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**INTERNATIONALIZATION: CONCEPTUALIZING AN ENTREPRENEURIAL
PROCESS OF BEHAVIOR IN TIME**

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Marian V. Jones

University of Glasgow

Email m.v.jones@mgt.gla.ac.uk

Nicole E. Coviello¹

University of Auckland

Email n.coviello@auckland.ac.nz

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¹ *Corresponding Author*

INTERNATIONALIZATION: CONCEPTUALIZING AN ENTREPRENEURIAL PROCESS OF BEHAVIOR IN TIME

Abstract

This paper presents a three-stage process of conceptual development in response to the call for a unifying direction for research in the emergent field of international entrepreneurship. Drawing on classic approaches to internationalization and importing insight from entrepreneurship as a separate and distinct field of study, the paper develops three potential models of internationalization as a time-based process of entrepreneurial behavior. The models evolve from the simple through general to precise levels of conceptualization. Research implications are discussed.

Keywords:

- International entrepreneurship
- Entrepreneurship
- Internationalization
- Time
- Firm behavior
- Process
- Innovation

INTERNATIONALIZATION: CONCEPTUALIZING AN ENTREPRENEURIAL PROCESS OF BEHAVIOR IN TIME

In his comments on the international business research agenda, Buckley (2002) challenged researchers to think of their future work in terms of the past achievements of the discipline. One such achievement noted by Buckley (2002, p. 365) is the body of work concerned with “understanding and predicting the development of the internationalization of firms”. Indeed, there have been multiple efforts to explain internationalization, the most recent relating to firms generally referred to as ‘born globals’ (Rennie, 1993) or ‘international new ventures’ (Oviatt and McDougall, 1994). A decade ago, the internationalization of such firms was not readily explained by extant theory, but was characterized as a rapid process of international expansion from firm inception, using a range of market entry modes in multiple markets. Such behavior was described as entrepreneurial, and led McDougall and Oviatt (2000) to identify ‘international entrepreneurship’ as an emergent field of study positioned at the intersection of the international business and entrepreneurship disciplines.

As defined by McDougall and Oviatt (2000, p. 903), international entrepreneurship is “...a combination of innovative, proactive and risk-seeking behavior that crosses national borders and is intended to create value in organizations.” Important in this definition is explicit integration of the generally accepted understanding of internationalization as a firm level activity that crosses international borders (Wright and Ricks, 1994) with the characteristics of an entrepreneurial orientation as defined by Covin and Slevin (1989): innovative, proactive and risk-seeking behavior. Furthermore, McDougall and Oviatt’s (2000) definition goes beyond the international new venture to incorporate the behavior of larger, more established firms.

Although internationalization research is well-developed, research specific to international entrepreneurship may require an element of paradigmatic shift and a fresh research lens in order to understand how international firms develop competitive advantage through entrepreneurial behavior, and how entrepreneurial firms can operate internationally. Unfortunately, McDougall and Oviatt (2000) raise the concern that international entrepreneurship research lacks a unifying and clear theoretical direction. In response to this concern, we follow Buckley's (2002) advice and suggest that to move forward with international entrepreneurship research, it is appropriate to build on past achievements of international business researchers by importing concepts from the field of entrepreneurship. In doing so, we are able to reconceptualize internationalization as an entrepreneurial process of behavior. The general objectives of this paper are therefore to: 1) identify core concepts common to internationalization and entrepreneurship research, 2) use those concepts as points of integration between the fields, 3) develop integrative conceptual models relevant to the emergent field of international entrepreneurship in order to provide a sound basis for empirical examination, and 4) discuss implications for research in the field.

The Challenge of Conceptual Integration

As research on international entrepreneurship emerges, McDougall and Oviatt (2000) suggest the need for increased rigor in construct development, and sophistication in the assertion of construct validity and reliability. In a different vein, Buckley and Chapman (1996, p. 244) suggest that another solution for an emerging field of research might lie in the development of

“...a set of core concepts which are analytically rigorous and tractable, yet remain flexible”, where core concepts refer to suitably grounded notions about the phenomena under study. These ideas seem to pull in opposite directions in that the former calls for more attention to fine detail and specifically-defined constructs and measures, and the latter for a holistic perspective with broad explanation. This creates a tension between the need for ‘precise’ models and those more ‘general’ in nature. This tension is compounded by the fact that international entrepreneurship researchers might focus variously on macro or micro levels and units of analysis, and different aspects of the phenomenon such as internationalization or cross-national comparison of cross-border activities and so on.

One of the problems in conceptualizing any complex phenomenon is in trying to find a balance between very precise causal models which tend to be narrow in their focus, and broader universal models which offer general description but are challenging to operationalize. According to Weick (1999), the development of theoretical explanations and conceptual models that are simultaneously simple, general and precise is not impossible. It is however, likely to be challenging. We argue that to minimize the need for trade-offs in attempting to conceptualize phenomena, what seems to be required is a *balanced* process of conceptual development. Such a process might commence by identifying the basic or simple concepts that provide parameters for the phenomenon under study. These concepts could then be applied to a general, holistic conceptualization within which the major constructs are embedded; constructs from which the antecedent and consequent variables are drawn and incorporated into precise contingency models which form the basis for empirical validation. We believe that the evolution of a series of related models progressing through stages of conceptual development from the simple to the general to

the precise may contribute to unification in thinking for international entrepreneurship researchers, and more specifically, may provide a foundation for researchers interested in internationalization as a process of entrepreneurial behavior.

Focusing on this notion of entrepreneurial internationalization behavior, which we see as a firm level manifestation of international entrepreneurship, we articulate a process of conceptualization that draws on Weick (1999). Commencing with an overview of classic approaches to internationalization and entrepreneurship, we present as a first level, two *simple models* reflecting: 1) the entrepreneurial process and 2) the internationalization process. We then identify core concepts from these simple models and integrate them with enduring constructs drawn from the international and entrepreneurship literatures. This leads to the second level of conceptual development in the form of a *general model* that represents entrepreneurial internationalization as a time-based behavioral process. The central dimensions and constructs of the general model can then be used at the third level of conceptualization to develop and operationalize precise causal models. As an illustration of the last step, we develop one example of a *precise model* and outline a number of other possibilities for research at that level.

Moving through an integrative process of conceptual development beginning with the abstract and simple to the general, and finally, precise models reflects Patton's argument (2002, p. 120) for "...understanding the whole process" and "...understanding real world complexities, viewing things as whole entities, embedded in context and still larger wholes". In taking this approach, we follow Buckley's (2002) advice to inform and build on the strengths of existing

internationalization theory by importing entrepreneurship theory. To this end, we begin with a brief review of insights from the extant internationalization and entrepreneurship literatures.

Insights from the Internationalization and Entrepreneurship Literatures

A considerable number of theories from international business research have been used in the literature to describe and explain aspects of internationalization. These various theories have been extensively critiqued elsewhere (see for example Andersen 1993, 1997; Oviatt and McDougall, 1994; Coviello and McAuley, 1999; Jones, 1999), however certain observations are relevant to our process of conceptual development. For example, the internalisation/transaction cost and resource-based approaches tend to emphasise rational and strategic decision-making criteria such as costs, investment, risk and control. They assume that foreign market entry decisions consist of discrete alternatives, and occur at specific and identified points in time. In contrast, the network/resource-dependency and organization-learning approaches to internationalization emphasise a process of internationalization that takes place, or has taken place over a period of time. That is, a relationship and learning-based process that may result in gradual internationalization on the one hand, or a more discontinuous process consisting of specific events, on the other. Finally, export development approaches, while describing a process of internationalization through incremental stages of innovation for the firm, are more concerned with the predetermined stages that a firm might have reached, rather than its process of getting there.

Drawing these views together, the internalisation/transaction cost, resource-based and export development approaches have tended to focus on factors influencing internationalization.

In contrast, the network and organizational learning approaches have been more concerned with identifying and describing the behavioral processes underlying internationalization. Most recently, what has been described as the international new venture approaches have emerged (Dana et al., 1999; Arenius, 2002). Such approaches tend to be hybrid combinations of their aforementioned predecessors and have attempted to explain early or rapid internationalization and the born-global phenomenon. Their emphasis is on internationalization as firm-level behavior and a process of development, but they also accommodate the idea that certain conditions, i.e. firm and environmental factors, must be necessary and sufficient to explain internationalization (Oviatt and McDougall, 1994). Thus, recent developments in the literature reflect an apparent convergence in theory, suggesting a contemporary understanding of internationalization is informed by integrating multiple theoretical perspectives in a manner that is both pluralistic and holistic. This suggests that the internationalization literature is moving towards a unifying theoretical framework. If however, we are interested in understanding and explaining 'entrepreneurial' internationalization behavior, conceptual models need to be sufficiently flexible to accommodate the range of conditions that might influence and lend explanation to a firm's internationalization decisions, actions and dynamic processes. This requires a greater understanding of entrepreneurial behavior, and we thus turn to the entrepreneurship literature to help inform our understanding of internationalization.

As noted by Dana et al (1999) in their review of the theoretical foundations of international entrepreneurship, as well as Shane and Venkataraman (2000) and Ucbasaran et al (2001) in their assessment of entrepreneurship research, the field of entrepreneurship is characterized by a plethora of theoretical contributions from diverse disciplines. This diversity is

perhaps even more evident than in the internationalization literature, and indeed, Shane and Venkataraman (2000) express concern that a unique and unifying conceptual framework is lacking in entrepreneurship. Nevertheless, identifiable themes of entrepreneurship research can be identified. More importantly, they show considerable theoretical convergence with developments in the field of internationalization.

For example, the classic entrepreneurship literature considers the role of the entrepreneur in economic theory, specifically in terms of transaction cost economics, internalization decisions, theories of the firm and firm growth, and theories of innovation. This parallels studies in internationalization conducted from the internalization/transaction cost perspective and the export development approach. Similarly, the entrepreneur's characteristics or traits and his/her role in identifying, accessing and leveraging resources in the pursuit of opportunity creation and innovation is relevant to the body of internationalization research that discusses human and social capital in the context of resource-based theory, the organization learning approach and the emerging research on international new ventures.

Related to the above, recent developments in the international business literature have turned to the phenomenon of social and industrial networks in internationalization, and similarly, entrepreneurship research has emphasized the role of the entrepreneur as a participant and manager of social systems and networks. Particular interest has been paid to examining entrepreneurship (at both the individual and firm level) as a process of behavior manifest in entrepreneurial events, and exhibiting entrepreneurial orientations. This mirrors the internationalization literature in terms of developments in the organizational learning and export

development approaches, and network/resource dependency theory. Finally, like research in the internationalization field, especially that pertaining to international new ventures, much of the entrepreneurship literature has focused on determining the necessary and sufficient conditions that explain decisions and actions pertaining to the start-up, growth and development of an enterprise, or the creation of value.

Overall therefore, it appears that the intersection of research at the internationalization/entrepreneurship interface is a logical one in that its emergence reflects complementary theoretical interests and empirical developments in both fields. What is evident in each area of research is that entrepreneurship and internationalization are generally accepted to entail processes, and specifically, the behavioral processes associated with the creation of value by assembling a unique package of resources to exploit an opportunity (Morris et al. 2001; Johanson and Vahlne, 2003). Process too, is implicit in McDougall and Oviatt's (2000) definition of international entrepreneurship which, following Covin and Slevin (1991), describes internationalization as a composite of behavior, innovation, proactivity, risk-seeking and value-creation. Thus we have the common foundational element of *behavioral process* from which an integrative conceptualization can be developed.

Behavior, as we shall discuss later in the paper, can be determined from the decisions and actions that occur in response to certain conditions at specific points in time, and which constitute the necessary and sufficient conditions that support theoretical explanation. The time at which, and over which such actions occur provides the link between static and dynamic explanations, and between events and processes. Viewing entrepreneurial internationalization

behavior through a temporal lens presents further opportunity to accommodate multiple theoretical explanations within the same, flexible conceptual models. Therefore, *time* becomes another important foundational element in our conceptualization process.

From this base, we can now proceed through several levels of conceptual development in which core concepts pertaining to the entrepreneurial internationalization process can be identified and unbundled into more finely detailed constructs. Ultimately, these constructs can then be transformed into precise variables and measures relevant for empirical validation and analysis. To elucidate core concepts common to the internationalization and entrepreneurship literatures, we turn to the first level of conceptual development adapted from Weick (1999): simple models.

Simple Models of the Entrepreneurial and Internationalization Processes

Internationalization entails entry into new country markets. As such it may be described as a process of innovation (Andersen, 1993; Casson, 2000). International new ventures have, in particular, been described as especially innovative in their internationalization (Oviatt and McDougall, 1994; Knight and Cavusgil, 2004). Innovation is also central to the field of entrepreneurship (Schumpeter, 1934; Shane and Venkataraman, 2000). Therefore, we begin our conceptual development with the simple model of the entrepreneurial process offered by Brazeal and Herbert (1999). This model integrates distinct concepts from the entrepreneurship literature (innovation, change and creativity), and as seen in Figure 1a, describes how they result in entrepreneurial events. In the model, environmental change, which may be internal or external to

the firm, elicits a cyclical process of response (human volition) that results in innovation (innovation 1). This is classically defined as the successful implementation of creative ideas and as such, is an outcome of a creative or innovative process (innovation 2). The entrepreneurial event involves the separation of the innovation from its predecessor (if any), and its separate exploitation (Brazeal and Herbert, 1999). Of note, this simple model has the potential to include both event and outcome-driven approaches in process-focused research, and may be developed to accommodate a variance approach as described by Van de Ven and Engleman (2004).

Insert Figure 1a and 1b about here

Figure 1a represents entrepreneurship as *proactive behavior* that results in *innovation* as a process, and as an outcome that implicitly has the potential to *create value* through separate exploitation. It also accommodates the process of *change*, which stimulates the process of innovation from which incremental or radical innovation outcomes emerge as entrepreneurial events. Thus, development may be evolutionary or discontinuous. The model parallels the behavioral process described in McDougall and Oviatt's (2000) definition of international entrepreneurship, but while the level of abstraction it presents has the ability to describe the entrepreneurial process within internationalization, it makes no specific reference to that phenomenon.

Drawing on Johanson and Vahlne's (2003) observation of similarities between the entrepreneurship and internationalization processes, and using the Brazeal and Herbert (1999) model as a base, a simple model of the internationalization process can also be developed (Figure

1b). In this model, an internal or external environmental change leads to the adoption of an entry mode in a selected country. As considered in some explanations of the international expansion of the firm, this reflects innovation (Andersen, 1993; Knight and Cavusgil, 2004). From that outcome innovation, a cyclical innovation process involving experiential knowledge and organizational learning occurs. Coupled with further change (resource commitment), this may lead to the adoption of more risky and committed modes in psychologically distant countries (decision/action). Similar to Brazeal and Herbert's (1999) definition of the entrepreneurial event, internationalization events occur when they are exploited separately from their predecessors. Following Van de Ven and Engleman (2004), we see internationalization events as the most valid representation of what occurs in the development and change process that is internationalization. Further support is indicated in Zander's (1994) call for an evolutionary theory of the multinational firm in which he stresses that "certain events" influence the long term evolution of the firm.

Returning again to the terms identified in McDougall and Oviatt's (2000) definition, Figure 1b describes an internationalization process that is *behavioral*, is potentially risk-seeking depending on the radicalness of *innovation processes* and *outcomes* (in terms of entry mode and country), and which potentially *creates value* for the organization through separate exploitation of the internationalization event. This model also accommodates *change* as a result of environmental triggers and as part of an adaptation process in response to organizational learning following the adoption of new forms of business in new countries. Furthermore, it accommodates the occurrence of revolutionary or serendipitous events which may alter the firm's development path, and may be important in accounting for early or sudden

internationalization and the emergence of opportunities such as cross-border acquisitions (Zander, 1994).

Common to both simple models is an evolutionary and potentially discontinuous process determined by innovation, and influenced by environmental change and human volition, action or decision. Figure 1a views human volition and creativity as a cyclical process culminating in innovations marked by the evidence of a recognizable entrepreneurial event. Figure 1b views organizational learning and resource commitment in a similar way, i.e. as cyclical processes culminating in mode and country decisions and actions, marked by the evidence of an internationalization event.

Both models are process-based and describe a rudimentary sequence of behavior which is inherently linear. However, the level of abstraction at which they operate provides no means to distinguish the specific influences of the environment, the firm or the entrepreneur. What they do offer is a number of shared core concepts. These include: *innovation*, *change*, a *cyclical process of behavior*, and culmination in a specific *value-adding event*. Critically, the concept of *time* is implicit in both simple models although not explicitly indicated. The concepts shared between these two models form the first level of conceptual thinking. They also provide the basis for the development of a general model of entrepreneurial internationalization, i.e. the second level of conceptual development.

Developing a General Model of Entrepreneurial Internationalization

Developing Primary Dimensions and Constructs for a General Model

In their discussion on levels of theory complexity, Ofori-Dankwa and Julian (2001) suggest that there are two dimensions to a phenomenon that may serve as building blocks between levels of conceptual abstraction: ‘concept depth’ and ‘concept width’. By way of example, they cite Hock’s (1999) dimensions of memory and language as the building blocks for his work on social diversity and social complexity. Following Ofori-Dankwa and Julian (2001), we argue, on the basis of our earlier discussion on theoretical development relating to international entrepreneurship, that the primary dimensions of entrepreneurial internationalization are: 1) *time*, against which all processes can be described and 2) *behavior*, manifested as an accumulation of actions or events in relation to time. If these primary dimensions are then integrated with the core concepts identified from the two simple models, six basic components relevant to a general model of entrepreneurial internationalization behavior emerge. These are value-added events that manifest as (1) internationalization behavior influenced by (2) the entrepreneur and (3) the firm as moderated by (4) the external environment. The behavioral process is characterized by innovation and change, and consists of actions and decisions that determine the international development and (5) performance of the firm. The entire process is seen as fluid and potentially iterative as a result of learning from behavior and performance. Finally, entrepreneurial internationalization occurs within and is characterized by, aspects of (6) time.

By positioning *time* and *behavior* as concept width and concept depth respectively, we have the potential to view the phenomenon of entrepreneurial internationalization through both temporal and behavioral lenses. Both dimensions are now explained, followed by a discussion of the other four constructs relevant to the general model.

The Primary Dimension of Time

Interestingly, while time is implicit in behavioral research in both internationalization and entrepreneurship (Johanson and Vahlne, 1977, 1990; Brazeal and Herbert, 1999), it is seldom positioned as a primary conceptual dimension to which explicit behavior may be tagged and understood (Ancona et al., 2001). Furthermore, in their review of methodological issues in international entrepreneurship research, Coviello and Jones (2004) highlight a dearth of literature capturing the time-based dynamics of various behaviors and processes pertinent to entrepreneurial internationalization. Time is however, fundamental to internationalization research in that each firm has a history comprised of internationalization events occurring at specific points in time. For example, establishing a new type of cross-border relationship is a landmark in the firm's chronology of internationalization, as is the establishment of a relationship in a new country, or the cessation of a previously established connection. As described by Kutschker et al. (1997), successful internationalization also requires that time is actively managed in terms of order, timing and speed of the process.

We argue that incorporating time as a primary conceptual dimension is essential to understanding entrepreneurial internationalization. This reflects Stevenson and Harmeling's (1990, p. 10) view that: "contingency theory conclusions are not only a function of industry and environment, but must also be a function of time and timing." Also, we believe that entrepreneurship is essentially a behavioral process, and behavior is represented as an accumulation of actions over time (Covin and Slevin, 1991). The firm itself and

internationalization behavior are also functions of time, subject to its passing and influence on the wider environment.

As discussed by Harvey et al. (2000), time is comprised of a number of elements in organizational research. Applying their arguments to entrepreneurial internationalization for example, time can be taken as a simple means of categorization. *Chronological time* is fundamental as it is the same for all firms, and it is likely that firms established in a particular era will differ in their behavior either collectively (compared to firms established in previous eras), or individually (based on micro-level influences). Thus, time-based patterns may emerge. For these reasons, it is important to peg the firm's international activities against a relevant historical backdrop, thus providing a *reference time* (Jones, 1999; 2001; Autio et al., 2000).

At a descriptive level, internationalization is a process and therefore, by definition, internationalization behavior takes place over time, manifest in a *time sequence* in which events occur (Luostarinen et al., 1994; Jones, 2001). Also, firms are founded at specific dates in time, and internationalization activities occur over discernible *time periods* within a dynamic environment, with various activities differing in their *duration* (Reuber and Fischer, 1999; Westhead et al., 2001).

At an interpretative level, the firm's internationalization activities may be more or less concentrated at a specific reference time or over a time period (Jones, 1999; 2001), and therefore the notion of *time intensity* has relevance. Hurmerinta-Peltomäki (2003) also suggests that time has a *cyclical* dimension, with no fixed direction in that it can roll back to some objective and

historical reference. Likewise, learning from past internationalization experiences may feed forward into present and future internationalization decisions and actions.

Time is also a key element that distinguishes studies focused on international new ventures (INVs) from studies of SME internationalization. At a general level, studies of INVs have focused on the early stages of internationalization in terms of chronology. At a more specific level, INVs are distinguished from other SMEs in terms of: 1) the time taken to commence international activity (Reuber and Fischer, 1997; McNaughton, 2000), and 2) the speed or rate at which internationalization develops (Coviello and Munro, 1997; Jones, 1999). As noted by Autio et al. (2000) however, these characteristics have not been fully examined in the literature. This suggests that a general model of entrepreneurial internationalization behavior might also incorporate the *gap time* between the establishment of different forms of international activities, thereby accommodating a measure of the *rate* of internationalization, i.e. the speed of international development over time.

Overall, by including the conceptual dimension of time in the general model, we support Andersen (1993; 1997), Zander (1994), Zahra et al. (2000) and Coviello and Jones (2004) in their suggestions that research on internationalization should explicitly incorporate the role and influence of time.

The Primary Dimension of Behavior

Covin and Slevin (1991, p. 7) argue that behavior is the "...central and essential element in the entrepreneurial process," and that an organization's actions (or behavior) are what make it

entrepreneurial. In the context of the general model, the question arising from Covin and Slevin's discussion is the extent to which such behavior can be identified, and following from this, whether or not entrepreneurial internationalization behavior manifests itself in ways that can be measured. As noted by Covin and Slevin (1991, p. 8) however:

"...behavior is, by definition, overt and demonstrable. Knowing the behavioral manifestations of entrepreneurship, we can reliably, verifiably, and objectively measure the entrepreneurial level of the firm."

By inference, this paper argues that by understanding the behavioral evidence of internationalization, we should be able to reliably measure the entrepreneurial internationalization of firms based on analysis of their patterns of behavior.

Like entrepreneurial behavior, internationalization behavior is overt and demonstrable, and manifest in recognizable ways. Indeed, the evidence of internationalization behavior is readily identifiable in measures used in the traditional internationalization literature. Perhaps the most frequently used measures include modes of cross-border activity (foreign market entry modes), the countries of involvement, and time-related dimensions (reported variously and somewhat loosely as, for example, stages of development or steps in a process). Andersen (1993; 1997) argues that country selection and entry mode choice are the key strategic decisions in relation to a firm's internationalization, and suggests that what differentiates internationalization from other growth processes is the transference of goods, services or resources across national borders. Interestingly however, goods, services and resources tend to be treated as explanatory variables in the literature in that they are used to explain differences in internationalization patterns, rather than as evidence that the process has taken place. For example, Ekeledo and

Sivakumar (1998) propose that entry-mode choice and variations in these choices will be influenced by the nature of the firm's product offer (distinguished as goods, hard services and soft services). Furthermore, rapid internationalization has repeatedly been found to occur amongst high technology firms, and those seeking to augment their resource base through collaborative activity (Boter and Holmquist, 1996; Coviello and Munro, 1995, 1997).

Therefore, while the range of goods, services and resources transferred may indicate whether a firm's internationalization is concentrated in a specific line of business or represents a more comprehensive range of business interests, we view the primary evidence of internationalization behavior to be:

1. The mode of transference (cross-border business modes);
2. The place of transference (country); and
3. The time at which it occurs.

In support of using these three characteristics as evidence of internationalization behavior, they are observable or at least able to be recorded. As Andersen (1997) indicates, this will increase the robustness of any predictions made. The following section discusses how the first two characteristics potentially indicate evidence of internationalization behavior, with time discussed in the previous section.

The *mode of transference*, i.e. the cross-border business activity commonly referred to as foreign market entry modes, has been well documented in the internationalization literature. Formal cross-border modes include the conventional outward entry modes of exporting, licensing and foreign direct investment (see Young et al., 1989 for a comprehensive discussion).

More recent studies have also included inward and co-operative modes (Luostarinen et al., 1994; Jones, 1999), as well as service firm entry modes (Erramilli, 1989; Ekeledo and Sivakumar, 1998).

At a deeper level, the literature also discusses foreign market entry modes in terms of levels of risk and resource commitment (Hill et al., 1990), levels of fixed and variable cost and return on investment (Luostarinen, 1980; Buckley and Casson, 1985), levels of involvement and organizational commitment (Johanson and Vahlne, 1977; Welch and Luostarinen, 1988), degree of control (Anderson and Gatignon, 1986) and locus of control (Luostarinen 1980; Young et al., 1989). Importantly, these studies imply naturally occurring hierarchies of modes as discussed by Pan and Tse (2000). As such, this literature supports the assumptions of the conventional incremental pattern of internationalization which suggests that, over time, international activity evolves through a taxonomy of modes ordered by increasing risk, cost, commitment, control, return on investment and so on, as the firm's size, experience and knowledge grow.

However, rather than place modes into predetermined ranks or assumptions of order, we suggest that it is more appropriate to incorporate known measures of cross-border business modes to determine representative composite measures of cross-border activity undertaken by a firm, in relation to time. For example, a composite of the range of modes and range of countries established at a particular internationalization event, or between events. Such composite measures also provide a useful proxy of the innovativeness of each mode or modes, i.e. the extent to which an internationalization event is a radical innovation from any predecessor as illustrated in the simple model shown in Figure 1b, if taken to a level of detail that incorporates

levels of risk, cost, control and commitment etc. We argue that the firm's cross-border business modes are important because they provide evidence that value-creating activity has taken place (McDougall and Oviatt, 2000), the point of time it was established, and the country with which the business occurs. Furthermore, discrete measures of entry modes can be used to construct indicators of the extent of internationalization behavior such as, for example, functional diversity (range of mode choice) and functional time intensity (range of modes in relation to time).

Turning to the place or *country of transference* as evidence of internationalization behavior, the choice of country has generally been described in terms of psychic and economic distance (Johanson and Wiedersheim-Paul, 1975; Luostarinen, 1980), geographic distance (Carlson, 1974) and cultural distance from the internationalizing firm (Kogut and Singh, 1988; Benito and Gripsrud, 1992). Together, these measures reflect the notion of 'country distance'. Country distance is indicative of the extent and reach of the firm's internationalization activities, and can be used to indicate country diversity and the intensity of a firm's internationalization activities. Thus, country distance can provide a proxy measure for the radicalness of internationalization events from any predecessors.

Positioning Time and Behavior in the General Model

The two primary dimensions of time and behavior underpin the general model of entrepreneurial internationalization presented in Figure 2. This model depicts entrepreneurial internationalization as it might be experienced by any firm, in any industry, under any circumstance, and thus is context free. It further develops the simple model (Figure 1b) by making explicit the composition of internationalization events. With the incorporation of time as

a measurable dimension against which internationalization may be examined, it also overcomes the inherent linearity of the simple model.

Insert Figure 2 about here

The dimension of time is illustrated as a continuous flow by means of the widely recognized notion of a time-line, illustrated in the general model as an all-embracing arrow pointing from left to right. Diagrammatically, two dimensions of time are illustrated: chronological time shown as a continuous horizontal timeline, and reference time indicated as points on the time-line at which events associated with the firm's internationalization occur. Distance between different time points measures the duration of an activity or process.

Firms are founded at specific reference points in time, which may or may not coincide with the commencement of internationalization behavior. Thus, internationalization behavior is mapped as its evidence occurs in relation to time, illustrated in the general model as a floating box situated over a portion of the time-line, and to some extent in parallel with aspects of the entrepreneurial process and the firm. In addition to the key dimensions therefore, the other constructs of the model include the entrepreneur, the firm and firm performance. As discussed in the next section, all operate with the external environment, and are influenced by the cyclical effect of time and forces of change.

Each establishment of a new business mode is evidence of innovation in internationalization behavior, as is the establishment of an existing business mode in a country

new to the firm. These are illustrated in Figure 2 as events at specific reference points in time, and as processes that occur for specific durations of time. Examples of modes might include the setting up of an export arrangement (ex), licensing out technology to a foreign partner (lo) or setting up a production subsidiary off-shore (ps). Further, the country in which the event occurs is illustrated vertically as occurring at a specified country distance from the firm's domestic base. Together with each type of cross-border event, this indicates whether the innovation is radical or incremental. Internationalization may therefore be captured as patterns of behavior, formed by an accumulation of evidence manifest as events at specific reference points in time. Following Kutschker et al. (1997), we describe this manifestation of evidence as a fingerprint pattern of internationalization. That is, a static impression indicated by evidence at a specific point in time.

We define the *fingerprint pattern* in the general model as a composite of the number and range of cross-border business modes established by the firm, and the number and distance of countries with which those modes were established, at a specific point in time. Changes in the composition of business modes and countries over a period of time are described in the general model as dynamic *profiles* of the firm's internationalization behavior. Our purpose and definition differs from Kutschker et al.(1997) in that we emphasize mode and country diversity as indicative of entrepreneurial internationalization behavior patterns while the latter authors emphasize integration between business activities (modes and countries) as indicative of the configuration of the firm's international expansion path. In common with Kutschker et al. (1997), we distinguish static "fingerprint patterns" from dynamic "profiles" or processes. .

The purpose of the general model is therefore, not to predict which mode will be established when or where, but to characterize or profile firms according to their unique patterns and profiles of internationalization. Of note, the extant literature contains examples of attempts to profile aspects of internationalization behavior (e.g. Oviatt and McDougall, 1994; Reuber and Fischer, 1997; Zahra et al., 2000), however these efforts focus on a few variables at specific points in time (such as the study date), and are often embedded in performance indicators. That is, as measures of the result of the behavior, rather than as a profile of the behavior itself. The usefulness of profiling behavior however, is profound in that it “explains why firms differ in their internationalization profile (e.g. entry mode chosen, number of foreign markets served) at a specific time *t*” (Andersen, 1997, p. 30). It also describes the international evolution of the firm and thus provides a developmental foundation for an evolutionary theory of multinational enterprise (Zander, 1994).

Drawing on Jones (1999), we propose that such patterns and profiles may be described in relation to the composition of modes and countries at any reference time or over a given time period, the rate at which new events occur, the sequence in which they occur, the intensity of activity over time, and whether events occur early or late in the time period or are equally distributed. Further depth in understanding may emerge from analysis of the gap time between events, their duration and cyclical time effects, all of which underpin the processes of innovation and learning.

Interaction of the dimensions of time and internationalization behavior in the general model specifically indicates:

1. An entrepreneurial event (E) consisting of the establishment of the firm at a specific reference point in time (t).
2. An internationalization event (IE) measured from any reference point in time at which the firm establishes, or ceases a new cross-national business mode (M), or enters a country new to it (country distance).
3. A fingerprint pattern at a specific reference point in time that reflects an accumulation of evidence of internationalization behavior as manifest in the business modes established and the countries to which transfer is made.
4. A dynamic profile of streams of events (internationalization evidence) that reflects change and developments in the firm's internationalization behavior.

Following from this, entrepreneurial internationalization behavior is influenced by, and in turn, influences a number of important constructs. These are outlined in the next section.

Positioning Contextual Constructs in the General Model

To this point, our emphasis has been on describing the two process dimensions, time and internationalization behavior, that are central to the general model of entrepreneurial internationalization. There are however, a number of other contextual elements that are likely to act as antecedent, moderating and outcome variables in relation to behavior and time. As discussed in the international business literature (Calof and Beamish, 1995; Ekeledo and Sivakumar; 1998), the entrepreneurship literature (Covin and Slevin, 1989; Chandler and Hanks, 1994; Lumpkin and Dess, 1996; Greene and Brown, 1997), and the emerging international entrepreneurship literature (Oviatt and McDougall, 1994; Bloodgood, et al., 1996; Madsen and Servais, 1997; Reuber and Fischer, 1997; Yli-Renko et al., 2002), these generally include firm performance, the external environment, the firm or internal environment, and the manager or management team.

As regards the manager/management team, it is worth noting that although Covin and Slevin (1991, p. 8) acknowledge: "...individual level behavior on the part of the entrepreneur may affect an organization's actions, and in many cases, the two will be synonymous," their widely used behavioral model of entrepreneurship focuses on the firm level (of larger firms) rather than that of the individual entrepreneur. However, Madsen and Servais (1997) argue that the entrepreneur is a key antecedent of a born global, with Shrader et al. (2000, p. 1244) concluding that in the context of international new ventures, the "...locus of relevant foreign-market knowledge may be more with the entrepreneur or the entrepreneurial team than the organizational decision-making system." Similar conclusions have been drawn by Ibeh (2003) and Kundu and Katz (2003). Extending this argument further, Kuemmerle (2002) posits that the entrepreneur may choose to establish the international new venture at a location where his/her resources and knowledge can best be allocated and managed, and from where knowledge may be augmented and exploited towards international growth.

Therefore, in developing the general model to ultimately provide a foundation for more precise contingency models across firm size, we argue that key constructs to include alongside the primary process dimensions of time and internationalization behavior are performance, the firm, the environment, and specifically, the entrepreneur. This follows Chrisman et al. (1999), who argue that the entrepreneur's personality, skills, and values will affect their behaviors and decisions. In turn, the key decisions, strategies, and management practices of the entrepreneur will shape the performance of the venture (Cooper et al., 1994). Thus, the firm has an entrepreneurial influence that serves to combine capabilities, competencies and resources (Eisenhardt and Martin, 2000) as part of the strategic and tactical activity of the organization.

This includes specific decisions, processes and actions that result in or contribute to internationalization. However, the relationship between the entrepreneur and the firm differs between firms and changes over time. This is represented in Figure 2 as a variable relationship boundary (signified by a broken line). The individual entrepreneur and firm-level entrepreneurial behavior are expected to influence internationalization behavior, both together and separately.

The relationship between the entrepreneur, the firm and the external environment is viewed from a systems perspective and assumes continuous input, process, output and feedback activity over time, whereby the external environment acts as a moderator on internationalization behavior (Kast and Rosenzweig, 1974). Figure 2 therefore shows the boundary between the entrepreneur, the firm and the external environment as permeable (signified by a heavy broken line), thus accommodating continuous interaction with, and response to, the outside world. External associations such as formal cross-border entry modes are seen here as part of that interaction (as indicated on two dimensions, time and country distance). The view taken is that the entrepreneur and firm consciously, or by osmosis, draw in and draw on, knowledge and resources from external associations, whilst making a similar contribution outwards. In a similar manner, the entrepreneur and firm learn from their organization's performance, leading to knowledge creation, the foundation of new organizational competencies, innovation processes and outcomes (Zahra et al., 1999).

Interaction of the entrepreneur, the firm and the external environment with the dimensions of time and internationalization behavior in the general model specifically indicates:

5. A dynamic process of innovation in which internationalization behavior is indicative of the *entrepreneur's and firm's response* to a continuous process of change (C) in the composition of internal and external factors in relation to time, to learning and to experiential knowledge.

To identify relevant variables underlying the four constructs added to the general model, we draw on the international business, entrepreneurship and international entrepreneurship literatures. As summarized in Table 1, firm-specific internationalization behavior is potentially influenced by the entrepreneur's unique combination of philosophic views, social capital and human capital.

Insert Table 1 about here

The integration of literature summarized in Table 1 also suggests that at the firm-level, likely influences are the firm's structure, its resource base (both tangible and intangible), the nature of the firm's product offer and its entrepreneurial orientation. Of note, while some consider internationalization behavior as an entrepreneurial strategy per se (Lumpkin and Dess, 1996; Lu and Beamish, 2001), and others find that strategic actions influence internationalization behavior (McDougall, 1989; Calof and Beamish, 1995; Bloodgood et al., 1996), strategy is not accommodated as a specific variable in the general model. Rather, we follow Chell (2001) in arguing that strategy should be inferred post-hoc from the emergent patterns and dynamic profiles of internationalization behavior. Therefore, the model implicitly indicates:

6. A dynamic process of innovation in which internationalization behavior is indicative of a *firm's strategic response* to a continuous process of change (C) in the composition of internal and external factors in relation to time, to learning and to experiential knowledge.

Turning to the environment, the international business and entrepreneurship literatures are particularly rich in their discussion of this construct as a driver of change. Focusing on the most prevalent and comprehensive factors discussed across both fields, the general model incorporates a range of potential influences from Table 1. The first set focuses on market characteristics, the second set on competitive factors, and the third set on industry characteristics.

Finally, as noted by Cooper (1993, p. 244), measuring firm performance is a challenge, and "...diversity among entrepreneurial firms should be kept in mind." The general model suggests that the firm's fingerprint pattern and profile of internationalization behavior at a point in time and over time will directly influence firm performance in terms of both financial and non-financial measures (see Table 1). Importantly, any such measures also need to allow for examination of both larger public firms and smaller private firms. Furthermore, the general model allows for the firm's performance in terms of learning to influence the firm and entrepreneur over time through cyclical feedback, and thus, moderate the firm's ongoing internationalization behavior. Therefore, the general model specifically indicates:

7. Firm performance indicators (P) that show the effect of internationalization behavior at any given point in time, or changes in performance over any period in time.

Summary and Premises of the General Model

The general model of entrepreneurial internationalization behavior (Figure 2) positions the potential variables influencing internationalization within the primary dimensions of time and behavior. As such, it can accommodate an array of relationships combining various entrepreneurial and firm factors, environmental factors and performance factors. It also builds on

the five core concepts common to the simple models. Thus it depicts a *process of cyclical behavior* involving the entrepreneur and firm, and moderated by the external environment within which the firm operates. As a specific example, *environmental change* may trigger change in internationalization behavior (Zander, 1994). This behavior is demonstrated by a firm's composite pattern of international activities over time.

The evidence of internationalization occurs as *value-creating events*. That is, behavior manifest at points in time (as events), in locations (countries), consisting of cross-border business modes established between the firm and organizations/individuals in foreign countries. The *time* dimension is key and marks the distinction between decisions emerging from process, and processes triggered by decisions or streams of actions. It also marks complementarity between static economic-based explanations at points in time (e.g. internalization/transaction-cost and resource-based approaches), and more dynamic evolutionary behavioral explanation of processes, over periods of time (e.g. the network dependency, organization learning and innovation approaches).

Innovation in the form of cross-border activity may commence or cease at any time, leading to a complex pattern of change in internationalization decisions, processes and activities. The relative permeability of a firm's boundaries may be indicated by the ways in which it seeks out, establishes and manages its points of contact, and the ways these are used to augment the firm's resource and knowledge base. It is likely that firms with more boundary permeability will internationalize more rapidly and more successfully than those with boundaries that are relatively less permeable, i.e. firms that are less responsive to change.

Overall, different fingerprints of internationalization behavior indicate differences between firms, and as internationalization behavior evolves over time, firm performance will impact future behavior through an iterative process of organizational learning. This results in a dynamic profile of internationalization behavior for each firm (Jones, 1999), and as such, provides a basis by which firms may be grouped and compared. Importantly, the general model reflects internationalization as a long-term entrepreneurial behavioral phenomenon unique to the experiences of individual firms, and thus avoids prescribing steps or stages in a pre-ordained view of international expansion. As with the simple model, the general model allows for event and outcome-driven approaches to be applied in process-focused research. With the inclusion of entrepreneurial, firm, environmental and performance factors, it may be further developed for use in variance approaches (Van de Ven and Engleman, 2004). This is demonstrated in the third and final level of conceptualization where precise models are discussed.

Developing Precise Models

Following from the general model's holistic description of internationalization as an entrepreneurial process of behavior over time, it is now possible to develop context-specific models useful for focused empirical investigation of a narrow, more manageable set of constructs. This reflects the variance approach noted previously. As an illustration of this third level of the conceptual development process, we present one example of a precise model (see Figure 3). In developing this model, we select a specific set of constructs from the general model and Table 1. Here, the context is defined to be international new ventures. For this example, we

have chosen four variables: the entrepreneur, organizational structure, internationalization behavior and performance. Focusing on these variables allows researchers to examine a small ‘piece of the puzzle’ that is entrepreneurial internationalization.

Insert Figure 3 about here

Central to Figure 3 is the INV’s internationalization behavior, captured as both a fingerprint pattern and a profile over time. As previously noted in the general model, the fingerprint of internationalization behavior includes functional diversity (mode choice) and country diversity (geographic, economic and cultural distance), in relation to time. The firm’s fingerprint therefore provides a measure of the firm’s international involvement at a given point in time and can be profiled and interpreted over specified time periods, particularly in terms of assessing (e.g.) the INV’s rate, intensity and/or duration of internationalization and related events.

As antecedents to internationalization behavior, we follow the arguments of Cooper et al. (1994) and Chrisman et al. (1999) from the entrepreneurship literature, and argue that in the INV, the entrepreneur will be the driving influence on the firm’s structure. In turn, firm structure will shape the firm’s internationalization behavior, and ultimately, firm performance. This view also reflects the arguments of Madsen and Servais (1997) and Shrader et al. (2000) which place the entrepreneur as the key antecedent of an INV.

Looking at these variables in greater detail, we draw from Table 1 and suggest that in the context of this example, the entrepreneur's levels of innovativeness and risk tolerance will influence his/her firm's organizational structure (drawing on Lumpkin and Dess, 1996) as will their managerial competence (Chandler and Hanks, 1994). For example, we suggest that while the entrepreneur is typically assumed to drive his/her firm in a centralized manner and with strong leadership, s/he is also likely to create an organization structure that allows for innovativeness, risk-taking and creativity. Thus, the characteristics of the entrepreneur in an INV will impact the firm's level of organicity.

In turn, the extent to which a firm is organic vs. mechanistic in structure will impact firm behavior. In the context of internationalization, this relates to (e.g.) the rate, gap time, and time intensity of internationalization. Also, the degree of conventionality reflected in organization structure is also likely to be associated with the place and mode of transference (i.e. market choice and mode of entry), and the degree to which the internationalization event represents a radical innovation for the firm.

Finally, differences in internationalization behavior will impact performance, both in terms of market success and organization learning, i.e. the "process of assimilating new knowledge into the organization's knowledge base" (Autio et al. 2000, p. 911). This learning is arguably based on experiential knowledge generated through internationalization behavior. However, rather than position learning as an intermediate variable between internationalization behavior and performance as done by Zahra et al. (2000), we argue that there exists a learning loop providing experience and performance-based knowledge into the decision process, at both

the level of the entrepreneur and the firm, cyclically over time (Athanassiou and Nigh, 2000; Hurmerinta-Peltomäki, 2003).

Overall, this particular example of a precise model is specific to the context of a certain type of firm: the INV. Beyond the primary process dimensions of time and internationalization behavior, it comprises a select set of variables drawn from the list outlined in Table 1. A second (and related) precise model might also incorporate environmental hostility and dynamism in a moderating-effects test. Alternatively, if a researcher was interested in understanding how the international new venture compares with more established firms, firm-level measures such as organizational resources and entrepreneurial orientation might be introduced as antecedents to internationalization behavior, with firms assessed at various stages of the lifecycle (e.g. start-up, early internationalization, late internationalization). If entrepreneur-level characteristics were included, interesting interaction-effects or independent-effects models could also be tested. Yet another example of a precise model might assess completely different aspects of the key constructs from Table 1 such as relationships between the firm's network resources and its internationalization behavior. More specifically, research could examine the extent to which network structure and internationalization behavior are self-reinforcing. That is, how network structure influences internationalization and vice versa, over time. Given much of the extant network research has focused on technology-based firms (e.g. software or 'hard service' organizations), this analysis could compare firms with different product offers (e.g. goods vs. hard services vs. soft services) or firms from industries with different degrees of knowledge and/or technological intensity.

These illustrative examples provide some sense of the range of time-based entrepreneurial internationalization research that is possible. As precise models examining component parts of the general model evolve, a holistic understanding of entrepreneurial internationalization behavior will emerge, informing both the international business and entrepreneurship literatures.

Discussion

This paper presents a three-level process of conceptual development. This first entailed the identification of two simple models of entrepreneurship and internationalization as behavioral processes, and the identification of core concepts common to both fields. Second, the shared concepts were used in the development of a general model of entrepreneurial internationalization comprised of two primary process dimensions (time and behavior), and four key constructs (the entrepreneur, firm, environment and performance). To illustrate how the general model provides a basis for development of precise, context-specific contingency models, we detailed one example of such a model as the third level of conceptual development, and highlighted a number of other possibilities for precise models.

Our general premise is that to develop a unifying direction for international entrepreneurship researchers interested in internationalization, it is essential to first understand the basic commonalities of the international and entrepreneurship literatures. Then, rather than moving immediately to precise models, an evolutionary process of conceptual development is more helpful, moving from the simple to the general to the precise. This approach also reflects

the idea that multi-theoretical perspectives are useful in understanding complex social phenomena such as entrepreneurial internationalization behavior. Our conceptualization is sufficiently flexible to accommodate the necessary and sufficient conditions that influence and lend explanation to a firm's decisions and actions, and also the dynamic processes of entrepreneurial internationalization behavior over time. Consequently, it also lays a foundational framework for the development of an evolutionary theory of multinational firms.

Importantly, our arguments provide foundation for the development of an entrepreneurial theory of internationalization, where entrepreneurship and internationalization are seen as interdependent processes. Specifically, we also establish internationalization as a firm level entrepreneurial behavior manifested by events and outcomes in relation to time. This is accomplished through our three levels of conceptual development whereby the internationalization literature is informed by concepts and ideas imported from the complementary field of entrepreneurship. We also incorporate a temporal focus, arguing that entrepreneurial internationalization is both time-based and time-dependent. Thus, we delineate the dimension of time as critical to internationalization research. Similarly, we highlight the notion of the cyclical effect of time in respect of how the environment, firm and entrepreneur interact and learn to impact internationalization behavior. Emphasis is also placed on defining internationalization behavior per se, where it is proposed to be a phenomenon determined by and manifest in measurable evidence represented as a firm's fingerprint pattern and profile. The discussion also distinguishes between behavior and strategy in that the general model explicitly delineates the former and suggests that the latter may be determined post-hoc from interpretation of internationalization behavior patterns and profiles.

We also suggest that entrepreneurial internationalization is linked, directly and cyclically, to various aspects of firm performance, and our arguments distinguish between evidence of internationalization behavior (fingerprints and profiles) and the outcome of that behavior i.e. firm performance. Critically, our view accounts for the competencies and resources specific to the entrepreneur, and encourages future investigation of the entrepreneur's influence along with those of the firm and environment. Finally, the discussion regarding precise models illustrates how international entrepreneurship researchers can draw from the general model to then focus on narrow or precise models in order to understand specific aspects of entrepreneurial internationalization behavior over time. Such precise models can be used for the development and testing of individual hypotheses, allowing researchers to focus on fine detail and specifically-defined constructs and measures. Importantly, these constructs and measures can be grounded in the definitions derived from the core concepts underpinning the integrative process of conceptual development presented here. Thus, the recommendations of both McDougall and Oviatt (2000) and Buckley and Chapman (1996) can be implemented.

Limitations and Research Implications

In moving forward with international entrepreneurship research, we acknowledge a number of limitations with the outcomes of our conceptual development. First, we chose the concepts of *process* and *time* as the initial foundations for our integration of the international and entrepreneurship literatures and our assessment of the simple models. While we believe this is most relevant, we recognize that other bases for integration might exist. These should be drawn from further evaluation of the classic contributions from each field. Second, the general model is

purposefully broad and integrative. It is therefore comprised of multiple general constructs. We suggest that beyond the primary dimensions of time and internationalization behavior, the likely antecedent, outcome and moderating variables are summarized in Table 1. However, we also recognize that there is scope for additional work to refine the composition of these variables, and ensure that measures are operationally defined in a manner appropriate to international entrepreneurship research.

Finally, testing the general model in its entirety within a single research study presents a daunting and prohibitive task. Indeed, it is not our intent to offer the general model as one which is testable. Rather, we have positioned the general model within the overall process of conceptual development as essentially, a means to an end. That is, as a basis for use by international entrepreneurship researchers in developing narrower and more precise, context-focused models for empirical investigation. We feel there is clear opportunity for developing a range of precise models that fall within the umbrella of the general model. This is however, not to suggest that the extant literature does not contribute to our understanding of entrepreneurial internationalization. Rather, it provides a critical base from which to move forward with time-based research. As a simple example, the recent work of Ibeh (2003) examines individual, firm and industry influences on the decision to create an export venture in small firms. These are of course, variables encompassed by the general model, but as yet, Ibeh's (2003) work does not account for decisions or behavior over time. Replication of this work by, for example, tracking Ibeh's sample firms, will provide one step to understanding the dynamics of internationalization antecedents, behavior and outcomes.

Ideally, we suggest that future research might not only examine component parts of the general model, but treat such parts as pieces of an emerging puzzle whereby adding one piece at a time reveals the nature of the larger process in question. However, as discussed in Coviello and Jones (2004) effort is needed to ensure that consistent definitions and measures are used across studies in order to truly advance an integrated understanding of entrepreneurial internationalization behavior. Additional work is required to develop a commonly accepted and rigorous set of definitions for the field.

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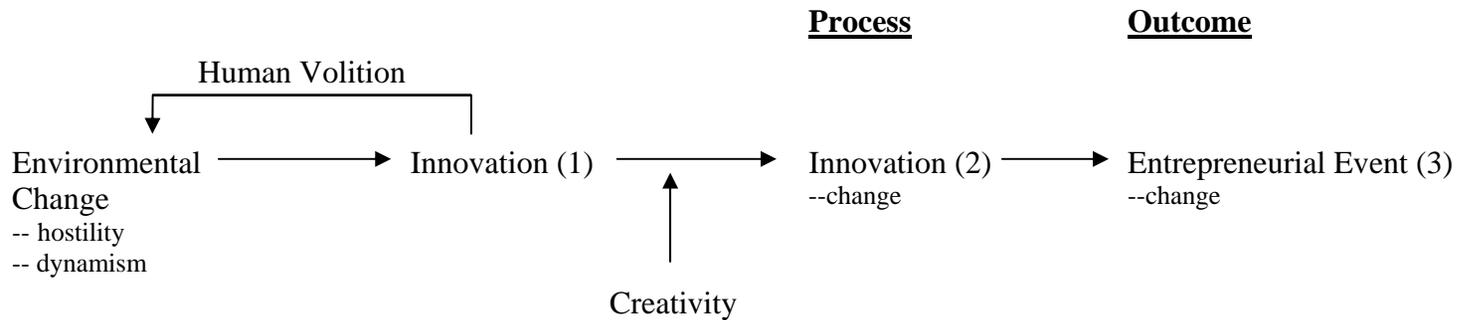
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Table 1: Contextual Constructs Relevant to the General Model of Entrepreneurial Internationalization

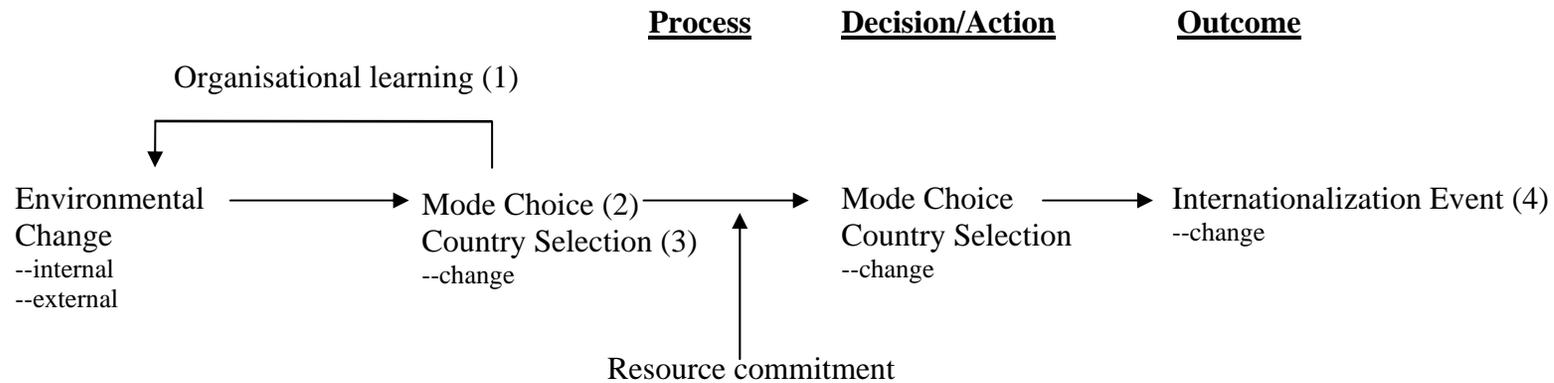
Variable	Meaning	Source Examples
<i>The Entrepreneur</i>		
• Philosophic View	The value placed by the entrepreneur on internationalization. Also their perceptions and attitudes regarding internationalization risk, cost, profit, potential and complexity.	Cavusgil, 1984; Covin and Slevin, 1991; Calof and Beamish, 1995; Leonidou et al., 1998; Preece et al., 1998
• Social Capital	The entrepreneur's proprietary network relationships such as communication/social networks, informal contacts.	Birley, 1985; Jarillo, 1989; Coviello and Munro, 1995, 1997; Ellis, 2000; Yli-Renko et al., 2002
• Human Capital	The entrepreneur's innovativeness, tolerance for ambiguity/flexibility, commitment, need for achievement. Also their general perception of risk and risk tolerance, entrepreneurial and management competence, international experience, education and language proficiency.	Johanson and Vahlne, 1977; 1990; Chandler and Hanks, 1994; Cooper et al., 1994; McDougall et al., 1994; Bloodgood et al., 1996; Lumpkin and Dess, 1996; Reuber and Fischer, 1997; Leonidou et al., 1998; Westhead et al., 2001; Kuemmerle, 2002
<i>The Firm</i>		
• Structure	The firm's level of formalization, centralization and process coordination; organic vs. mechanistic.	Covin and Slevin, 1991; Jolly et al., 1992; McDougall et al., 1994; Lumpkin and Dess, 1996; Oviatt and McDougall, 1997
• Resources	The firm's financial, physical and technology resources (tangible), as well as human and organizational/relational/network resources (intangible).	Chandler and Hanks, 1994; Calof and Beamish, 1995; Coviello and Munro, 1995, 1997; Greene and Brown, 1997; Eisenhardt and Martin, 2000; Yli-Renko et al., 2001; Kuemmerle, 2002
• Product Offer	The product's degree of inseparability (e.g. goods vs. hard services vs. soft services).	Erramilli, 1989; Ekeledo and Sivakumar, 1998
• Entrepreneurial Orientation	The firm's strategic posture in terms of innovativeness, risk-taking and being proactive, as well as competitive aggressiveness and autonomy.	Miller, 1983; Covin and Slevin, 1989; Yeoh and Jeong, 1995; Lumpkin and Dess, 1996; Kuemmerle, 2002; Ibeh, 2003; Knight and Cavusgil, 2004
<i>The Environment</i>		
• Market Characteristics	The market's size, potential and degree of internationalization (both domestic and foreign).	Johanson and Mattsson, 1988; Calof and Beamish, 1995; Madsen and Servais, 1997; Oviatt and McDougall, 1997; Ekeledo and Sivakumar, 1998
• Industry Characteristics	The industry's degree of internationalization, knowledge intensity and technological intensity.	Johanson and Mattsson, 1988; Aaby and Slater, 1989; Oviatt and McDougall, 1994; 1997; Coviello and Munro, 1997; Madsen and Servais, 1997; Reuber and Fischer, 1997; Zahra et al., 2000; Bell et al., 2003
• Environmental Characteristics	The competitive environment's dynamism, hostility and intensity.	McDougall, 1989; Covin and Slevin, 1991; Chandler and Hanks, 1994; Becherer and Maurer, 1997; Zahra et al., 1997; Ekeledo and Sivakumar, 1998
<i>Performance</i>		
• Financial Measures	Growth and profitability (absolute levels, relative to competition and/or relative to expectations).	Covin and Slevin, 1990; Brush and Vanderwerf, 1992; Bloodgood et al., 1996; Wiklund, 1999; Zahra et al., 2000
• Non-financial Measures	Learning, experiential knowledge creation.	Johanson and Vahlne, 1977; Covin and Slevin, 1989; 1990; Zahra et al., 1999; Autio et al., 2000

Figure 1A: A Simple Model of the Entrepreneurial Process (Brazeal and Herbert, 1999: 32)



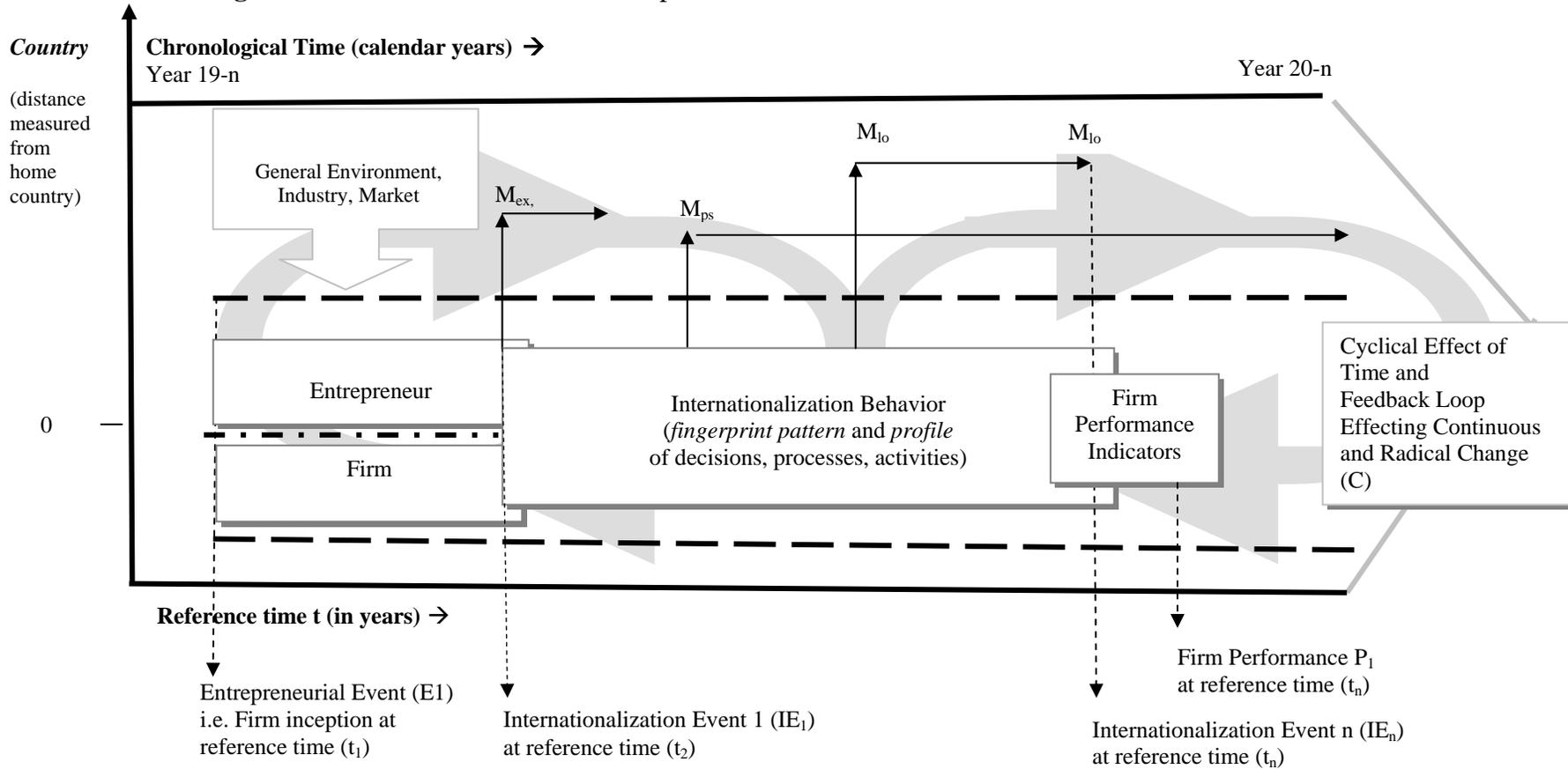
Note: Innovation (1) is housed in the technology literature
 Innovation (2) is housed in the psychology literature
 Entrepreneurial event (3) is housed in the business literature

Figure 1B: A Simple Model of the Internationalization Process



Note: Organisational Learning (1) is implicit in the internationalization process literature
 Mode choice (2) and country selection (3) are key in internalisation & export development literatures
 Entrepreneurial event (4) is likely to be key to internationalization as entrepreneurial behavior

Figure 2: A General Model of the Entrepreneurial Internationalization Process



Key: Boundary Lines and Time-Based Processes		Key: Evidence of Internationalization and Entrepreneurial Events	
C	Continuous and Radical change	E	Entrepreneurial Event
— —	Permeable boundary between the primary, firm specific variables, and the external environment	IE	Internationalization Event
— — .	Relationship boundary and interface between the entrepreneur and the firm	t	Reference Time
→	Duration of cross-border activity mode.	P	Firm Performance
		M	Cross-border business mode, e.g. export (ex), production subsidiary (ps), license-out (lo) etc.
		↓	Indicates firm specific chronological date, and reference time on time-line
		↑	Country (distance indicated by arrow length) of cross border activity

Figure 3: Example of a Precise Model for Empirical Examination

