117 small- and medium-sized enterprises (SMEs)—Zhang, Ma, et al. (2012) explored relationships between the individual EO dimensions of innovativeness, proactiveness, and risk taking and two dimensions of degree of internationalization: multinationality (international sales as a percentage of total sales) and country scope (number of foreign countries in which the SME has operations and the cultural diversity of the SME's overseas markets). Results indicated that of the three EO dimensions, proactiveness is most consistently and positively associated with the internationalization performance criteria, while innovativeness exhibits no significant association with these criteria. Li, Wei, and Liu's (2010) research on 140 Chinese "vendor" firms revealed that EO positively affects knowledge acquisition from foreign outsourcers, and this knowledge acquisition, in turn, positively affects overall (i.e., not international-specific) firm performance, as assessed through various comparisons with competitors. Zhang, Tansuhaj, and McCullough's (2009) research based on 155 Chinese manufacturing firms reported that various dimensions of international entrepreneurial capability, including an international innovative and risk-taking capability, are positively associated with subjective financial and strategic indicators of global performance for both traditional exporting firms and born-global INVs. In a study of 775 Chinese firms, Zhou (2007) explored the relationship between the dimensions of what he termed "international entrepreneurial proclivity," measured using innovativeness, proactiveness, and risk-taking items modified (from the M/C&S scale) using international verbiage, and the pace and performance of early internationalization. His results indicate that international entrepreneurial proclivity (i.e., the three EO dimensions) positively influences foreign market knowledge acquisition, and that for early internationalizing firms, entrepreneurial proclivity affects the speed of born-global internationalization through foreign market knowledge. Finally, Zhang, Sarker, et al. (2012) investigated relationships between IEO, information technology (IT) capability, and international performance in samples of "born-global" SMEs in both China ( $n = 81$ ) and the United States ( $n = 66$ ). Their results suggest that IT capability mediates the relationship between IEO and international performance, the latter operationalized using subjective indicators of both financial and strategic performance. No differences were found in the pattern of results for the Chinese and U.S. subsamples.

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5. Several IEO studies identified through *Google Scholar* are written in languages other than English and French and are, as such, uninterpretable by the authors. Additionally, access rights of the authors' universities restricted our review to a subset of the written materials identified through *Google Scholar*.

In other EO/IEO–international performance research, Ripollés-Meliá et al. (2007) reported in their sample of 155 Spanish firms that EO levels are significantly higher among firms that internationalized than among their noninternationalized counterparts, and that EO is positively related to international scope, measured as number of countries in which the firm operates, and international sales percentage. EO was also found to positively affect the speed with which firms internationalize subsequent to their founding. Based on a sample of 135 Spanish INVs, Ripollés-Meliá, Blesa, and Monferrer (2012) reported that EO is positively associated with the exhibition of an international market orientation (performance effects were not explored in this particular study). A study by Dimitratos et al. (2004) of the relationship between EO and international performance among 152 Greek firms revealed that EO positively predicts satisfaction of the firm with its operations in a foreign country. Additionally, Dimitratos et al. found that the uncertainty of the firm’s domestic market positively moderates the relationship between EO and the foreign country sales ratio (i.e., sales in foreign country/total enterprise sales).

Research by Kuivalainen et al. (2007) examined the impact of individual IEO dimensions (i.e., EO dimensions whose indicators were modified using “international” verbiage) on a measure of the degree to which the 185 Finnish exporting businesses were “born global,” as indicated by the degree to which the firms were operating in many markets and receiving a large share of their turnover in these markets. Results revealed that competitive aggressiveness is positively associated with the degree of born-globalness; risk taking is negatively associated with the degree of born-globalness, and proactiveness is unrelated to the degree of born-globalness. Additionally, Kuivalainen et al. (2007) found that export performance (measured using sales, profit, and sales efficiency indicators) is significantly higher among “true born-globals” (for which number of markets is large and export turnover—i.e., share of turnover from foreign markets out of total turnover—is high) than among other “born-internationals” (for which number of markets and export turnover may be low). In a study of 268 U.S.-based SMEs, Knight (2000, 2001) reported that IEO is significantly and positively associated with “international preparation,” as indicated through specific actions taken prior to the initiation of international sales, which in turn is positively associated with a subjective measure of firm performance in which respondents compared their firms’ performance with that of competitors.<sup>6</sup> Likewise, in their study of 148 Italian SMEs, Hagen, Zucchella, Cerchiello, and De Giovanni (2012) reported that firms with “entrepreneurial growth-oriented” strategies ( $n = 43$ )—which were operationalized, in part, through their emphasis on IEO<sup>7</sup>—exhibited some of the highest levels of international performance among the sampled firms, as indicated through objective export intensity criteria as well as subjective performance measures.

Sundqvist et al. (2012) categorized the five dimensions of EO, as initially identified by Lumpkin and Dess (1996), into two groupings—(1) the Kirznerian manifestations of entrepreneurially oriented behaviors, which include the competitive aggressiveness and proactiveness dimensions of EO and (2) the Schumpeterian manifestations of entrepreneurially oriented behaviors, which include the innovativeness, risk taking, and

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6. Knight reports slight variations in the wordings and labeling of his IEO and performance measures in these two articles, but his descriptions of his methods suggest that he relied on the same data and sample in both studies.

7. The items used to assess IEO were not agglomerated into an overall scale. Rather, individual items reflecting proactiveness, risk taking, and innovativeness had their highest scores in the cluster of firms characterized as having an “entrepreneurial growth-oriented” strategy.

autonomy dimensions of EO. Based on data collected from 783 Finnish exporting firms, Sundqvist et al. found that the Kirznerian manifestation of entrepreneurially oriented behaviors have stronger positive relationships with the profitability of the firms' exporting operations when markets are relatively stable, whereas Schumpeterian manifestations of entrepreneurially oriented behaviors have stronger positive relationships with the profitability of the firms' exporting operations when markets are more dynamic.

Research by Dimitratos, Plakoyiannaki, Pitsoulaki, and Tüselmann (2010) also assessed the five dimensions of EO, initially identified by Lumpkin and Dess (1996), in their in-depth case studies of 10 Greek SMEs, four of which were categorized as global SMEs ("actively achieves presence in the lead international countries of its industry" [p. 602]) and six of which were categorized as intercontinental SMEs ("absent from the lead international countries of its industry; or, if it has presence in those countries, this is not the end-result of an active stance" [p. 602]). Results indicated that proactiveness *vis-à-vis* opportunities abroad, risk attitude, and innovativeness are more pronounced among global than intercontinental SMEs.

Whereas the aforementioned studies reveal generally strong, positive relationships between EO/IEO and international performance, this has not uniformly been the case. In Jantunen et al.'s (2005) research based on 217 Finnish manufacturing and service firms, EO was not significantly correlated with an objective measure of degree of internationalization (percentage of international sales), although it was significantly correlated with subjective assessments of various aspects of international performance. Jantunen et al. speculated that the absence of a connection between EO and degree of internationalization may be attributable to the fact that the firms in their sample were, on the whole, established (i.e., not new ventures). Likewise, in their study of 513 Finnish SMEs, Kuivalainen et al. (2004) found no significant relationship between EO and most of their observed indicators ( $n = 6$ ) of international performance. Notably, in both of the preceding studies, EO measures were employed whose items deviated significantly from those in the M/C&S scale. In Frishammar and Andersson's (2009) EO research based on 188 Swedish SMEs, proactiveness was found to be positively related to a multi-item subjective scale measuring quantitative indicators of international performance, while risk taking and innovativeness exhibited no relationship with international performance. As reported earlier, Zhang, Ma, et al. (2012) also found particularly strong performance effects for proactiveness, suggesting that early movement (relative to one's competitors) into international markets may be particularly beneficial for SMEs. To summarize the earlier findings, there is an overall tendency for EO and IEO or at least their components, most commonly proactiveness, to have a positive impact on international performance. The studies that fail to confirm this finding are relatively few in number, depart from the M/C&S scale, and pertain mostly to mature firms in mature economies.

To put the collective research results on the EO/IEO–international performance relationship into perspective, it should be noted that Rauch et al.'s (2009) meta-analysis of the EO–firm performance relationship revealed that EO's relationship with performance (not international performance *per se*) "is of similar magnitude in different cultural contexts" (p. 779) (the mean correlation between EO and various performance measures across all studies reviewed is  $r = .24$ ). They conclude "that examining the EO-performance relationship in an additional country is not a sufficient contribution in and of itself. In contrast, additional theoretical cultural hypotheses can be tested profitably. For example, specific EO dimensions (such as competitive aggressiveness) may be less valid in certain cultural contexts that frown upon high competitiveness" (p. 779).

## EO/IEO and Culture

EO and IEO have been theoretically and empirically linked to the construct of culture, operationally defined at different levels of analysis. At the organizational level of analysis, research by Morris, Davis, and Allen (1994) revealed an inverse U-shaped relationship between a firm's EO and the cultural value of individualism–collectivism, with EO being greatest in samples of U.S. and South African companies exhibiting a balanced emphasis on individualism and collectivism. By contrast, Knight and Cavusgil's research (Knight, 2000, 2001; Knight & Cavusgil, 2004) treats IEO as an aspect of organizational culture *per se*. Knight and Cavusgil (2005) argue that IEO is an important organization culture attribute in born-global firms.

At the national level of analysis, a literature review by Hayton, George, and Zahra (2002) firmly establishes that national culture influences individual entrepreneurial behavior. McGrath, MacMillan, and Scheinberg's (1992) study of entrepreneurial behavior in 10 countries reaches this same conclusion. In reporting the results of Global Entrepreneurship Monitor research, Reynolds, Hay, and Camp (1999, p. 43) conclude that "[a]mong many factors that contribute to entrepreneurship, perhaps the most critical is a set of social and cultural values along with the appropriate social, economic and political institutions that legitimize and encourage the pursuit of entrepreneurial opportunity." More pertinent to the current research, Fayolle, Basso, and Bouchard's (2010, p. 717) review of research linking EO to various levels of culture concludes that "national culture can influence entrepreneurial orientation at the region/country level or can orientate attitudes within a firm."

Lee and Peterson (2000) proposed a theoretical model that links dimensions of societal-level culture identified by Hofstede (1980) and Trompenaars (1994) to the exhibition of firm- and individual-level EOs, where the EO is conceptualized in terms of Lumpkin and Dess's (1996) five dimensions. Lee and Peterson postulate that a societal-level culture conducive to EO will exhibit low uncertainty avoidance, low power distance, high masculinity, high individualism, high achievement orientation, and high universalism. Notably, Lee and Peterson discuss a "culture's EO" not as a separate dimension of culture, but as a separate societal-level phenomenon induced by a particular combination of recognized cultural values.

Empirical research on the relationship between EO/IEO and national culture—where culture is actually measured as opposed to simply being recognized as part of the national context in which the EO/IEO research is being conducted—is very limited. This is unfortunate, yet represents a significant research opportunity. The major empirical study in this area is that of Kreiser, Marino, Dickson, and Weaver (2010). These researchers collected data from 1,048 firms in six countries (Australia, Costa Rica, Indonesia, the Netherlands, Norway, and Sweden) on the relationship between the individual EO dimensions of risk taking and proactiveness and Hofstede's (1980) dimensions of societal culture. Findings indicated that uncertainty avoidance and power distance are negatively associated with risk taking and proactiveness, the latter two variables operationalized using items from the M/C&S scale. Individualism was also found to exhibit a negative association with proactiveness.

## EO/IEO and Measurement Issues

### Scale Validity and the Dimensionality of EO/IEO

As observed by Aldrich (2000), researchers have commonly assumed that core entrepreneurship constructs are "universal"; that is, generalizable across country contexts. It is

encouraging that a growing body of research has sought to determine whether the construct of EO is generalizable across countries, as inferred by assessing the cross-national invariance of the construct's indicators (i.e., whether the scale measures the same attribute across national boundaries and, as such, demonstrates evidence of construct validity). Among the questions commonly asked in this research is whether EO is most defensibly conceptualized and operationalized as unidimensional or multidimensional (e.g., Cadogan, 2012).

For example, Knight (1997) collected data using the M/C&S scale (excluding item EO4, see our Appendix)—what he termed the ENTRESALE—from a total sample of 258 English-speaking and French-speaking companies in Canada. Confirmatory factor analysis suggested that model fit is maximized with a two-factor model in which items EO1, EO2, and EO3 represent an innovativeness dimension, and items EO5, EO6, EO7, EO8, and EO9 represent a proactiveness dimension. Knight concluded “All in all, the ENTRESALE was found to perform well in both English and French with regard to consistency and pattern of factor structure, internal consistency, convergent and discriminant validity” (p. 221).

Antoncic and Hisrich (2001) examined the cross-national invariance of the M/C&S scale (as with Knight [1997], they excluded item EO4) in a study in which two additional aspects of the intrapreneurship construct were assessed—namely, new business venturing and self-renewal. Based on samples of 51 U.S. and 141 Slovenian firms, they conclude that “the intrapreneurship construct showed acceptable convergent, discriminant, and nomological validity, as well as external validity in terms of comparability across the two samples” (p. 521). The authors retained items EO2 and EO3 (along with other items not originally included in the M/C&S scale) as indicators of an innovativeness dimension and items EO6, EO7, and EO9 as indicators of a proactiveness dimension. Notably, in both the Knight and Antoncic and Hisrich studies, risk-taking items—as identified in the M/C&S scale—are retained, but the dimension they are associated with is labeled proactiveness.

Kreiser, Marino, and Weaver (2002) also used the M/C&S scale (excluding item EO9,<sup>8</sup> see Appendix) to collect data from 1,067 SMEs operating in six countries—namely, Australia, Finland, Mexico, the Netherlands, Norway, and Sweden. Based on their analyses, Kreiser et al. conclude that EO is best represented as a multidimensional (rather than unidimensional) construct. Moreover, unlike the results suggested by Knight's (1997) data, they observed that model fit was greatest when EO is modeled as a three-dimension construct (comprised of innovativeness [EO1, EO2, EO3], proactiveness [EO4, EO5, EO6], and risk taking [EO7, EO8]) not only in their overall sample, but in each of their six country contexts. Nonetheless, Kreiser et al. also reported that the alpha coefficient for the overall EO measure exceeded .70 in each of the six country samples, thus suggesting that it is defensible to aggregate the dimensions into the larger construct on this basis. They conclude that “the Covin and Slevin EO scale can be effectively employed when conducting research on the topic of international entrepreneurship” (p. 88).

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8. In empirical research, it is not uncommon to drop item EO9 from the M/C&S scale. In their study of the relationship between EO and strategic alliance portfolio extensiveness among 647 firms in six countries (Indonesia, Finland, Greece, Mexico, the Netherlands, Sweden), Marino, Strandholm, Steensma, and Weaver (2002) reported that two items of the M/C&S scale (EO8 and EO9) “experienced significant translation errors” and that “it was virtually impossible to consistently translate these items across a broad set of countries in such a manner that they could be meaningfully differentiated from one another” (p. 150). Of the two items, based on factor structure, item EO9 is generally the one dropped.



Research by Hansen, Deitz, Tokman, Marino, and Weaver (2011) is an extension of the Kreiser et al. (2002) study. It relies on the same core database and adds U.S. data to the sample as a reference group. Using the M/C&S scale (again, excluding item EO9, see Appendix), Hansen et al. collected data from 1,279 SMEs operating in seven countries (United States, Australia, Sweden, Mexico, Indonesia, the Netherlands, and Greece). Notably, six world cultures are represented by the nations from which data were collected, using the GLOBE categorization of world cultures (House, Hanges, Javidan, Dorfman, & Gupta, 2004). Based on confirmatory factor analysis of their data, Hansen et al. suggest that, from a cross-national equivalence perspective, EO is most appropriately assessed using a 6-item scale comprised of innovativeness items (EO2, EO3), proactiveness items (EO4, EO5), and risk-taking items (EO7, EO8). In their data, the risk-taking items were found to be the most robust as assessed using various cross-national invariance metrics. Still, Hansen et al. conclude that “the number of dimensions and observed variables associated with each dimension are the same across countries. . . . EO is a second-order construct formed in the aggregate by some combination of innovative, proactive, and risk-taking behaviors. Each of these dimensions makes a unique contribution to the overall construct, and may vary independently of one another” (p. 72).

Runyan, Ge, Dong, and Swinney (2011) also examined the measurement invariance of the M/C&S scale in a cross-cultural context, in this case comparing data collected from companies in the United States ( $n = 250$ ) and China ( $n = 187$ ). As with the Hansen et al. (2011) study, Runyan et al. conclude that EO is best modeled as three factors corresponding to the innovativeness (EO1, EO2, EO3), proactiveness (EO4, EO5, EO6), and risk-taking (EO7, EO8) items. Risk-taking item EO9 was dropped from the EO scale because its elimination increased model fit. Runyan et al. conclude that the M/C&S scale “exhibits the same pattern of factor loadings across both U.S. and Chinese SMEs, allowing scholars to assume that the basic meanings of EO and the underlying dimensions are the same in both countries” (p. 11).

Notably, not all cross-national research on the M/C&S scale has concluded that EO is—or should be modeled as—a multidimensional construct. For example, Arbaugh, Cox, and Camp (2009) used the M/C&S scale to collect data from 1,045 firms in 17 “developed” countries. Based on the observed alpha coefficient of .68 for the scale across the entire sample of firms, Arbaugh et al. conclude that “EO appears to be somewhat globally generalizable to developed countries as a uni-dimensional construct” (p. 20). While it is questionable whether Arbaugh et al. should have drawn any conclusions about EO’s dimensionality based solely on the observed alpha coefficient (see John & Benet-Martinez, 2000), these researchers are not alone in their conclusion that EO is a unidimensional construct. Dimitratos et al. (2012) collected data from SMEs operating in the United Kingdom ( $n = 91$ ) and in the United States ( $n = 71$ ) for the purpose of developing an international entrepreneurial culture measure. These researchers employed exploratory and confirmatory factor analysis of 23 items focused on international entrepreneurial culture, including seven items (EO2, EO3, EO4, EO5, EO6, EO7, EO8) slightly modified (i.e., the inclusion of foreign marketplace-related verbiage) from the M/C&S scale. Their results indicate that the seven EO items comprise a single factor within the larger IEO measure, a finding which they conclude “essentially confirms the unidimensionality of international entrepreneurship orientation” (p. 9).

Collectively, the preceding studies suggest that the most commonly employed EO measure—the M/C&S scale—is (with the possible exception of item EO9) interpreted and responded to similarly across diverse national cultures. These studies also reveal that conclusions drawn about EO’s dimensionality are often based on factor analyses of data

reflecting the construct's indicators. On this latter point, it is important to recognize an important distinction between the nominal or theoretical meaning of constructs and the empirical or operational meaning of constructs, and to recognize how these meanings relate to one another.<sup>9</sup> Specifically, it is inappropriate to draw conclusions about how constructs should be conceptualized based on the results of empirical analyses. As such, while confirmatory factor analyses can reveal, for example, the particular dimensionality of indicators which optimize model fit, that dimensionality *per se* should not and, indeed, cannot be used to specify how the construct ought to be theoretically defined. Stated differently, confirmatory factor analysis cannot be used to define theoretically what EO is or how many dimensions the construct *has*. These are theoretical matters, not empirical matters (see Covin & Lumpkin, 2011). This is not to suggest that research which has sought to identify the dimensionality of EO's indicators is misguided; only that care must be taken in how the results of such research are interpreted. Notably, if EO is theoretically and operationally defined as a multidimensional construct, then one cannot draw general conclusions at the "overall" construct level based on results pertaining to the individual dimensions (see Wong, Law, & Huang, 2008).

### **Tautological Concerns in IEO Research**

A recognized design flaw in some IEO research is a tautological relationship between independent and dependent variables. For example, commenting on Knight and Cavusgil's (2005) study, Frishammar and Andersson (2009, p. 68) note:

the item "The prevailing organizational culture at our firm (management's collective value system) is conducive to active exploration of new business opportunities abroad" was part of the scale for international entrepreneurial orientation, and the item "Overall, we have finally capitalized on the potential that our main export-market affords for this product" was part of the international performance scale. Consequently, the similarities between the two concepts international entrepreneurial orientation and international performance might be so significant that it is not without great difficulties that one can argue that the two scales measure mutually exclusive constructs.

Likewise, Ibeh and Young model export venturing (operationalized as the likelihood of involvement in export market entry [Ibeh, 2003; Ibeh & Young, 2001]) and export performance (operationalized using multiple indicators including export sales and percentage of total sales contributed by exporting [Ibeh, 2004; Ibeh & Young]) as driven by "export-entrepreneurial orientation level." The measure of export-EO employed in these three studies incorporates items that assess, for example, the extent to which the firm pursues new product ideas for export and considers new export markets.

A challenge in IEO research is constructing and assessing models in which IEO and international outcomes, such as performance, are measured as mutually exclusive constructs. If one employs a traditional, noncontext-specific EO scale (like the M/C&S [1989] scale), then having an "international outcome" dependent variable is not a problem; i.e., there is no tautology. However, it should not be surprising, for example,

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9. A construct's nominal meaning "is that meaning assigned without reference to empirical information. That is, it is the inherent definitional nature of the construct that forms the basis for hypothesizing linkages with other constructs, developing observable indicators, and so forth" (Howell, Breivik, & Wilcox, 2007, p. 207). The empirical meaning of a construct, by contrast, is derived from that construct's relationship with observed variables.

that firms with a stronger emphasis on entering international markets are likely to realize greater international sales. The challenge is identifying theoretically meaningful dependent variables that are indicators of international outcomes which are independent of IEO when this latter construct is operationalized as an indicator of international activity.

## **EO/IEO and the Value of “Mixed” Measures**

The concept of EO has been concurrently embraced and viewed with a fair degree of skepticism within the scholarly community (see Covin & Lumpkin, 2011). The core notion that firms can “be entrepreneurial” is well accepted, and the exhibition of entrepreneurship as a generalized organizational trait is the very phenomenon the introduction of the concept into the literature was meant to capture (Miller, 1983). Nonetheless, ambiguity over the essential nature of the construct and perceived weaknesses in how it has been measured seem to have precluded EO research, as a whole, from being accorded legitimacy and respect commensurate with the construct’s popularity. At a recent academic conference a well-known and respected entrepreneurship scholar, playing off the writings of William Shakespeare, tellingly commented on the topic of EO with the quip “I come to bury EO, not to praise it.”

Ambiguity over the essential nature of the EO construct is undoubtedly due, at least in part, to the fact that scholarly conversation on the construct diverged along two distinct paths with the publication of Lumpkin and Dess’s (1996) seminal article. Until that time, EO was commonly discussed as a unidimensional or composite construct (Miller, 1983; Morris & Paul, 1987), albeit one comprised of three elements—risk taking, innovativeness, and proactiveness. Lumpkin and Dess’s article changed the conversation by explicitly advocating that EO be viewed as a multidimensional construct with autonomy and competitive aggressiveness recognized as additional important dimensions of the construct. Only recently is it generally acknowledged that the composite dimension conceptualization of EO and the multidimensional conceptualization of EO are not competing perspectives on the same construct. These are conceptualizations of different constructs (Basso et al., 2009; Covin & Wales, 2012). EO’s credibility as a field of scholarly pursuit should be enhanced as scholars increasingly recognize the distinctiveness of the two constructs.

As suggested, reliance on what are sometimes perceived as less-than-optimal EO measures may have also limited acceptance and understanding of empirical EO research for some in the scholarly community. At issue is the matter of what is being captured by measures commonly employed in EO research. While measures that operationalize the five EO dimensions proposed by Lumpkin and Dess (1996) have been used (e.g., Hughes & Morgan, 2007; Jambulingam, Kathuria, & Doucette, 2005), to date such measures have not been widely employed and there is no standard operationalization of Lumpkin and Dess’s collective EO dimensions. As noted by Rauch et al. (2009), scholars have largely adopted the M/C&S scale as a basis for EO’s measurement. While the preceding review of research on this scale’s validity and cross-cultural invariance is encouraging, the scale has been criticized for including diverse types of indicators. For example, Wiklund (1999) identified the inclusion of items that measure past behaviors and the inclusion of items that measure current attitudes within the M/C&S scale as a “weakness” of the scale, observing that this may be why researchers often disagree on the “type of construct [EO] really represents” (p. 38). Likewise, Brown, Davidsson, and Wiklund (2001, p. 954) identify the fact that the M/C&S scale includes “a mix of attitudes and self-report of past

behaviors” as a “problem.” Indeed, the EO scale indicators have various foci—beliefs (EO8), preferences (EO1, EO7), behaviors (EO4, EO5, EO6, EO9), and outcomes (EO2, EO3).

While it is understandable that mixing indicator type might be viewed as problematic, this aspect of the scale may also be the basis for its broad acceptance and the reason it has been empirically linked to a wide variety of organizational, environmental, strategic, and managerial phenomena (see Wales et al., 2011). The M/C&S scale captures multiple aspects of what “being entrepreneurial” means and, as such, triangulates the phenomenon using a diverse assortment of indicators. A triangulation approach to measuring EO is consistent with the reasoning of Lyon, Lumpkin, and Dess (2000) that EO is best understood when assessed from multiple perspectives and with different types of indicators. Returning to Lumpkin and Dess’s (1996) definition of EO—that is, “EO refers to the processes, practices, and decision-making activities that lead to new entry” (p. 136)—it might be said that the M/C&S scale captures both the processes, practices, and decision-making activities that *lead to* new entry (EO1, EO4, EO5, EO6, EO7, EO8, EO9) and evidence of new entry *per se* (EO2, EO3). While Lumpkin and Dess were clearly distinguishing between EO (what leads to new entry) and entrepreneurship (new entry) in their definition, the strength of the scale may be the fact that it captures both antecedents to entrepreneurship and entrepreneurship. This is important because just as the label entrepreneur should be reserved for individuals who have exploited opportunities for new entry (Gartner, 1988), the label entrepreneurial when applied to an organization should be reserved for organizations that have manifested some form or forms of new entry. Moreover, as argued by Covin and Lumpkin (2011), singular or infrequent acts of new entry do not warrant labeling an organization as entrepreneurial. Rather, the exhibition of new entry as a sustained pattern of behavior demonstrates that entrepreneurship is a trait or attribute of the organization and not an aberration. Significantly, the manifestation of the beliefs (EO8), preferences (EO1, EO7), and behaviors (EO4, EO5, EO6, EO9) that lead to acts of new entry (EO2, EO3) suggests that such acts are not attributable to chance or compulsion but, rather, consequences of a disposition to engage in entrepreneurship.

Of particular relevance to the current paper, the value of assessing EO through indicators of both antecedents to new entry and new entry *per se* is evident when one considers that some would-be entrepreneurial actors can be “disposed toward” international new entry without ever engaging in the act, while other entrepreneurial actors that enter international markets do so with reluctance or minimal commitment to globalization (Freeman & Cavusgil, 2007; Jones & Coviello, 2005; Ripollés-Meliá et al., 2007). In either case, as a trait or attribute of the entrepreneurial actor, it is arguable that an IEO is minimal or nonexistent.

## **Future Research Directions**

Conversations and knowledge voids in the IEO literature highlight the need for future research along at several themes, as discussed here.

### **IEO and the Various Forms of New Entry**

Broadly speaking, IEO consists of the beliefs, preferences, and behaviors that lead to and include acts of new international market entry. New international market entry is

inherent and essential to the exhibition of an IEO. However, as discussed earlier, new product introduction is the form of new entry commonly assessed in EO's measures. This leads to the question of whether the belief-, preference-, and behavior-related antecedents of new international market entry are the same as those for new product entry. Certainly, there are long-running discussions in the IE literature on the motivations for "going international" (see, for example, Perlmutter, 1969; Zahra & George, 2002). The question here, however, is not so much about trying to better understand the unique motivators of international new entry as it is about trying to characterize and capture the entrepreneurial process elements that lead to and include new international entry.

The challenge for researchers of IEO is to position the entrepreneurial act of new international market entry as the focal phenomenon, then identify the commonalities that inherently relate to what "being entrepreneurial" means in this specific new entry context. To illustrate the point, the risk-taking profiles of executives who guide their firms into new international markets may be different from those of executives whose firms' acts of new entry are domestic in focus and centered around new products or technologies. Perhaps there are risk-taking indicators that consistently correlate with acts of new international market entry (but less so for new product entry) and, as such, are particularly meaningful for capturing the risk-taking element of EO in an IE context (e.g., multiple career moves across international boundaries, first-mover investments in international sourcing or outlets, sponsoring of untraditional distribution channels). Additionally, perhaps "being entrepreneurial" in an IE context implies the presence of entrepreneurial "dimensions" not currently acknowledged or emphasized in the EO conversation. Future IEO researchers are encouraged to focus on these fundamental conceptual and measurement issues, recognizing that IEO implies a specific form of new entry (i.e., international market entry) seldom considered in the traditional EO literature.

## **Exploring the Drivers of New Entry as Culture-Specific Phenomena**

Suggestions that IEO may be a culture-specific phenomenon are scattered throughout the entrepreneurship literature. Hansen et al. (2011, p. 76), for example, asked "Might it be that in particular countries EO is more a function of innovativeness, while in others risk-taking assumes a more prominent role?" Likewise, in commenting on why an item of the M/C&S scale may be a poor indicator of EO in China, Runyan et al. (2011) observed that "[t]he term 'aggressive' is used in this item, and as a highly collectivistic culture, the Chinese respondents may have felt uncomfortable selecting this response. Aggressive behavior is not congruent with expectations of behavior in a collectivistic society (Hofstede, 1980)."

The essential act of entrepreneurship—new entry—is *not* a culture-specific phenomenon. That is, entrepreneurship is understood around the world as manifested through acts of new entry. What may be culture-specific, on the other hand, are the beliefs, preferences, and behaviors that lead to new entry and, therefore, help define what being entrepreneurial means in different cultural contexts. In his influential article, Miller (1983, p. 780) stated:

In general, theorists would not call a firm entrepreneurial if it changed its technology or product line ("innovated" according to our terminology) simply by directly imitating competitors while refusing to take any risks. Some proactiveness 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.



The theorists being alluded to in this quote were, for the most part, “Western” thinkers. One might reasonably ask whether, say, proactiveness is as essential to, or as defining of, entrepreneurship in other cultural contexts. The cross-culture invariance studies of the M/C&S scale (e.g., Hansen et al., 2011; Kreiser et al., 2002; Runyan et al., 2011) suggest that the indicators of proactiveness have consistent structural patterns in association with other indicators employed within the scale. Still, perhaps acting in a proactive, leadership role has differentially strong associations with the concept of entrepreneurship as it is generally understood in cultures associated with, say, emerging versus established economies. For example, in an established economy, entrepreneurship may be more closely associated with the speed of new entry than the order of new entry. In an emerging economy, the opposite may be true.

Thus, a promising path for researchers to explore is how an EO might itself differ within various cultures, as a function not only of cultural values, which have been relatively well explored (Aldrich, 2000; Hofstede, 1980; House et al., 2004; Reynolds et al., 1999; Runyan et al., 2011), but also socioeconomic and institutional conditions that differentially favor the emergence and consequences of EO and its components. Let us take two divergent examples. In micro-financed start-ups run by poor African families, the women often are the entrepreneurs (Ibeh, 2004). In these impoverished contexts, the females with the least status and power may manifest significant proactiveness and initiative compared with their male counterparts, but they may take relatively few risks due to their having children to support. At the same time, they typically have too few resources to truly innovate in the products or services they offer given the primitive economic conditions that confront them. In Chinese family dynasties, on the other hand, many of which are entrepreneurial, overaggressiveness and independence are eschewed due to the Confucian ethic, and entrepreneurship many take the form of proactive alliance formation, collective risk sharing, and borrowing novelty rather than initiating innovation (Chen & Miller, 2011; Zhang, Ma, et al., 2012). In short, due to economic, social, and institutional differences, national economies may differ greatly in the attitudes, beliefs, and behaviors that constitute EO, the manifestations of an EO, and their consequences in the form of different types of new entry. Several drivers may be especially prominent, and it may be useful to explore some of them here in the hope of spurring related research.

**Cultural Values and National Religious Values.** The Hofstede (1980) and House et al. (2004) cultural measures seem to show some capacity to differentiate EO and its components and to display its commonalities across nations—and we have cited research to that effect. Religious values, however, have been less often explored. The beliefs, values, and attitudes spawned by Confucianism, Calvinism, the Quaker faith, and Judaism, for example, also may have implications for EO. Indeed, they may provoke a reexamination of the concept of EO itself, and stretch the envelope regarding its measurement. For example, the Calvinist–Protestant belief in the merits of profit as witness of God’s rewards on earth may encourage more risk taking and proactive business creation (a theme well developed in Max Weber’s celebrated *The Protestant Ethic and the Spirit of Capitalism*). To the extent that overlapping values and attitudes are part and parcel of both religion and an orientation to entrepreneurial behavior, the two may in some communities be inextricably bound. Indeed, the social entrepreneurship endeavors so popular in today’s literature may be driven quite directly by religious and moral values. Thus, devout Mennonites might be more apt to behave like social entrepreneurs—with piousness, frugality, and industry being attitudes or values that promote entrepreneurship—and thus that “orient one” toward the creation of some kinds of organizations

and services. Thus, frugality and industry may be as or more closely associated with entrepreneurial activity in Mennonite communities as the traditional components of EO. Indeed, in this context, the values of the community might constitute a component of EO. The relevance of this discussion to internationalization is simply that countries differ greatly in their religious values and in the intensity with which those values are held. Hence the drivers, nature, and consequences of EO might well differ systematically according to the religious orientations of a given population or subgroup. Similarly, a common religion, especially where deeply held, may constitute a bridge between vendors and purchasers in different nations.

***National Economic Development.*** The wealth of a country can set the stage for its entrepreneurial climate. Poverty engenders its own type of entrepreneurship—out of need. Thus, one finds unlikely entrepreneurs—as noted, poor African and Indian women whose entrepreneurial predilections are tied to and shaped by their family situation. They are motivated and proactive, take as little risk as possible, and innovate only when absolutely necessary—yet they are a major force for business creation and economic development (Karmakar, 1999; Mayoux, 2001). Here once again we see the utility of differentiating the EO components as a function of an important national parameter.

At the other extreme of economic development—namely, national riches in financial, knowledge, and technological resources—we may find that there is a greater need for a given venture to be significantly innovative because the economy is developed and solely initiatives that perform a pioneering or creative destruction function can succeed (Schumpeter, 1942). Moreover, significant returns may only be forthcoming with important attendant risks. Here, innovation in all its guises may become central to an EO. More specifically, in developed economies with ample resources available to entrepreneurs, the requirements for an influential EO may be significant and multifaceted, with all three of the EO components being necessary. The paradox is that abundance in the environment may attract competitors, which in turn makes the requirements for an impactful form of EO more severe (Zahra & Neubaum, 1998). Further research could determine whether it would be wise for firms contemplating internationalization toward developed national economies to bear these constraints in mind.

***Diasporas and Racial Separation.*** Intense levels of entrepreneurship are often demonstrated by “excluded” groups—minorities in a given society who cannot fit into the mainstream economy or social hierarchy. Nations and urban centers within which these groups are prominent or where they have gathered from around the world (e.g., Israel, New York City) show high levels of EO. Within these centers, groups exhibit a good deal of proactiveness and are willing to take risks. After all, they have few paths to success because traditional avenues of career advancement and wealth attainment often are not open to them (Waldinger, Aldrich, & Ward, 1990). However, the level of innovativeness demonstrated by these groups is highly sector-dependent, with those with little education going into sectors that require little innovation, and PhDs becoming important technological or market pioneers (Renko, Carsrud, & Brannback, 2009). The larger lesson is that the cultural history of a people and its relationship with dominant social groups may engender at least some of the elements of EO—and the international context provides an ideal setting for exploring such differences with comparative studies of countries in which these semi-isolated groups account for greater or lesser economic prominence.

**National Industry Composition.** The industrial mix of the national economy may vitally shape the kinds of EO that would determine the nature of new entry: Where a country's population is concentrated on primitive agrarian and crude extractive industries in rural areas, a firm may be required to embrace risk to cope with the uncertainties—particularly where the minimum economic size of a venture is large and demand and supply are subject to unpredictable fluctuations (as is often the case in agriculture and resource extraction). However, the scope and need for innovation in these settings may be limited. By contrast, in nations where high-tech sectors are prominent, to be effective in driving new entry EO may have to include in good measure all three traditional components—with innovation once again taking on a key role (Miller, 1983).

**Institutional Voids.** Khanna and Palepu (2000) have discussed the manner in which the institutional development of a nation can impact its economic performance and the behavior of its businesses. An institutional void occurs when the formal institutions of society do not function well. For example, there may be significant government corruption, a failure to amply codify or enforce laws and contracts, an overburdened legal system, unreliable market mechanisms, wealth concentrated in families, impoverished education systems, and inadequate physical infrastructure for communication, transportation, and health (Morck & Yeung, 2003). A major challenge confronting entrepreneurs in these contexts is the need to connect to informal, trust-based sources of power and resources. Social connections and one's ability to develop and nurture these becomes a sine qua non of entrepreneurship (Miller, Lee, Chang, & Le Breton-Miller, 2009). In such contexts, none of the dimensions of EO may have a great deal of influence on venture creation until the entrepreneur or his or her business develops the social connections and reputation that are the prerequisites for new entry. What may have to be confronted in such settings is an all-critical moderating variable, whereby EO has little effect without the preconditions of social connection to fill the institutional void.

### **In Search of the Unrecognized Elements of EO/IEO**

Another topic area suggested for consideration by IEO scholars relates to the prior discussion of the drivers of new entry, but there is an important distinction with what is being proposed here. The prior discussion advocates exploration of the possibility that new entry will be associated with unique drivers that vary by cultural context. It may also be that EO and the subcategory of IEO share core elements beyond those commonly recognized in the literature. In their study of the cross-cultural invariance of the M/C&S scale, Hansen et al. (2011) observed that one item of the EO scale (EO1) loaded poorly on the intended dimension (innovativeness) and inconsistently on the other two dimensions (risk taking and proactiveness). The authors comment that “This indicates that the item does not adequately reflect any of the three dimensions. Might it reflect some other unrecognized dimension?” (p. 76).

As suggested by Brown et al. (2001), “opportunity orientation” may be one such element that is generally the characteristic of the entrepreneurial process and common to firms that engage in new entry. Notably, in their scale development study designed to operationalize Stevenson and his co-authors' (Stevenson, 1983; Stevenson & Gumpert, 1985; Stevenson & Jarillo, 1990) conceptualization of entrepreneurship as opportunity-based firm behavior, Brown et al. (2001) speculated that opportunity orientation is a distinct dimension of entrepreneurial management. Their data did not reveal a dimension of opportunity orientation distinct from that of the other dimensions proposed as

comprising entrepreneurial management (namely, strategic orientation, resource orientation, management structure, reward philosophy, growth orientation, and entrepreneurial culture). Nonetheless, this is an empirical matter that reflects the indicators chosen, not the underlying validity of their arguments. Indeed, there may well be an alertness-to-opportunity element (Kirzner, 1973) that is inherent to the entrepreneurial process and, as such, ought to be reflected in future indicators of the EO construct in order to more fully capture the essence of the phenomenon. As stated by Dimitratos et al. (2012, p. 708), “[a]lertness regarding novel opportunities lies at the heart of both entrepreneurship (Shane & Venkataraman, 2000; Tang, Kacmar, & Busenitz, 2012) and international entrepreneurship (Hadjikhani, Ghauri, & Johanson, 2005; Oviatt & McDougall, 2005).” Future IEO researchers are encouraged to develop measures that capture the extent to which entrepreneurial actors are “opportunistic” (e.g., open to opportunities, alert to opportunities, aggressively seek/create opportunities, see the world as a set of opportunities versus a set of problems or challenges) as essential indicators of IEO.

### **The Promise of EO/IEO for Understanding New International Ventures**

Our next proposed research extension concerns how the notion of EO or IEO can be used to understand international ventures. Specifically, it is useful to ask which aspects of EO, to what degree, and in what contexts do they influence international ventures. Moreover, how are those ventures shaped by the different components of EO? International ventures might be represented by new entries that extend in scope and dimension from simple exporting, to proprietary foreign distributorships, to manufacturing abroad, to designing, manufacturing, and selling abroad—each of which may be a function of different aspects of EO (Gleason & Wiggernhorn, 2007; Ripollés-Meliá et al., 2012). Similarly, the scale and reach of these ventures in terms of the percentage of a firm’s revenues and earnings, their geographic scope in number of countries and cultural distance, their use of international resources and factors of production, and even how quickly a firm ventures internationally may be influenced by EO (Knight & Cavusgil, 2005). Thus, scholars may begin to make more fine-grained connections between the different aspects of EO—either component by component, or using the original or modified version of the M/C&S scale (or perhaps a tailored version representing IEO). Although we have alluded to the important work that has begun to explore this rich area, there appears to be room for further development.

Indeed, there may be a kind of cascading effect of the different elements of EO on the scale and scope of different internationalization outcomes. For example, proactiveness may contribute to whether or not a firm engages in export behavior, and it may help to drive the scale and scope of that behavior—specifically, more proactive firms may export a larger percentage of their output to clients in other nations. Where there is a significant risk component present in the firm—that is, where risk aversion is attenuated and there is a proclivity to undertake new initiatives with uncertain payoffs—a firm may be more willing to undertake not only exporting but it may decide to expend capital on engaging in outsourcing or on locating distributorships or even sales outlets abroad. There may also be more of a proclivity to export to countries that are geographically and culturally more distant to the focal firm. Finally, where there is in addition to proactiveness and risk orientation a proclivity to engage in innovation—our third component of the M/C&S version of EO—it may be more likely that the firm embarks upon the full scale tailoring of products for foreign markets and perhaps even the manufacture and design of products in those countries.

This “cascading” of the elements of EO might be an interesting conception to explore. It may well be that most elements are present most of the time, but to different degrees—and with increasing presence as we move from proactiveness to risk to innovation. Alternatively, it could be also that each of the components of EO has a selective impact on the different aspects of internationalization. Moreover, the range of activities, geographies, business volume, complexity, and “foreignness” of international ventures may be influenced by the overall degree of the composite EO construct. All of these conjectures might be usefully explored. It would be useful as well to study empirically whether the different measures of EO or of IEO are best suited to exploring this more fine-grained treatment of international venturing.

The context in which EO occurs may represent an important moderator of its impact. Specifically, the amount of pressure on the key decision makers from the environment due to uncertainty, shortages, and a hostile domestic market may strengthen the relationships between EO and export behavior (Weaver et al., 2002). For example, under the conditions of abundance and relative success, there may be little incentive to export, whereas where domestic markets are drying up or where there is a great deal of local competition, the incentive may be greatest to move toward international markets (Zahra & Garvis, 2000; Zahra & Neubaum, 1998). Similarly, resource availability (Williams & Lee, 2009) and capability (Jantunen et al., 2005; Knight & Cavusgil, 2004), technological capability (Dimitratos et al., 2012), alliance possibilities (Lohrke, Kreiser, & Weaver, 2006), foreign knowledge (Autio, Sapienza, & Almeida, 2000; De Clercq, Sapienza, Yavuz, & Zhou, 2012; Li et al., 2010), and decision-making discretion for those charged with internationalization (Hambrick & Finkelstein, 1987) may play corresponding facilitative moderating roles. Finally, ownership too may influence the relationships between EO and the various outcomes of internationalization (Liu et al., 2011). For example, among owners with useful foreign contacts, EO or IEO may be potentiated to have greater effect. By contrast, family business owners whose wealth is tied up in their firms are often more risk averse than other owners and that may curtail the activities of their entrepreneurial executives (Le Breton-Miller, Miller, & Lester, 2011).

Whereas this subsection has focused on the promise of EO/IEO for understanding new international ventures, firms that exhibit EOs/IEOs need not be independent start-ups. Indeed, a growing body of literature is currently exploring, for example, the entrepreneurial actions of multinational subsidiaries (e.g., Ambos, Andersson, & Birkinshaw, 2010; Birkinshaw, Hood, & Young, 2005; Boojihawon, Dimitratos, & Young, 2007; Dimitratos, Liouka, Ross, & Young, 2009). Significant and largely unexplored research questions pertaining to the multinational corporation include: What effects do particular corporate-level strategic control system design features (e.g., wide versus narrow definitions of strategically relevant business domains) have on the level and forms of EO/IEO exhibited by multinational subsidiaries?; Is there a contagion effect with respect to the emergence of subsidiary-level EO/IEO that can be promulgated by corporate headquarters to facilitate corporate-level performance and, if so, what are the mechanisms involved?; and What are the elements of an effective parenting style(s) among multinational corporations whose subsidiaries diversify via the exhibition of IEOs into new foreign markets that are unfamiliar to the parent corporations?

## **Theories and Methods Pertinent to EO/IEO Knowledge Advancement**

Another tack in developing the domain of EO/IEO is to begin to build on some promising theories that have become quite prominent in the fields of strategy and organizational theory. We have space here only to call attention to a very few.



***Institutional Theory.*** Institutional theory provides a basis for arguing the importance of the sociocultural, religious, and socioeconomic factors we have mentioned earlier in shaping EO in different nations. For example, using the institutional logics framework of Thornton and Ocasio (2008), one might maintain that entrepreneurs within Protestant countries might embrace the Protestant ethic and hence an institutional “market logic” in which aggressive, profit-oriented risk taking is sanctioned and thus very common. By contrast, patriarchal societies such as Italy and Spain would be more apt to adopt a family logic, under which the family patriarch protects parochial family interests above any other, thereby rendering his or her organization especially conservative and its management team nepotistic and entrenched (Gomez-Mejia, Haynes, Nunez-Nickel, Jacobson, & Moyano-Fuentes, 2007). Thus, there may be less risk taking and less innovation in countries dominated by patriarchal family logics.

Institutional theory also points out the importance of the pressures for conformity that most firms are subject to (DiMaggio & Powell, 1983). One reaction to such pressure is mimetic: Firms seek to copy other prominent successful companies because it bestows upon their managers legitimacy in the eyes of various key stakeholders. Thus, where entrepreneurial companies in an industry adopt a strong international EO and its concomitant internationalization behavior, there may be a contagion effect as other companies follow suit. The impact of such mimetic behavior on IEO may help explain why some industries and some geographic centers quickly become highly entrepreneurial while others lag far behind.

***Network Theory.*** Organizational theorists argue that the position of an organization within a network of other organizations supplying critical resources may represent an important constraint or facilitator of international entrepreneurial behavior (Kilduff & Tsai, 2003). Firms with many contacts with multiple distributors, international sources of funding, and alliance partners may find themselves in an advantageous network position. They may fill a “structural hole” to bridge critical vendors and purchasers and extract superior rents in any internationalization initiatives (Burt, 1995). They may be able to undertake new entry without assuming much risk.

Network theorists also make a distinction between bridging and bonding ties, the former being close, enduring, homogeneous, and few in number, the latter being more fleeting, heterogeneous, and diverse (Uzzi, 1996). In some developing nations with underdeveloped institutional infrastructures, networks of companies consist of few “bonding” ties. Firms cannot rely on legal or financial or market systems for resources but instead must seek out close partnerships based on trust or family honor (Khanna & Palepu, 2000). That confining network is said to constrain innovation due to a limited exposure to good ideas. In developed nations with sound and sophisticated institutional infrastructures, particularly for firms operating in large urban centers, there is much exposure to new ideas. Networks across firms are quite varied—consisting of ample bridging ties that afford a variety of experiences and resources to stimulate innovation and proactive initiative (Uzzi). Entrepreneurial endeavors typically require a mix of such bridging and bonding ties: for example, trust-based bonding ties to reduce risk and knowledge- or opportunity-based bridging ties to identify and access promising new entry initiatives. IEO researchers may wish to explore the role of these different aspects of networks on both the nature and prominence of EO and its outcomes.

***Organizational Ecology.*** Organizational ecology may help us to understand the forces shaping EO in different countries (Hannan & Freeman, 1977). Firm population density and consequent resource scarcity, as is to be found in some developing agrarian nations,

may spawn competition—stimulating aggressive behavior but leaving little slack for innovation or true “new entry” beyond turf war expansion. Firm population sparseness may dampen competition and hence suppress EO. Intermediate levels of density might be the most conducive to innovation. It may be too that whereas population dynamics have little effect on proactiveness, it can constrain or promote innovation and make risk taking more or less necessary.

***The Resource-Based View and the Dynamic Capability Perspective.*** The strategy literature today is dominated by the resource-based view (Barney, 1991) and the dynamic capability perspective (Teece, Pisano, & Shuen, 1997). The former view maintains that resources that are rare, valuable, inimitable, and original enable the firm that possesses them to sustain abnormal rents. The latter perspective argues that firms that are most successful are able to continually renew their resources and capabilities while building on cumulative strengths. The possible implications for IEO are that resources such as international connections, exclusive alliances with distributorships, foreign licenses, and other assets may all constitute internationalization advantages that could potentiate and enhance the effectiveness of EO or IEO. Paradoxically, those very same assets may make EO or IEO less predictive of internationalization as there may be less need for it given the strong position and abundant, superior opportunities open to the company. Only empirical research can determine which of these alternatives is true.

In closing, (another) brief word on method. Most of the literature on IEO—the vast majority of it in fact—is based on quantitative studies or conceptual contributions. What are missing are fine-grained qualitative pieces of research that could help to lay bare the concept of IEO—or its nature in different national contexts. In order to enrich our understanding of what an EO consists of in different societies, it may be useful to undertake qualitative studies of entrepreneurs at different levels of society: How do they differ in their beliefs, attitudes, preferences, and behaviors that might lead us to country- or culture-specific predictions? We have suggested that sometimes religious values drive EO. In such cases, might the very essence of the orientation be different? Would proactiveness, risk taking, and innovation be complemented by, say, a sense of obligation, industry, and service—qualities that may not only underlie but also constitute in part what it means to have a proclivity toward entrepreneurship? Would the poor women entrepreneurs in Africa be oriented to new entry as a function of their level of devotion to increasing family wealth and security and their understanding of how risk can be *avoided*? Only intensive interviews and long-term studies can determine whether there is any merit to such reflections.

## Appendix

### The Miller/Covin and Slevin (1989) EO Scale

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#### Innovativeness items.

##### EO1

In general, the top managers of my firm favor . . .

A strong emphasis on the marketing of tried-and-true products or services	1	2	3	4	5	6	7	A strong emphasis on R&D, technological leadership, and innovations
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(Item originally proposed by Khandwalla [1976/1977])

##### EO2

How many new lines of products or services has your firm marketed in the past 5 years (or since its establishment)?

No new lines of products or services	1	2	3	4	5	6	7	Very many new lines of products or services
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(Item originally proposed by Miller and Friesen [1982])

##### EO3

Changes in product or service lines have been  
mostly of a minor nature

1	2	3	4	5	6	7
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Changes in product or service lines have usually  
been quite dramatic

(Item originally proposed by Miller and Friesen [1982])

#### Proactiveness items.

##### EO4

In dealing with its competitors, my firm . . .

Typically responds to actions that competitors initiate	1	2	3	4	5	6	7	Typically initiates actions to which competitors then respond
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(Item originally proposed by Covin and Slevin [1989])

##### EO5

Is very seldom the first business to introduce new  
products/services, administrative techniques,  
operating technologies, etc.

1	2	3	4	5	6	7
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Is very often the first business to introduce new  
products/services, administrative techniques,  
operating technologies, etc.

(Item originally proposed by Covin and Slevin [1989])

##### EO6

Typically seeks to avoid competitive clashes,  
preferring a “live-and-let-live” posture

1	2	3	4	5	6	7
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Typically adopts a very competitive,  
“undo-the-competitors” posture

(Item originally proposed by Covin and Slevin [1989])

#### Risk-taking items.

##### EO7

In general, the top managers of my firm have . . .

A strong proclivity for low-risk projects (with normal and certain rates of return)	1	2	3	4	5	6	7	A strong proclivity for high-risk projects (with chances of very high returns)
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(Item originally proposed by Khandwalla [1976/1977])

##### EO8

In general, the top managers of my firm believe that . . .

Owing to the nature of the environment, it is best  
to explore it gradually via cautious, incremental  
behavior

1	2	3	4	5	6	7
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Owing to the nature of the environment, bold,  
wide-ranging acts are necessary to achieve the  
firm's objectives

(Item originally proposed by Miller and Friesen [1982])

##### EO9

When confronted with decision-making situations involving uncertainty, my firm . . .

Typically adopts a cautious, “wait-and-see”  
posture in order to minimize the probability of  
making costly decisions

1	2	3	4	5	6	7
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Typically adopts a bold, aggressive posture in  
order to maximize the probability of exploiting  
potential opportunities

(Item originally proposed by Covin and Slevin [1989])

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R&D, research and development.

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The authors thank Rebecca Reuber, the two anonymous *Entrepreneurship Theory and Practice* (ET&P) reviewers, and the ET&P Special Issue guest editors Marian Jones, Patricia McDougall, and Manuel Serapio for their many helpful comments and suggestions during the preparation of this manuscript.