Internationalization of SMES as a Dynamic Adaptive System: Towards a Theoretical Model

Abstract
This paper adopts a dynamic open complex adaptive system, comprised of three layers, reflecting the entrepreneur(s) (or entrepreneurial teams), the firm(s) and the market(s) to capture the true inter-relations and interactions of entities within a layer and across them. After a brief review of the theoretical underpinning of each layer, the interdependencies and interactions among layers are highlighted. This paper argues that extant theory has abstracted from such dependencies and therefore our understanding of firms’ internationalization is incomplete and at best partial. The proposed grounded framework lays the foundation for development of a unified theory of Internationalization.

Introduction
The primary objective of this article is to propose an integrative meta, or macro, framework, grounded in the extant theory, to permit for a gradual integration of the various fragmented components of Internationalization theory in international Business (IB). Naturally, an integrated and unified theory is far beyond one article. However, our over-riding aim in proposing a theoretically-grounded framework is threefold: to present a basic theoretical foundation on which further developments can be built; to stimulate scholarly thoughts, including debate, for conducting pertinent systematic research; and also to provide a potential foundation for building a unified body of theory in IB in general and International Entrepreneurship in particular.

Additional objectives of this article are: i) to briefly examine arguments pointing towards the components of a potential framework, ii) and to present a framework in terms of its various components and explore its potential contributions. The structure of this article is as follows. Following this brief introduction, preliminary arguments highlighting the need for a grounded theoretical framework, to provide a theoretical context for research and further development of integrated theory, is presented. The major characteristics and various components of a framework based on dynamic open complex adaptive systems (DOCAS) are presented next, followed by a critical examination of the three components of the framework in relation to the extant literature. This examination is designed to find confirming support or evidence for re-evaluation of the future direction of the framework. Conclusions and implications are presented last.

Towards an Organizing Meta-Framework
We propose a layered, interactive, adaptive meta-framework following, and also based on, the basic tenets of dynamic open complex adaptive systems (Holbrook 2003; Stacey, Griffin and Shaw 2000). The main characteristic of such adaptive systems is that a minute change in one part of the system may result in large effects in other parts as time marches on; but the system as a whole adapts and reaches a new state in its evolutionary path. Entrepreneurs and entrepreneurship have historically been viewed as change agents in their indigenous environment (Reynolds and White 1997; Shapero 1975, 1984 and 1985) and extended later on in international markets. Consider, for example, the case of entrepreneurs who have successfully commercialized, individually or collectively, basic inventions, ranging from light bulbs to Xerox; and thereby have changed the course of developments in all parts of society. International entrepreneurs have extended the impact of entrepreneurial role(s) and action(s) beyond their initial domestic frontiers and into the international markets and environments over time. In that role, not only have such entrepreneurs introduced change, directly, which has impacted their enterprise and the
environment (Aldrich and Martinez 2003); but also, they have forced change on other enterprises and environments (by the virtue of competition in international markets). Their influence may be viewed similar to perturbation in one firm, magnified by and through the market, thereby impacting other competitors and their respective environments. Logically, the extent of openness and propensity of these institutions to change may moderate the magnitude of ultimate change. This may, in turn, compel the entrepreneur(s) and entrepreneurial enterprise(s) to revise their initial expectations and strategy in response to the initial change resulting in another cycle of feedback, interactions and consequent change, which point to an interactive and adaptive interplays of the various agents involved in a complex system underlying them. Collectively, this resembles, and possibly is, a dynamic complex adaptive and open system comprised of at least three distinct layers all embedded in their respective environment and ultimately in the global environment.

Specifically, we propose three layers, each embedded in the next, consisting of: i) the entrepreneurial layer, ii) the enterprise layer, and iii) the market layer. Traditionally, we have considered two additional layers associated with the industry and the environment. We will argue that the combination of enterprise and the market preclude industry and environmental layers, as both of these entities are embedded, if not nested, in the industry and environmental layers. Therefore, explicit introduction of the latter two layers add unnecessary redundancy and complexity. However, we also argue that an entrepreneurial layer must be introduce into the enterprise, as a typical enterprise is managed by entrepreneur(s) or team of entrepreneurial managers. In fact, the absence of entrepreneur(s) in our economic theories of the firm is unjustifiable deletion that may have increased complexity, as opposed to adding simplicity, in our theories.

Consider for example, the followings:

i) As highly adaptive agent, an entrepreneur is an integral part of the society within which he or she is embedded (Dana 1995; Jones, and Conway 2004; Keeble, Lawson, Smith, Moore and Wilkinson, 1998) and thus shares many adaptive features of societal processes and adapts to change caused by other parts;

ii) Entrepreneurs operates within, and interacts with, many complex adaptive institutions (suppliers, buyers, governments, etc.), each with constituents and processes of its own embedded in their respective contexts, including firms and markets, which are inherently adaptive and are ultimately subject to societal rules, processes and interactions;

iii) The embeddedness of both the entrepreneur and the firm in their indigenous market and societal environments makes what they plan, do, or expect to do, a part of the broader, richer, and possibly spontaneous, social order of their indigenous society, imposing social constraints, norms and expectations on entrepreneurs and entrepreneurial processes;

iv) The entrepreneurial enterprise is an interactive and adaptive entity, where the entrepreneur and the enterprise interact routinely with themselves and similar entrepreneurial entities in their own respective value chains (with which they interact more intensively) and other heterogeneous entities, including the institution of market(s) and market participants, (with which they must interact, but not necessarily as intensively) for attaining objectives;

v) International activities involve multiple entities, including international markets, each with its own characteristics, as they are embedded in respective environments following their own rules and expectations; but they are
becoming increasingly more open, dynamic and interactive due to globalization;

vi) The inherent differences in characteristics, rules, processes and expectations of these entities participating and thereby interaction in international markets will require further adjustment beyond adaptation to one’s own indigenous system and will inevitably add further to the level of complexity, and demand more mutual adaptiveness from international entrepreneurs and enterprises than their domestic counterparts;

vii) As a field of scholarly inquiry, entrepreneurship has become a highly multidisciplinary field (Etemad 1999; Etemad and Lee, 2003) adding to the difficulty of studying such inherently complex, dynamic and interactive system that includes the entrepreneur at the centre of action, the socio-economic institution of the enterprise (firms or firms) conceived as conduit for housing entrepreneurial "processes", "actions" and “outcomes” (Aldrich and Martinez 2003; Shaver and Scott 1992; Stapleton and Stapleton1996; West and Meyer1997) interacting continually with one-another to accomplish their respective objectives subject to constraints imposed by other parts of the system within which they interact; and consequently,

viii) The very core functions of international entrepreneurship become more complex, and must necessarily gain more adaptiveness than its domestic counterpart, as it evolves over time and encompasses different entrepreneurs, respective entrepreneurial enterprises, indigenous social network(s) and market processes in different markets.

The above arguments point clearly to the existence of an interactive system with varying degrees of complexity and adaptiveness. This recognition challenge us to at least consider a framework capable of handling such interdependencies and enable us to focus on a focal subsystem (e.g., entrepreneurial international firms) with full acknowledgement of their dependencies on other parts of the overall system (e.g., home government, headquarters, host governments, international competitors, etc). Furthermore, such a framework will lead scholars to identify each component’s system-related role, function, dependence and behavioural patterns within the subject area under study.

Towards The Definitions of a Theoretically Grounded Meta-Framework. A framework, based on DOCAS must at least initially define its prominent components, or layers, to allow for further delineation as research and inquiry in the field progresses and evolves over time. Defining this initial structure or architecture is the primary aim of this introductory article, as stated earlier. Naturally, each layer is embedded, and possibly nested, in the next layer with mutual inter-relations and interactions. All layers will ultimately have to inter-relate and interact with their commonly shared environment. One can therefore define the framework in terms of an interactive system of multiple layers, where each layer has its own characteristics and behaviours. Interactions between the layers are then defined in terms of their respective bilateral and multi-lateral dependencies, inter-relations and interactions. In such a multi-layered system, each layer (or the components of a layer) in the framework must necessarily correspond with an existing entity portraying the true characteristics and attributes, which would distinguish it from the next in terms of the layer’s boundary as well as identify both the origin, nature and points of impact that characterize the layer’s inter-relation and interactions with the others.

We propose a highly simplified DOCAS to reflect our initial characterization comprising three prominent layers, as a starting point; where entities in one layer are related to and interact with others, while embedded and possibly nested in the next layer and ultimately in their commonly-shared environment. Consider, for example the following three layered framework as a point of departure:
i) The Entrepreneurial Layer. A typical entrepreneur and his interactions (belonging to the entrepreneurial layer of the population) to be nested in the enterprise,

ii) The enterprise Layer. A typical enterprise (or firm from the population of firms in the enterprise layer), encompassing entrepreneurial initiatives, actions and interactions that empower the entrepreneur and the enterprise, nested in the market while following market processes; and

iii) The market Layer. A typical market construct defined in terms of selective, but ever-present, processes with full impact that characterize what we customarily attribute to the market, including the influence of participating agents, where every given agent interrelates and interacts with the others to a lesser or higher extent.

The Entity Versus the Layer. The noteworthy point is the distinction between a layer and the entities populating it. While an entity within a layer (e.g., a particular entrepreneur) possesses a specific set of attributes, the layer houses the distribution of a wide range of such characteristics. Naturally, entities within each layer interact with their related counterparts within the layer as well as with the immediate and the next layer(s). A simple example is that an entrepreneur may direct his enterprise to deal with certain other entrepreneurs and enterprises to the exclusion of others (e.g., members of a firm’s supply chain). However, other layers (e.g., the market and the environment) must be assumed to be omni-present with impacts on each of them, either directly or mediated through others, as no firm can be an independent island of its own. To reflect the prevailing reality, each entity must be assumed to interact with some entities more actively and explicitly within a group in a layer, while more passively and implicitly with the other group (i.e., the interactive feature of DOCAS). The intensity of such relations varies over time as the system evolves from one time period to the next (i.e., the adaptive feature of DOCAS).

Market But Not Industry. The economic literature has traditionally defined the industry, or sector, with which an enterprise is closely affiliated, as the immediate context for inter-enterprise interactions. Although there are merits to this traditional approach for some problems, we deviate from that convention in favour of added clarity and simplicity. We propose market as the relevant context for the enterprise for following reasons:

i) Our primary focus is on entrepreneurship and entrepreneurial initiatives, but not necessarily on the enterprise, which is the primary focus of economic sciences,

ii) Following Schumpeter (1911/1934, 1928), Entrepreneurs might not necessarily feel strong affinity with a given industry and industry structure, as their creative, innovative and entrepreneurial actions may intentionally be aimed at, or result in, re-organizing, if not destructing, an existing industry structure,

iii) With increasing globalization (Ohmae 1995, 1990 and 1985), industries are globalized and the lines of demarcations between the various industries are blurring increasingly as firms diversify their product lines, supply chain, transactions and alliance relations beyond a given location, across industries and with the members of other previously-unrelated industries in other locations;

iv) Markets (not the industry) are interacting increasingly across borders and resemble the global environment as the immediate context within which transactions takes place; and entrepreneurs (or entrepreneurial firms) can simply determine with whom to transact (based on transaction costs and industry membership) or which trends to follow based on their entrepreneurial intuition as opposed to conventional affiliation with an industry;
While, entrepreneurial firms can easily abstract from the conventional industry, to which they are attributed, construct and manage their own transactions (Williamson 1975 and 1981) based on the best practices (or family of practice) in the market equally well within the market construct, the reverse may be impossible (they may be incapable of performing well in the market based on special privileges accorded to the members of an industry by the virtue of their membership in the industry) to the exclusion of all others; and furthermore,

The market does not prohibit entrepreneurs, and enterprises, from establishing privileged relations with the members of a given industry (or industries with which they feel special affinity) and can easily consummate industry-base relations the industry, or sector, (as the context for inter-firm transactions) adds a trivial layer less capable than market in regulating or optimizing transactions, which leads us to favouring the market to the industry construct.

In Summary, this simplified framework acknowledges that international entrepreneurship, involve entrepreneurs, enterprises and markets, which play central roles and form both the context for mutual transactions and reflect the immediate manifestation of the overall environment(s). A schematic representation of this framework is depicted in Exhibit 1.

As shown in Exhibit 1, each layer may interact, and be even nested in, the next; and all layer also interact with environment because they are both embedded and nested in the environment. In favour of time and space, we highlight only the distinguishing features of typical entities in each layer of the framework in table format in Tables 1 and 2. A brief summary is further discussed bellow.

The First Layer: The Entrepreneur Within The Frameworks

A Contextual View of Entrepreneurial Characteristics. The entrepreneur is naturally embedded in the environment (Dana 1995; Jones, and Conway 2004; Keeble, Lawson, Smith, Moore and Wilkison, 1998) and he is the portrayal of his (her) upbringing, early education and his socio-cultural environment. His early needs for achievement (McClelland 1961), for example, are influenced, if not formed, by interaction with his indigenous environment. Travel, exposure to and experiential learning in the context of other cultures may have also influenced the course of developments (Andersson, et al. 2004; Kuivalainen et al. 2004), including his mindset and orientation (Kedia and Mukherji 1999; Knight 2001 and 2002; Kuivalainen et al. 2004; Nummela et al. 2004). The extant literature, including the collection of papers contained in this issue, discuss entrepreneurial attributes much more extensively than the scope of this paper would allow. However, this paper will provide only a selective list of entrepreneurial attributes and processes in a table form in favour of time and space as they are discussed in some length elsewhere (see for example Kedia and Mukherji 1999; Knight 2001 and 2002; Kuivalainen et al., 2004, McDougall 1989 and 1996; McDougall and Oviatt 1991; McDougall, Shane and Oviatt 1994; Oviatt and McDougall 1994, 1995 and 1997; Oviatt, McDougall, Simon and Schrader 1993; Nemmula et al. 2004; Zahra and George 2002 and Etemad 2004a and 2004b; among a long host of others). In light of the extant theory’s documentation of entrepreneurial attributes, the proposed grounded framework compels us not to focus further on the entrepreneur and his attributes in isolation, but and instead focus attention primarily on the interaction between the entrepreneurs, or entrepreneurship, and other layers, including the firm and the market and the environment. A selective list of entrepreneurial attributes is highlighted in Table 1. Table 1 also shows a selective list of the literature documenting and discussing these attributes.
An Analogical Example. The simple example of a car and its driver, despite their simplicity against the complexity of the subject at hand, may help us to see the parallels. Although a driver can accomplish some activities without the car, the car offers flexibility, safety, speed, and power and enables him to achieve even more. While a car is self-propelling, it still needs the driver to give it a directional command, harness its power and control its functions on the road. Similarly, the driver's performance, and possibly freedom of action, is somewhat restricted by what the car can or cannot do. Naturally both have to adapt to each other's capabilities and limitations to function optimally. Furthermore, they must also adapt to the conditions of the roads and abide by the rules of the road while interacting with other cars and drivers and behave accordingly. The note worthy point is that these seemingly independent entities combine to function more optimally interdependently than functioning independently. The combined entity of the car and the driver adapts to the roads, to other driven cars, each of which adapts to the others. Consequently, they become parts of a larger adaptive system of roads, driven cars, and transport vehicles, which requires all of them to abide by the rules, norms and standards of that system. The road system and their corresponding rules and conditions can be viewed as the environment within which the cars, trucks and other transport systems are embedded.

International Markets as the Road System for Internationalizing Enterprises. Following the above analogy, an international entrepreneur needs a firm, capable of internationalizing and supporting his international entrepreneurship activities, in the vast and competitive span of international markets. Similarly, the internationalizing firm need the entrepreneurial initiatives to give it adequate strategic directions, which may entail choosing an adequate set of choice(s) from the portfolios of goods and services, modes of entry, markets and market segments, given the state of the firm's resources and capabilities. We use the term "entrepreneurial firm" to refer to such synergistic and (Dana 2000; Etemad 2003 and 2004b, Etemad, Wright and Dana 2001; Dana, Etemad and Wright 2000 and 2001). While either is primarily restricted by the limitations of the other, both adapt and are eventually bounded by the ultimate circumstances of their broader market environment and the limitations imposed by inter-relations and interactions with other similar entities in that environment. The prominent institution embedded within the environment, but external to both the entrepreneur and the enterprise, but with imminent influence on both, is the market, which comprises the third layer in the proposed grounded framework. It includes entrepreneurial firms and its competitors. Naturally, they are all embedded in their encompassing environment, which is taken for granted for the most parts. While each layer has its own characteristics and dynamics, they collectively adapt to the prevailing, and changing, conditions imposed not only by the environment but also by their mutual inter-relation and interactions over time. Since most of the environmental effects are exerted either through the Market or the enterprise, we propose to abstract from the additional complexities that the broader environment imposes in favour of time and clarity. Naturally, this abstraction can be relaxed once the internal functioning of the proposed framework is well-developed and there is a need to deal with environment-initiated influences directly (as opposed to mediated through the firm or the market entities).

The Second Layer: The Enterprise

Following the discussion of the entrepreneurial initiatives in relation to entrepreneurial firms in the first layer of the proposed grounded framework, presented above, we focus on the institution of the firm itself, which comprises the second layer. As the topic of the firm has been discussed extensively in the extant literature of economics and management, we abstract from detailed discussion of the subject. Instead, we focus on selective highlights in the historical evolution of concepts of firm over time as presented in Table and discussed briefly below. As in the case of the entrepreneur, the firm is also embedded in the environment. Although numerous theoretical traditions bear on the firm as an economic entity, we do not yet have much theoretical insight on the firm’s actual behaviours and inner-firm process.
The Firm in Classical Economics. The classical firm is still closer to the proverbial "black box" than otherwise, although we know a lot about what it does and does not. Consider for example, that as an economic unit, a firm uses a complex set of factor-inputs to produce a combination of factor-outputs for sale in markets. It organizes the inputs and outputs, schedules production and logistics, and makes profits in the process. As a complex social institution, it provides employment and a place of work for employees and attends to their work-related, and even social, problems. At the turn of the Twentieth Century, many firms went much beyond: they created "company towns" and managed many aspects of employee’s life in such towns. As direct results, firms evolved into complex socio-cultural and economic units. Although company towns have been reflections of the firm at the time, the relationship has changed and firms have gradually become the societal manifestations. Yet many aspects of this prominent socio-economic institution remain opaque for most practical purposes. For example, the theory of the firm as conceived, and continually amended, by prominent classical economist including Marshall, Ricardo and Smith.

Neo-classical Economics. Although further developments have relaxed some of the restrictions of classical economics and those of perfect competition, the prominent engine of firm’s innovative actions and competitive activities, the entrepreneur (or the entrepreneurial team), is yet to be the center of attention. However there have been very encouraging developments. Joan Robinson (1933) introduced the theory of Imperfect Competition, whereby each firm, regardless of the size, would no longer be a complete signal taker and would be free to take some (although limited) initiatives, resembling a small monopolist. Simultaneously, Edward Chamberlin (1962) introduced his theory of Monopolistic Competition, in which firms shared many features with those of Robinsonian firms. The point to note is that firms were not necessarily the miniature replicas of the industry as a whole; they could be entrepreneurial to a limited extent by assuming some initiatives and exerting some monopolistic powers (for example deciding on production level and/or setting the price).

The Contemporary Firms. Entrepreneurial firms are not necessarily monopolists; but they are far from taking orders from an unclear construct called "industry". They certainly recognize the sovereignty of the consumers and the power of market; and thrive by either satisfying consumers’ needs and wants or influencing their desires and trends, which classical economics could not easily handle. In fact, consumers were not given much more discretion than those given to firms by classical economics, and markets were not much different. Fortunately, further developments did not stop. For example, John von Neumann and Oscar Morgenstern (1947) introduced Game Theory. In the theory of Games, competition is reduced to game players (e.g., a firm, its entrepreneur and all resources at their command) competing against other competitors, which may be one or a coalition of many. This theory posits that the firm can formulate complete strategies for playing competitive games (zero-sum) with competitors and cooperative games (non-zero-sum) with others (i.e., non-competitors) simultaneously, some times all belonging to the same industry defined broadly.

Firm Coming of Age. The above argument regarding firm’s boundary conditions merits a much deeper discussion than the scope of this paper. However, it suffices to say that the concept of boundary plays a critical role in internationalization of smaller firms, especially when the choice of a resource-intensive internationalization strategy might be infeasible because of the state of a firm’s restricted resources, competencies and capabilities. Germene to the above discussion is the contribution of Ronald Coase's (1937) discussion of internalization, whereby a firm would capitalize on externalities and appropriate resources and activities from the external environment, which should be viewed as the predecessor of the Transaction Cost Theory of the firm (Williamson 1975 and 1981). This theory focuses on the cost of transactions within the firm (i.e., hierarchies) and outside of the firm (i.e., markets) in light of the inherent uncertainties involved in contracting (or sub-contracting) firm’s activities to others, irrespective of their industry membership and market context.
The Behavioural Theory of the Firm. The above observations resonate with the Behavioural Theory of the firm (Cohen and Cyert 1965; Cyert and March 1963), which deviates from the economic principle of profit maximization, and cost minimization in an inert environment (i.e., inactive and non-interactive) in favour of “satisficing”. Similarly, the modern Operations Management and Management Sciences, as parts of Administrative Sciences, show that in the presence of any constraint, the unbridled profit maximization is theoretically unachievable. Given a wide range of constraints, imposed by buyers and suppliers, markets and regulators, a branch of Operations Management, the goal programming, seeks to achieve the highest possible levels of prioritized objectives in order of their priority, taking into account the possibility of potential trade-offs among them. Although, an in-depth discussion of the theory of the firm is far beyond the scope of this paper, we have attempted to present a selective list of the theoretical discussions to bring increased clarity to firm’s features pertinent to the grounded framework proposed in this paper. A summary of the above arguments are presented in Table 2 in order to highlight potential adaptive interactions between the entrepreneur and the firm and the corresponding immediate environment in the proposed grounded framework.

Insert Table 2 Near Here

In summary, the extant theory has slowly evolved to recognize the potential contribution of entrepreneurs, or entrepreneurial team, as firms grow larger, and would allow the entrepreneur to play an increasingly meaningful role inside the firm structure. This is a crucial departure point for studying international entrepreneurship as most, if not all, entrepreneurial activity in international markets need international champions and managers but are conducted mainly through the firm's scaffolding. These developments resonate with most of our assumptions and also serve naturally to form important context for both the structure and the realism in the proposed grounded framework and its further development. Furthermore, the realistic firm-entrepreneur relations are further reinforced in terms of the two distinct concepts of embedding and nesting the entrepreneur in the firm and the combined entity in the market (and in the environment).

The Third Layer: The Market

The third layer in the proposed framework is the market, within which both the entrepreneur and the firm are embedded and with which they interact. This layer also represents the environment that embeds the entire system, including the traditional notion of industry as the context for inter-firm interactions. As noted earlier, we propose to substitute the market construct for both the industry and environment layers, which is both simpler and more realistic than either the narrower industry construct (incapable of conducting transactions with non-industry members) or much broader environment at large (with the non-specificity of housing all agents and associated transactions). In fact, firms inter-relate and interact with others much more through the market than the industry and the environment.

Defining the Market. For the purposes of the proposed framework, the market is defined as the locus for all transactions, which may include consummation of relations, interaction as well as transactions. Following Coase (1937) and Buckley and Casson (1976), we also recognize internal markets as a part of broader markets, where some interactions and relations are negotiated and finalized. Internal markets are considered as quasi entities, as they are internal to the firm; but they also resemble external markets. This allows the firm the added flexibilities in shifting activities within the firm or agents outside the firm. The criteria for deciding in favour of the internal market, as opposed to the external market (or vice versa), may follow the total transaction cost criteria as discussed initially by Coase (1937) followed by Williamson (1975 and 1981). Further elucidation of internalization, where transactions previously in the public domain and external to the firm, are appropriated and transferred into the firm's internal market, are discussed by many scholars, including Coase (1937), Williamson (1975 and 1981), and in the context MNE's internal market of sister-subsidiaries by Buckley and Casson (1976), Dunning (1988, 1986, 1981 and 1980), Rugman (1982), Etemad (2004a) among others. The reverse process (i.e., the transfer of previously-internal activities to agents outside the firm) may also follow transaction cost criteria. In light of developments towards the network theory of the firm
(Carsrud, Caglio and Olm1987; Carsrud and Kruger 1996; Coviello and Munro 1995; 2003b and 2004b; Etemad, Wright and Dana 2001; Dana, Etemad and Wright 2000 and 2001; Hakansson and Snehota 1995; Jones and Conway 2004; Johanson and Mattson 1988; Rasmussan, Madsen and Evangelista 2001), one is forced to question whether the above transfer would transform the firm (defined in terms of conducting internal activities) to a collection of arm's length quasi-internal and quasi-external entities within the sphere of the firm's influence and network's reach. The difference is the firm's perceived boundary defined in terms of its relations and interactions with those agents. Implications of this notion are in line with the firm's perception of its boundary characteristics (Coase 1937), ranging from highly rigid conditions (necessitating more difficult and possibly costly interactions with external agents) to highly permeable conditions (interacting with quasi-external agents as quasi-internal, if not implicitly internal, agents more flexibly). An in depth treatment of such qualitative differences and their respective impacts are well beyond the scope of this paper. However, to the extent that such boundary conditions relate to the market (i.e., the third layer in our proposed grounded framework) in general and international markets in particular, a further examination of impact on internationalizing entrepreneurial firms are discussed and presented below.

In favour of time and space a minimalist view is adopted here. Four views of the market have clear implications for, and are pertinent to, entrepreneurs and entrepreneurial firms in the proposed grounded framework because most entrepreneurial functions relate to at least one view in relation to other agents within the market. Accordingly, we will highlight the inter-relations and interactions of the market with their corresponding agents within and outside the entrepreneurial firms from the perspective of these four views of the markets, comprising markets as locus for exchange mechanisms, markets as locus of allocative mechanisms, markets as locus for discovery and opportunity and for clearing creative initiatives. Each view is further discussed as follows.

i) **Markets as Locus for Exchange Mechanisms.** The exchange function of the market is the oldest, the most fundamental and the most basic. The history of markets as a place for basic exchange of agricultural commodities and produce, regardless of time and scale, goes back to the antiquity. Even the crude markets in the antiquity operating on barter basis, allowed for the exchange of one economic good for another in order to fulfill their contemporary needs. Such exchanges may have also satisfied their sense of value in terms of receiving a good with higher perceived value for what they exchanged; but the formal articulation of this concept appeared later and is attributed to the Neo-classical economics. The notion of exchange for fair value has been a fundamental function of the market going far back but at least to Carl Menger's (1871/1981)) concept of "exchanges of unequal value".

ii) **Markets as Locus of Discovery and Opportunity.** This feature of the market is critical to entrepreneurial firms and follows from the information content and information processing capabilities in the society, discussed above. Building on Shane’s (2000) and Venkataraman’s (1997) suggestion that entrepreneurial opportunity is the nexus of information and the entrepreneur's recognition of both the value of the information and the ability to commercialize it successfully, one is compelled to approach the discovery, opportunity and informational aspects of the market systematically.

iii) **Markets as Locus for Clearing Creative Initiatives.** This aspect of the market is the newest that facilitates the matching of the outstanding supply and demand of creative initiatives and innovative ideas. Consider for example the fact that neither are all inventors entrepreneurs, nor are all entrepreneurs inventors or innovators. Market allows inventors to specialize in creating and supplying new ideas and innovative initiatives, while entrepreneurs find and exploit such ideas and initiatives in the market. Revisit the case of Sony’s founders. Ibuka and Morita were visionary entrepreneurs but not inventors, innovators or creators. They knew what to acquire to make their vision come through; and they found the supply of the necessary resources such as engineers, scientists, problem solvers and even inventors to create/materialize Sony’s innovative products and processes (including miniaturization process that made portable Walkman possible). Such supplies came mostly from external sources, especially in the early stages of the firm. Stated
differently, it is this market ability to bring together supplies of creative resources (including creative people and ideas as well as legal rights to proprietary innovative products, processes and ideas through, for example, licensing of patented inventions) and demand for such resources to enable the entrepreneurial firm to flourish in the market place.

**Implications and Conclusions**

Most papers concerned with international business have an implicit model in the background. Most of such models characterize some aspects of the firm’s operations in terms of a set of critical variables with influential impact, directly or indirectly. Similarly, most models utilize the confluence of influential variables to relate to some tangible measure of firm’s performance in order to evaluate the past, or predict the future performance, regardless of size. While the theories of MNEs provide some guidance for research of such larger firms, scholars studying smaller firms are left to our own devices, which point to the following observations:

*The Framework and Modelling.* As performance is the culmination of a confluence of complex set of forces, some caused by market environment, while others within the firm's sphere of influence or emanating from the entrepreneurial actions, the accuracy of the model must necessarily depend on the models ability to capture a semblance of the reality, which puts these models at the centre of the proposed grounded framework. Logically, these models should reflect the entrepreneur (or entrepreneurial team), the firm and their conditions, which are the very essence of the proposed grounded framework in terms of the various entities and their respective inter-relations and interaction. Conversely, the proposed grounded framework should be able to portray the underlying principles of these models. In other words there must necessarily be a very strong mirror-image relations between these models and any framework designed to characterize SMEs\(^*\) operations and performance.

*The Role of Information in Model Verification and Improvement.* To the extent that these models are driven by, and depend on, information, the information must reflect the confluence of pertinent players, layers or their respective influences on the firm’s operations when they impact performance. Ideally, these models reduce pertinent information, reflective of SMEs’ operations and performance, including internationalization efforts, to a set of diagnostic or prognostic signals assisting subsequent decisions. However, the reliability and accuracy of result from such models depend crucially on both the extent to which these models characterizing the true reality (as opposed to the analyst’s perception of reality) and the measurements representing influential factors accurately.

*Scalability and Model Calibration.* From the perspective of the proposed grounded framework, models pertaining to SME’s internationalization should not only capture the inter-relations and interactions articulated for a typical firm but also be capable of calibrating model parameters for the specific scale and characteristics of particular SMEs under examination, including size, state of resource relative to their respective challenges, and influence of entrepreneurial actions, if they are to reflect SMEs accurately and portray the principle tenets of the proposed grounded frameworks at the same time.

Naturally, a combination of multi-layered approach, with each layer reflects the true influence of existing entities, can help us to articulate a more reflective framework (or perhaps specialized frameworks), which can in turn serve to help SMEs learn more effectively than educated experimentation in order to achieve growth and development domestically and internationally. These challenges appear to be noble goals for scholars of the field to accomplish collectively.

In favour of space references are not provided in this paper. Please Contact the Author for the full list.
The First Interactive Layer

The Second Interactive Layer

The Third Interactive Layer

The Overall Environment

The Entrepreneur

The Firm

The Market

The International Environment
### Table 1: Highlights of Selected Entrepreneurial Characteristics and Selected Associated References.

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<tr>
<th>Entrepreneurial Attributes, Traits, Behaviours, Processes, and Outcomes</th>
<th>Associated References</th>
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<td><strong>2. Learned and Acquired Entrepreneurial Attributes:</strong> Communication capabilities (including foreign languages in case of international entrepreneurship), Interpersonal relations (including cross cultural sensitivities); and resourcefulness, among others</td>
<td>Hirsch &amp; Brush 1983, 1986 and 1987; Birley, Moss &amp; Saunders 1987; Buttner &amp; Rosen 1988; Buttner &amp; Moore 1997; Esters 1997; Schwartz 1979; Ireland, Hitt, Camp &amp; Sexton 2001</td>
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<td><strong>3. Entrepreneurial Behaviours:</strong> Commitment; Pro-activity and Planning; Sense of observation</td>
<td>Andersson, Gabrielsson and Wictor 2004; Aldrich, and Martinez, 2003; Bell, Murray &amp; Madden 1992; de Bono 1985; Pinchot 1985; Shaver and Scott 1992; Shapero 1985</td>
</tr>
<tr>
<td>Typology of Firms and Primary Architects</td>
<td>Primary Characteristics</td>
</tr>
<tr>
<td>----------------------------------------</td>
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</tr>
<tr>
<td><strong>1 The Classical Firm</strong> [Adam Smith, David Hicks; David Ricardo]</td>
<td>Black Box and Opaque; Taking industry signal to adjust cost to set the price; relatively small in the industry;</td>
</tr>
<tr>
<td><strong>2 The Marshallian Firm</strong> [Alfred Marshall and post-Marshalian Economics]</td>
<td>Cognizant of immediate environment for its external “economies of agglomeration”</td>
</tr>
<tr>
<td><strong>3 The Neo-Classical Firm</strong> [Joan Robinson; Edward Chamberlin; Roy Harrod; Paul Samuelson]</td>
<td>Small Monopolist: Still a black box but capable of perceiving a different demand curve</td>
</tr>
<tr>
<td><strong>4 The Schumpeterian Firm</strong> [Joseph Schumpeter]</td>
<td>Opportunity creating firms; Changing the basis of competition</td>
</tr>
<tr>
<td><strong>5 The Shapero / Knightian Firm</strong> [Albert Shapero; Frank Knight 1921]</td>
<td>Rationaly-analyzing opportunity exploitation; cognizant of risk-return relations</td>
</tr>
<tr>
<td><strong>6 The Firm in Austrian Economics</strong> [Carl Menger; Ferdinand Hayek; Isreal Kirzner]</td>
<td>Cognizant of consumer utility and value leading to price as the basis of decisions (reverse of the classical notion)</td>
</tr>
<tr>
<td><strong>7 The Behavioural Firm</strong> [Kalman Cohen &amp; Richard Cyert 1965; Richard Cyert James March 1963]</td>
<td>The firm as a learning, adaptive and interactive entity adjusting to circumstances</td>
</tr>
<tr>
<td><strong>8 The Coase/ Williamsonian Firm</strong> [Ronald Coase, Oliver Williamson]</td>
<td>Firm boundaries move flexibly depending transaction costs of activities</td>
</tr>
<tr>
<td><strong>9 The Entrepreneurial Firm</strong> [A combinations of Austrian, Coasian/ Williamsonian and Behaviorally-adaptive Firms]</td>
<td>A firm with flexible boundaries and entrepreneurial orientation seek</td>
</tr>
</tbody>
</table>

**Table 2: Summary highlights of the Evolutionary Path of the Developments in the Theory of the Firm**