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IS THE BUSINESS MODEL A USEFUL STRATEGIC CONCEPT? CONCEPTUAL, THEORETICAL, AND EMPIRICAL INSIGHTS

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ABSTRACT

Although a widely used managerial concept, the notion of a "business model" has only recently begun to receive serious attention from researchers. While disparate opinions exist regarding its nature, the business model holds promise as a focal point for the development of theory in entrepreneurship. Realizing this promise requires progress not only in how to conceptualize the business model but, also, in how to measure a firm's model and draw comparisons across model types. Utilizing a six-component framework published earlier by the authors, a methodology for measuring the business model is demonstrated with a random sample of high-growth firms. Cluster analysis indicates the existence of four generic models. Suggestions are made and implications drawn for ongoing theory development and entrepreneurial practice.

INTRODUCTION

Entrepreneurs are increasingly asked by investors and others to describe their business models. While it is commonplace for entrepreneurs to produce business plans, they may be less certain regarding how to characterize a business model (Shafer et al., 2005). Does it represent a strategy, a concept, a pattern, a method, an assumption, a statement, a design, or a type of architecture? Is it concerned with how the firm will create value or how it will make money? While one might posit that the business model provides a template around which a company is built, the nature of this template is not well understood.

For their part., academic researchers have only recently begun to address critical questions surrounding the business model (see Markides & Charitou, 2004; Mitchell & Coles, 2004; Voelpel, Leipold, & Tekie, 2005). The lack of research can be traced to conceptual, theoretical, and empirical challenges. Conceptually, the business model

Is a fairly recent concept, popularized as a function of the dot.com boom. As a result, there is neither an agreed upon definition nor a generally accepted framework for capturing the entrepreneur's model. Further, the theoretical foundation for the design and application of business models remains unclear. No single theory captures the varied elements that contribute to a model. These conceptual and theoretical limitations have hindered the ability of researchers to conduct empirical work. As a result, much of the extant research relies on case studies. This lack of empirical work represents a major obstacle to the advancement of our knowledge. Specifically, without the ability to measure a business model, fundamental insights regarding the identification of generic business models, the characteristics of successful business models, whether certain components of models are more important than others, how components interact, and the dynamics of model evolution, remain elusive.

The current research seeks to address some of the more vexing conceptual, theoretical, and empirical challenges. Specifically, we argue for a more strategic conceptualization of the entrepreneur's business model, as reflected in our recently introduced framework (Morris, Schindehutte, & Allen, 2005). Theoretical foundations for such a framework are examined. We then describe a potential measurement approach based on an adaptation of this framework. The empirical possibilities are demonstrated by characterizing the business models of a representative sample of high-growth entrepreneurial firms and, then, using cluster analysis to identify underlying patterns in the models employed by these firms. Inferences are drawn concerning the existence of generic models. A dynamic perspective on business model development over time is introduced. Implications of the findings for entrepreneurial practice are discussed and priorities are established for ongoing research.

DEFINITIONAL ISSUES

A model is a simplified abstraction of a real situation. It is a structure which purports to represent something else. Our interest in this article is with *descriptive* models, which describe a current or proposed situation and afford the user with an ability to explore various scenarios and ask "what if" questions (Caine & Robson, 1993). Thus, when the entrepreneur develops a business model, he or she is attempting to design a structure that captures key aspects of a sustainable new venture.

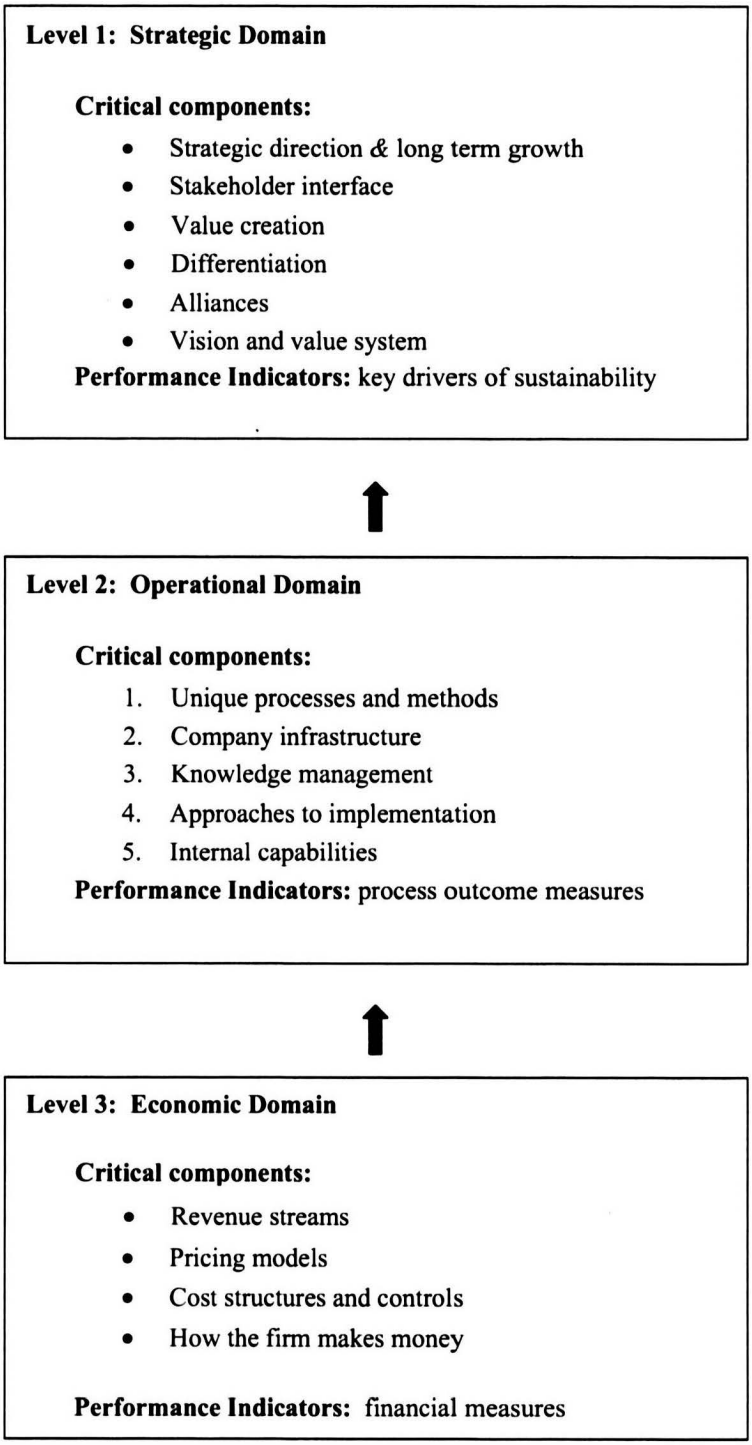
The term *business model* has been used in a variety of ways, as reflected in the divergent mix of definitions found in the literature. Table 1 provides a summary of contemporary perspectives. The diversity in these definitions suggests substantive challenges in delimiting the nature and components of a business model and in determining what constitutes a good, versus poor, model. It also leads to confusion in its application relative to other commonly used terms. Business model is used to describe a company's unique value proposition (the business concept), how the firm uses its sustainable competitive advantage to perform better than its rivals over time (strategy), and whether, as well as how, the firm can make money now and in the future (revenue model). The terms business model, business concept, revenue model, and economic model are often used interchangeably, resulting in less than desirable rigor being applied when assessing the attractiveness of an opportunity or viability of a proposed new venture.

In spite of this confusion, a systematic overview enables us to apply some logic to the various perspectives. It would appear that the definitions in Table 1 fall into three general categories based on their principal emphasis. As illustrated in Figure 1, these categories have been labeled strategic, operational, and economic. The categories are presented as a hierarchy in that the

Table 1 - Sample Definitions of the Term "Business Model"

"The architecture of a firm and its network of partners for creating, marketing and delivering value and relationship capital to one or several segments of customers in order to generate profitable and sustainable revenue streams"(Dubosson-Torbay, Osterwalder, & Pigneur, 2001)
"A representation of a firm's underlying core logic and strategic choices for creating and capturing value within a value network" (Shafer, Smith, & Linder, 2005)
"The method by which a firm builds and uses its resources to offer its customers better value than its competitors and to make money doing so" (Afuah & Tucci, 2001)
"A set of assumptions about how the company earns a profit in a competitive environment" (Picken & Dess, 1998)
"A statement of how a firm will make money and sustain its profit stream over time" (Stewart & Shao, 2000)
"How a firm leverages assets to generate value for all stakeholders" (Boulton, Libert, & Samek, 2000)
"A unique blend of three streams that are critical for business success: the value stream for business partners and buyers, the revenue stream, and the logistical stream" (Mahadevan, 2000)
"The design of key interdependent systems that create and sustain a competitive business" (Mayo & Brown, 1999)
"The patterns and strategies which enable the firm to make profits" (Slywotsky & Morrison, 1997)
"How a company makes money by specifying where it is positioned in the value chain" (Rappa, 2000)
"A description of how the company intends to create value in the market place. It includes that unique combination of products, services, image and distribution and the underlying organization of people and infrastructure" (KM Lab Inc., 2002)
"The totality of how a company selects its customers, defines and differentiates its offerings, defines the tasks it will perform itself and those it will outsource, configures its resources, goes to market, creates utility for customers and captures profits" (Slywotsky, 1996)
"A coordinated plan to design strategy along three vectors: customer interaction, asset configuration, and knowledge leverage" (Venkatraman & Henderson, 1998)
"A depiction of the content, structure, and governance of transactions designed so as to create value through the exploitation of business opportunities" (Amit & Zott, 2001)
"The architecture for product, service and information flows, including descriptions the various business actors and their roles, the potential benefits for the various actors, and the sources of revenue" (Timmers, 1998)

Figure 1 - Hierarchy of Business Model Perspectives



perspective becomes more comprehensive as one progressively moves from the economic to the strategic level.

At a basic level, the business model is concerned with economics and, specifically, the logic of profit generation. Hence, the model focuses exclusively on the integration of revenue sources, pricing methodologies, cost structures, margins, and volumes. Stewart and Shao (2000) capture this perspective well in describing a business model as "a statement of how a firm will make money and sustain its profit stream over time."

At the operational level, the business model captures the rudimentary design of a business and so it represents an architectural configuration (Timmers, 1998). Perspectives here focus on internal processes, the design of infrastructure, and outsourcing decisions that enable the firms to create a unique value proposition. Examples of the key elements of such models include production or service delivery methods, administrative processes, resource flows, knowledge management, and logistical streams. These elements form the building blocks of the organization. Hence, Mayo and Brown (1999) refer to "the design of key inter-dependent systems that create and sustain a competitive business."

Definitions at the strategic level emphasize overall direction in terms of the firm's positioning in the marketplace. Here, value creation for stakeholders, including suppliers, customers, and partners, becomes a consideration. The focus includes managing interactions and exchanges across organizational boundaries, with special consideration for growth opportunities. Business drivers are identified and measured. At this level, key elements of the model include stakeholder identification, value creation, differentiation, vision and values, and networks and alliances. Thus, Shafer et al. (2005) allude to an "underlying core logic and set of strategic choices," while Slywotsky (1996) refers to "the totality of how a company selects its customers, defines and differentiates its offerings, defines the tasks it will perform itself and those it will outsource, configures its resources, goes to market, creates utility for customers and captures profits."

It is this strategic level perspective that is especially promising for advancing entrepreneurship theory and practice. Here, the business model subsumes the strategic positioning of the firm, underlying business concept, specific product offerings, core internal processes, and revenue model. To illustrate, consider the case of Dell Computer, whose success can be traced to the company's adherence to a well-formulated business model. The Dell model integrates strategic considerations, operational processes, and decisions related to the firm's economic model. It is a model designed around the elimination of intermediaries, systems that are built to order, a highly responsive customer service program, moderate margins and rapid inventory turnover, speedy integration of new technologies, and a highly efficient procurement, manufacturing, and distribution process.

STRATEGIC USES OF A BUSINESS MODEL

Firms fail in spite of well-constructed business models and succeed with poorly-designed models. Nonetheless, a business model can provide significant value to the entrepreneur and other stakeholders (e.g., employees, financiers, network partners, and advisors). It serves at least five major purposes.

First, a model can help ensure that the entrepreneur brings a fairly logical and internally consistent approach to the design and operations of the venture and communicates this approach to stakeholders. Similarly, by making explicit the assumptions that underlie a venture, critical

flaws in these assumptions can be identified (Shafer et al., 2005). Second, a model represents the architecture for identifying key variables that can be combined in unique ways and, hence, is a platform for innovation. As an architectural platform, the entrepreneur can use different model constructions to identify functions and activities that can be outsourced or accomplished through partnerships and alliances. Third, it can serve as a vehicle for demonstrating the economic attractiveness of the venture, thereby, attracting investors and other resource providers. In this vein, the model can serve as a diagnostic tool for evaluating the implications of raising or lowering margins or converting certain fixed costs to variable costs. Fourth, the business model provides a guide to ongoing company operations, in that it provides parameters for determining the appropriateness of various strategic or tactical actions that management might be considering. Hence, Dell Computer deviated from its model when attempting to sell through retailers, with questionable results. As Brown (1998) notes, the model provides fundamental filters through which a company looks at the world and approaches the assessment of strategic alternatives. Finally, once a model is in place, mapping it can help facilitate necessary modifications as conditions change. Entrepreneurs are likely to become more strategic in their views of business operations over time. In addition, as core competencies are developed within the venture, keener insights may result regarding sources of innovation or competitive advantage as they relate to those competencies. In this context, Mitchell and Coles (2004) describe the need for continuous business model innovation.

The importance of the business model can also be linked to the type of venture pursued by an entrepreneur. If a distinction is drawn between survival, lifestyle, managed growth, aggressive growth, and speculative ventures, each requires a business model. However, the models may vary in formality and sophistication. The proprietor of a survival or lifestyle business may have an implicit model in mind that suggests how much must be sold to different segments, or how prices can be negotiated. Alternatively, a more formal, comprehensive, and potent model is needed to provide direction for growth and attract resources to a high potential venture. Similarly, with a speculative venture, the model is instrumental in communicating growth and profit potential to acquirers.

LIMITATIONS IN THE CURRENT RESEARCH

Although the importance of a business model is implicitly or explicitly recognized by most researchers and educators, there has been relatively little academic research on the subject, and much of what has been published is conceptual in nature. The available research tends to be descriptive, with the largest volume of studies coming from developments in electronic commerce and the Internet. Yet, it has also been noted that many of the ostensibly new E-commerce business models are actually adaptations of traditional approaches (e.g., auction models) (Linder & Cantrell, 2001).

Researchers have examined approaches to building a business model (Boulton, Libert, & Samek, 2000; Mayo & Brown, 1999) and have noted general types of models (Glascoff, 2001; Mahadevan, 2000). Attempts have also been made, *ex post facto*, to create classification schemes of model types (Barnes-Vieyra & Claycomb, 2001; Dubosson-Torbay et al., 2001; Kleindl, 2000; Levy, 2001; Rappa, 2001; Timmers, 1998). Yet, the diversity in classification schemes, and in the underlying variables that define the various schemes, suggest much more progress is needed. In particular, the ability to generalize a given scheme to different types of industries and ventures is limited.

Other research examines failed business models (Slywotzky & Morrison, 1997; Stewart & Zhao, 2000). This work has

attempted to identify major causes of failure, with emphasis placed on the revenue model, value proposition, market definition, marketing approach, and technology resources. Yet, such studies often do not distinguish the extent to which failure is due to model design or the manner in which a given design is implemented. Attention has been devoted to the need for new business models as market conditions change (Mitchell & Coles, 2004) but with little insight into the duration of a given model or when modification or abandonment is in order.

Where generic models have been proposed, some insights have been provided regarding when to rely on which model. Hence, Mahadevan (2000) suggests the choice of a business model should be driven by the role of the organization in the market structure (impacts choice of value stream), physical attributes of the good traded (impacts choice of revenue stream), and personal involvement required in the buying/selling process (impacts choice of logistical stream).

Attempts at decomposition of the business model have generally acknowledged the existence of inter-dependencies among the components but shed little light on the nature of the relationships (e.g., Afuah & Tucci, 2001; Petrovic, Kittl, & Teksten, 2001). Hence, the consequences of changes in one or more components are not well-understood. Such understanding would seem critical for the development of theory regarding how business models evolve.

Limited progress has also been made in establishing criteria for evaluating models or their underlying components (Barney, Wright, & Ketchen, 2001; Dubosson-Torbay, Osterwalder, & Pigneur, 2001). Sample criteria for assessing the overall model might include uniqueness, profit potential, internal consistency, comprehensiveness, imitability, robustness (ability to withstand changes in assumptions about underlying internal or external conditions), adaptability, and sustainability. Methods for quantifying and applying such criteria have not been proposed. Alternatively, numerous criteria exist for evaluating the individual model components, ranging from standard quantitative indicators (size and growth rate of the firm's target market, measures of operational efficiency) to highly qualitative indicators (originality of the value proposition, strength of partner relationships). Afuah and Tucci (2001) distinguish measures of profit, profit predictors, and component attributes.

Why has progress been slow in addressing these vexing issues? Three factors would seem to hold the key. The first of these concerns the definitional issues addressed earlier and the associated need for a uniform conceptualization of the business model. The second factor concerns the theoretical legitimacy of the business model construct. As a relatively new construct, models have achieved much more widespread adoption in practice than in academe. Hence, a content analysis of leading textbooks in the fields of entrepreneurship and strategy uncovered a notable lack of dedicated attention to business models. This relatively slow adoption process by academics can be traced to fact that the emergence of the business model concept was not theory-driven. Models emerged as a pragmatic means of capturing the essence of a business during an era when entirely new business forms were being created, rapidly grown, and harvested. While applications of the concept have subsequently become fairly universal, there has been no parallel attempt to establish the theoretical relevance of the business model. The third challenge to our understanding involves difficulties in measuring business models. The absence of a universal conceptualization that is theoretically sound makes it difficult to know what to measure, much less how to conduct the measurements. These difficulties may explain why virtually no empirical work has appeared to date.

Realizing the potential of the business model

requires that meaningful advances be made in all three of these areas. Let us explore possible new directions in each of them.

TOWARD A CONCEPTUAL FOUNDATION

The most critical issue, for which there is no consensus, involves the key components of a business model. Based on a comprehensive review of existing perspectives, Morris, Schindehutte, and Allen (2005) have proposed an integrative framework that reflects a strategic level perspective on the business model. Importantly, the framework is relatively simply to apply, fairly comprehensive in the factors it incorporates, and operationally meaningful. The approach centers around the six key decision areas described below and summarized in Table 2.

1. How does the firm create value?

The value offering of the firm includes the particular products or services being sold, the degree of product/service customization, and the relative depth and breadth of product/service mix. In addition, the value proposition is defined by whether the firm provides access to the product or service, sells the actual product or service, or sells the product or service as part of a bundle or total system. Other issues include whether the firm makes the product or service; outsources manufacturing or other critical functions; licenses others to make and sell the product; acquires the product and re-sells it; or acquires the product, modifies it, and re-sells it. Finally, the value proposition is affected by whether the product or service is sold directly by the firm or through an intermediary.

2. For whom does the firm create value?

The entrepreneur must specify the nature and scope of the market in which the firm will compete. Of importance is whether the firm will principally sell to consumers, businesses, or both, and where it falls in the value chain. When selling to businesses, the entrepreneur must further distinguish where in the value chain the firm's customers will be, such as upstream (e.g., mining, agriculture, basic manufacturing), downstream (e.g., final manufacturing, assembly), wholesaling, retailing, or some combination. The scope of the market should also be specified, including the extent to which it is local, regional, national, or international, and whether it is a niche-based or a broad-based market. Ventures also vary in the extent to which their success is driven by a focus on discrete transactions to a range of customers or by ongoing relationships with particular accounts.

3. What is the firm's internal source of advantage?

The firm's core competency reflects an internal capability or set of skills enabling it to provide particular benefits to customers in particular ways. Hence, Wal-Mart delivers a low-price benefit based on its competency at supply chain management. While a firm might attempt to build operations around any number of competencies, sources of advantage can be organized into seven general areas. These include the firm's production/operating system, capabilities in technology development and innovation, selling and marketing expertise, information management (including information mining and packaging prowess), competence in financial management and arbitrage, mastery of supply chain management, and skills at managing networks and leveraging resources.

4. How does the firm differentiate itself?

Depending on how they are applied, core competencies can enable the firm to differentiate itself, achieving a position of uniqueness in the marketplace. The challenge of differentiation is to identify salient points of difference that are not cosmetic or transitory, but rather, are sustainable. This can be an elusive quest

given the ability of companies to quickly imitate one another in the contemporary environment, yet companies such as Starbucks and Southwest Airlines have achieved such sustainable differentiation through their business models. Sustainable strategic positions tend to be designed around one of the following five bases of differentiation: operational excellence, product capabilities (e.g., quality, selection, availability, features), innovation leadership, low cost, or intimate customer relationships or experiences.

5. How does the firm make money?

The economic model provides a coherent logic for earning profits. It can be captured by considering four sub-components. The first of these is the firm's operating leverage, or the extent to which the underlying cost structure is dominated by fixed costs or is driven more by variable costs. The second sub-component concerns whether the firm is organized for high, medium, or low volume in terms of both the market opportunity and internal capacity. The third consideration is whether the firm will be able to charge high, medium, or low margins. Finally, the economic model considers whether the revenue drivers are fixed or flexible. An example of the former would be a company that sells only one product line based on a fixed price list. Alternatively, a firm that sold a number of value-added lines at varying prices depending on the customer segment and market conditions has more flexible revenue sources. This latter factor is the source of many of the creative revenue models found in dot.com businesses.

6. What are the entrepreneur's time, scope, and size ambitions?

The business model must be applicable to all types of ventures, ranging from lifestyle and managed growth firms to aggressive growth and mature enterprises. As such, the model must capture the entrepreneur's objectives and ambitions, reflected in what might be called the "investment model." Four such models can be used to characterize most ventures: subsistence, income, high growth, and speculative. With the subsistence model, the goal is to survive and meet basic financial obligations. When employing an income model, the entrepreneur invests to the point that the business is able to generate on ongoing healthy income stream for the principals. A growth model finds not only significant initial investment but substantial reinvestment in an attempt to grow the value of the firm to the point that it eventually generates a major capital gain for the initial investors. The speculative model is employed where the entrepreneur's time frame is shorter, and the objective is typically to demonstrate the potential of the venture and then sell it.

Morris, Schindehutte, and Allen (2005) further argued that decision-making in each of these six areas can occur on two levels, termed the *foundation* and *proprietary* levels. The foundation level concerns the generic decisions made regarding what is being sold, to whom, and so forth. The foundation level is adequate to capture the essence of any firm's business model. However, venture sustainability is ultimately dependent on the ability of the entrepreneur to apply unique approaches to one or more of the foundation components. For example, having determined that the firm will sell some combination of products and services directly to customers, the entrepreneur defines ways to implement such decisions in a novel manner. This is referred to as the proprietary level of the business model, as it entails innovation that is unique to a particular entrepreneur and venture.

Consider the example of Dell Computer. At the foundation level, the company sells a mix of products and services, with a heavier product focus. The product offering is customizable and is sold through a direct channel in both business and consumer markets. However, competitive advantage derives from unique approaches that are

Table 2 – The Core Components of the Business Model

Component one: ***(factors related to the offering)***

How do we create value? (select 1 from each set)

- offering: primarily products/primarily services/heavy mix
- offering: standardized/some customization/high customization
- offering: broad line/medium breadth/narrow line
- offering: access to product/ product itself/product bundled with other firm's product/service
- offering: internal manufacturing or service delivery/outsourcing/licensing/reselling/value added reselling
- offering: direct distribution/indirect distribution (if indirect: single or multi-channel)

Component two: ***(market factors)***

Who do we create value for? (select 1 from each set)

- type of organization: B2B/B2C/both/other
- local/regional/national/international
- where customer is in value chain: upstream supplier/downstream supplier/government/ institutional/wholesaler/ retailer/service provider
- broad or general market/niche market
- transactional/relational

Component three: ***(internal capability factors)***

What is our source of competence/advantage? (select those that apply)

- production/operating systems
- selling/marketing
- information management/mining/info. packaging
- technology/R&D/creative or innovative capability/intellectual
- financial transactions/arbitrage
- supply chain management
- networking/resource leveraging

Component four: ***(competitive strategy factors)***

How do we differentiate ourselves? (select those that apply)

- image of operational excellence/consistency/dependability
- product or service quality/selection/features/availability
- innovation leadership
- low cost/efficiency
- intimate customer relationship/experience

Component five: ***(economic factors)***

How Can We Make Money? (select 1 from each set)

- pricing & revenue sources: fixed/mixed/flexible
- operating leverage: high/med/low
- volumes: high/med/low
- margins: high/med/low

Component six: ***(personal/investor factors)***

What are our time, scope and size ambitions? (select 1)

- subsistence model
- income model
- growth model
- speculative model

applied to two of the foundation-level components. The so-called "Dell Direct Method" is the result of approaches both to defining the value proposition and to organizing internal logistical flows. It is these proprietary concepts that enable the firm to consistently deliver speed and customization at a moderate price, which translates into a sustainable marketplace position.

TOWARD A THEORETICAL FOUNDATION

The theoretical basis for a business model has not been established. Progress is needed on two fronts: the theoretical bases for the various elements included in a business model, and the creation of an original theory of the business model.

Amit and Zott (2001) have argued for a cross-theoretical perspective on the business model, concluding that no single theory can fully explain the value creation potential of a venture. They suggest the business model construct can serve as a unifying unit of analysis that captures value creation arising from multiple sources. Toward this end, they call for a linking of strategic management and entrepreneurship theories of value creation.

As we have noted, the strategic approach to a business model adopts an integrative picture of the firm's value creation, competitive advantage, and economics. Not surprisingly then, the business model concept encompasses and builds upon the theoretical traditions in the field of business strategy. Most directly, the business model builds upon the value chain concept (Porter, 1985), and the extended notions of value systems and strategic positioning (Porter, 1996). Because the business model encompasses competitive advantage, it also draws on the resource-based view (Barney, 1991; Wernerfelt, 1984). In terms of the firm's fit within the larger value creation network, the business model concept relates to strategic network theory (Jarillo, 1995) and cooperative strategies (Dyer & Singh, 1998). Further, the business model involves choices about the firm's boundaries (Barney, 1999), which includes issues of vertical integration and corporate strategy, as well as transaction cost economics (Williamson, 1983). A well formulated business model, thus, serves to integrate a number of choices often treated separately in the strategy literature.

Central to the business model concept is the value chain of the firm (Porter, 1985) and how it fits into the industry value chain or value creation network (Gulati & Singh, 1998). Hence, a business model must capture the firm's offerings and the activities undertaken to produce them. Here, the entrepreneur must consider the firm's value proposition and choose which activities will be undertaken within, versus outside, the firm. Based on Schumpeter's (1934) theory of economic development, value is created from unique combinations of resources that produce innovations, while transaction cost economics identifies transaction efficiency and boundary decisions as a value source. A business model should depict how the firm positions itself within the larger chain, system, or network of value creation activities. Indeed, positioning within the industry value chain can be a critical factor in value creation (Christensen, et al., 2001; Champion, 2001; Porter, 1996; Wise & Baumgartner, 1999). As part of its positioning within the value creation network, the firm must establish appropriate relationships with its network neighbors: suppliers, partners, and customers (Dyer & Singh, 1998).

A business model is designed around internal competencies that underlie the firm's competitive advantage. This is consistent with resource-based theory, which views the firm as a bundle of resources and capabilities (Barney & Wright, 2001; Wernerfelt, 1984). Firms are assumed to be heterogeneous in terms of their resources and internal capabilities, and the uniqueness of any one

firm can be captured in its business model. In a sense, a business model represents a particular way in which resources can be combined, with resource-based theory suggesting that an effective model is one where the combinations effectively enhance the extent to which resources are valuable, rare, inimitable and non-substitutable.

Competitive advantage can emerge from superior execution of particular activities within the firm's own value chain (e.g. production), superior coordination among those activities, (e.g. the product development process), or superior management of the interface between the firm's activities and the activities of others in the value creation network, (e.g. supply chain management) (Porter, 1985; Gulati & Singh, 1998). The choice of one source of advantage is meant to focus the entrepreneur on creating a strong and sustainable position or core competence (Hamel & Prahalad, 1994). Also, where advantage is built around innovation capability, Schumpeterian theory holds relevance (Schumpeter, 1934). A business model captures the firm's source of advantage in terms of fundamental building blocks that lead to superior performance (Hill & Jones, 2001). In formulating its model, the firm must choose which area of performance to focus its efforts in to achieve differentiation and competitive advantage (Porter, 1996). Once the firm chooses whether it will focus on efficiency, innovation, customer relationships, etc., the choice of activities to undertake within the firm (component one), how to position the firm within the larger value network (component two), and where to focus on building superior resources and capabilities (component three) should follow.

How the firm actually makes money is also central to the business model. If the other components are well-conceived and the firm is capably executing, superior value creation should be the result (Porter, 1985). The point of this component, then, is to set up the business so that superior value creation results in superior returns to the firm. This is by no means assured, especially when strong players (including customers) are present within the value creation system.

Finally, for the entrepreneur, decisions must be made about overall objectives of the enterprise and its relationship to his/her career and life. A key factor in this context is the firm's "entrepreneurial capital", a concept rooted in resource-based theory (Erikson, 2002). Most new ventures are conceived as subsistence or lifestyle opportunities rather than high potential growth or speculative opportunities. It is important to be clear about these time, scope, and size objectives when formulating the business model and to ensure other components of the model reflect the entrepreneur's orientation. Other theoretical traditions have implications for entrepreneurial intentions regarding the nature and scope of the venture being created. Self-efficacy theory (DeNoble, Jung, & Erlich, 1999) is a case in point, with its emphasis on role of an entrepreneur's cognitive capabilities and skills assessment in determining entrepreneurial outcomes.

Beyond the establishment of theoretical roots for the components of a model, there is a need for an original business model theory. A theory that guides attempts to model a firm must address the combinations of core elements that create value and sustainable advantage in the marketplace. Further, such a theory would specify the role of various model characteristics in explaining performance, possibly employing the type of criteria alluded to earlier (e.g., internal consistency, imitability, robustness). A relevant theoretical tradition in this regard might be dynamic capabilities theory, with its emphasis on strategic adaptability and innovation (Zollo & Winter, 2002).

Another example of a theoretical tradition that might be useful is systems theory. The elements of the business model are inter-related components of a system that form the underlying logic or architectural backbone of

a company. The business model is, therefore, not simply a sum of its parts, but each component becomes a contributor to a total system. Viscio and Pasternack (1996) propose that the business model must generate "system value" which is the *raison d'être* of the company in addition to the value from the individual parts. It is in this context that Petrovic, Kittl and Teksten (2001) suggest systems theory as a foundation for work on business models. Here, the business is viewed as an open system with varying levels of combinatorial complexity among sub-systems and bounded by the environment with which there is open information exchange.

TOWARD AN EMPIRICAL FOUNDATION

Once a uniform approach to the business model is adopted, it becomes possible to make meaningful progress in conducting empirical research. Such research requires an ability to easily apply and measure the components of the business model framework in different types of firms. We can use the Morris/Schindehutte/Allen (MSA) framework to demonstrate this application and measurement potential.

Step One: Applying the Framework

To be of value, a framework must be applicable to firms in general but serve the needs of the individual entrepreneur and the unique combinations behind his/her venture that make it sustainable. Hence, it must be possible to apply the framework to any type of venture. This can be illustrated with the MSA framework. Here, two distinct types of firms are considered: Dove Data Products and Operations Associates. The two firms have both been listed on the *Inc. 500* list of high growth, entrepreneurial companies. They were selected based on differences in the nature of their operations and the underlying manner in which they make money.

Dove Data Products is a successful distributor of re-manufactured toner cartridges in the Southeastern United States. They employ a growing sales force located in small local offices in the region. They are a product-based company, specializing in toner cartridges but, also, selling supplies for printer/copier units and storage media such as data tapes and writeable CDs. Operations Associates provides business and financial consulting, IT and telecommunications solutions, facilities master planning, supply chain consulting, and operations consulting. They are focused on helping customers improve productivity, profitability, and market share. This is a business built around a professional staff and customizable solutions, and it currently employs forty people. As the company has grown, they have expanded their services into the wide variety of areas listed above.

The application of the six components of the MSA framework is summarized in Table 3. As can be seen, the two companies have very different business models, and this helps to illustrate the flexibility of the framework. Dove Data is strictly a standardized, product-oriented firm that is transaction-based and stresses low costs and low margins. Operations Associates offers services exclusively, has a great deal of flexibility in revenue generation, and their services are high customized. The framework can help companies with strategic planning, competitor evaluations, and focusing their efforts on core competencies and advantages.

As can be seen with these examples, the framework is reasonably simple to apply, and each element is measurable. Further, the framework reflects the hierarchical perspective presented earlier in Figure 1. It is comprehensive in nature, capturing the essence of a sustainable business in terms of strategy, operations, and financial performance. Sustainability further requires that the components of the model be internally consistent. This consistency must be found within and between subcomponents

Table 3: Application of the MSA Framework to Two Firms

Model Component	Dove Data Products	Operations Associates
Factors related to the offering: • Primarily products/primarily services/heavy mix • Standardized/some customization/ high customization • Broad and deep line/broad and shallow/narrow and deep/narrow and shallow • Access to product/product itself/product bundled with other firm's product • Direct/indirect distribution; single or multi channel	Dove Data Products offers *only products* for sale and these products are *standardized*. Their product line can be characterized as *narrow* (only copier and computer storage items) and *shallow* (a limited number of products in each line). The products must be *bundled with other firm's products* to be useful. Dove Data Products relies upon *direct distribution* of their items through local company offices.	Operations Associates is *exclusively services* with *high customization* built into each service. Their business is characterized by a *narrow* business focus with *deep* offerings such as IT, operations, financial, etc. Operations Associates uses *direct distribution* of the services and are selling the *product itself* (in this case, the product is the service they provide),
Market factors: • Sell in B2B, B2C, Both • Local/regional/national/international • Value chain: wholesale/ retail/ upstream or downstream supplier: • Transactional/relational	Dove Data Products is a *B2B* company that is expanding in the Southeast *region*. Their business is *transactional* based with customers potentially in *all steps* of the *value chain*.	OA is a *B2B* company. They have clients *nationwide* and these firms are located throughout the *value chain*. Customers are concerned with supply chain and facilities planning issues. They base their work on building ongoing *relationships* with customers.
Strategic capability factors: • Production/operating systems • Selling/marketing • Information management/mining • Technology/R&D/innovative capability/intellectual • Financial transactions/ arbitrage • Supply chain management • Networking/resource leveraging	Dove Data Products employs a significant sales staff. This sales staff must convince customers that Dove Products are quality items and that they can save money by using the re-manufactured items. A chief competency of the company is in *selling/marketing* through their local distribution network.	Operations Associates employs "experts" in a number of business areas and provides the assistance of these knowledge experts to customers. Their core competency is in their *intellectual resources* and the breadth of the intellectual knowledge.
Competitive strategy factors: • Operational excellence • Product or service quality/ selection/features/availability • Innovation leadership • Low cost/efficiency • Customer relationship	*Low cost/efficiency*: An important aspect of Dove Data Products' competitive advantage is their ability to sell quality, re-manufactured items cheaper than it would cost to purchase a new replacement cartridge.	*Service quality, selection, and capabilities* are key to competitive advantage. By creating real value through customized services, the firm builds relationships and sells additional services to client.
Economic factors: • Revenue sources: fixed/mixed/flexible • Operating leverage: high/medium/low • Volumes: high/medium/low • Margins: high/medium/low	*Revenue sources* are *fixed* with *low margins* and *medium volumes*. They sell low cost, remanufactured products. *Operating leverage* is *medium* given costs associated with re-manufacturing and sales.	Revenue sources are from consulting and *flexible*. *Medium operating leverage* due to the cross training that is feasible with the many areas of service. The *volumes* are fairly *low* with *high margins* built into consultant fees.

Thus, an economic model with high operating leverage, low margins, moderate volume, and fixed revenue sources may, by itself, be untenable. Further, the economics must fit with the customer model. Hence, a given economic model might not be workable when selling in a regional business-to-business (B2B) market, where significant investment in the development of customer relationships is required. Finally, it should be noted that the framework applies to ventures of all types and sizes. However, firms with multiple divisions or strategic business units may have different models for different divisions.

Step Two: Measuring the Framework

Once it is clear that a framework is able to capture the business models of a diverse mix of firms, the challenge becomes that of conducting larger-scale empirical research. Specifically, we must be able to quantify the various components of the model in a manner that permits statistical analysis. With a well-conceptualized framework, any number of measurement approaches can be developed. One such approach was developed using the MSA framework.

Specifically, an empirical study was undertaken of business models in a cross-section of randomly selected ventures. The sampling frame was the listing of 500 high growth, entrepreneurial firms complied annually by *INC.* magazine. To be included in this compilation,, firms had to meet the following criteria: independent and privately held; net sales in the base year of at least $200,000; a four-year sales history that includes an increase over prior year sales; not a holding company, regulated bank, or utility; and based in the United States. Firms are ranked based on their average annual sales growth. A random number table was employed to generate a probability sample of 100 firms, which were used for the analysis.

The business models of each firm were then characterized using the six components delineated in Table 2. Specifically, these six components involve eighteen decision variables, and these have been numbered in column 1 of Table 4. For example, Component One (how the firm creates value) involves decisions in six areas: type of offering, level of customization, depth of product mix, breadth of product mix, product form, type of distribution, and source of production. Further, some of these decision variables involve multiple choices, resulting in a total of sixty-three choices for the overall business model. Hence, if we again consider Component One, these six decision areas involve twenty-two choices, such as the offering consisting of products, services, or a mix (3 choices), or distribution being direct or indirect (2 choices).

Selected firms were accessed via the *INC.* 500, website (www2.inc.com/inc500/ search. html), which provides a brief company synopsis and a link to the individual company website. The selected companies' websites were then thoroughly investigated, with most of them including pages on company history and mission, philosophy, customers, customer testimonials, partners, products and services sold, and pricing, together with links to relevant news articles and publicity releases. Many of the companies specifically identify their core competency, what makes them different, and key customer benefits. Total revenue figures were available, which with price information permitted a volume estimate. An attempt was also made to look for internal consistency in the statements made in various parts of the website. For some of the items in the business model framework, subjective inferences were made based on the information that was available.

To minimize interpretative error, three investigators independently examined each firm, classifying them on each of the eighteen elements in the framework. If the investigators were not unanimous on any item, differences were resolved in a group conference. Where differences could not be

resolved, the firm was contacted. Responses to the eighteen items were then coded and input into an SPSS computer file.

Cluster analysis was then applied to the data to classify business models into mutually exclusive groups based on similarities among the firms sampled. Cluster analysis is commonly used to classify a sample of objects on characteristics of interest when little is known about the population (Punji & Stewart, 1983). Response categories for each item in the foundation model were treated as dichotomous variables and binary coded where an affirmative response = 1, or else = 0. Similarity matching coefficients ranging from 0 to 1 were then computed where larger values represent pairs of firms that are more similar on a characteristic. As it would not be logical to assume similarity in firms based on the absence of a characteristic, Jaccard coefficients that exclude negative matches were employed (Everitt, 1993).

Next, the similarity matrix was used as input to the cluster analysis. An agglomerative hierarchical clustering method with complete linkage was used to produce a range of 2-9 solutions. The agglomeration schedule and homogeneity measures of the merged clusters (R^2 and semi-partial R^2) were examined for changes and the dendrogram inspected for differences in successive steps to identify four distinct clusters (Milligan & Cooper, 1985). Two separate procedures were used to evaluate the stability and validity of the four-cluster solution, nonhierarchical clustering and multinomial logistic regression. A nonhierarchical technique based on a k-means algorithm replicated four clusters that were nearly identical in proportion to those obtained with the hierarchical technique. Using the dichotomous variable set as predictors of cluster membership, the logistic regression model correctly classified 100 percent of the firms. The results of the validation procedures strongly suggest that the four-cluster solution is stable and represents the structure of the sample of entrepreneurial firms on the business model characteristics.

Step Three: Assessing Results

Profiles of the four empirical clusters identified are presented in Table 4. The table displays percentages of affirmative response by cluster for each of the 63 dichotomous variables regarding offering, market, internal capability, competitive strategy, economic, and investor factors reported by the entrepreneurial firms. The following descriptive labels were assigned to the clusters:Technical Service, Standardized Producer, Product Franchiser, and Customized Service.

The "Focused Technical Service Model" cluster accounted for 28 percent of the sample. Firms in this group tend to sell wholesale and create value by offering a deep and narrow line of services that are somewhat or highly customized. As internal service delivery firms, they supply both up- and down-stream in the value chain distributing directly to customers on a relational basis. The majority of firms are B2B organizations that operate in national and international markets. Although some service quality and innovative leadership are indicated, neither competitive strategy factor appears to dominate. A moderate percentage of technology or R&D, along with some networking or resource leveraging, are noted as key internal capability factors. Technical Service firms tend to have flexible or mixed revenue sources operating with moderate margins at all levels of volume. Similar to the other three clusters in terms of time, scope, and size ambitions, all of the firms ascribed to a growth model.

At slightly less than one quarter of the sample (22%), the second cluster was labeled the "Standardized Producer Model" primarily because these firms offer a narrow but deep line of standardized products emphasizing quality over competitors. They are inclined to be internal manufacturing organizations operating from medium to high

Table 4 - Factor Profile of Business Model Clusters

	Cluster			
	Technical Service	**Standardized Producer**	**Product Franchiser**	**Customized Service**
Variable	**(n=28)**	**(n=22)**	**(n=16)**	**(n=34)**
Offering Related Factors				
1. Basic Offering: Primarily Products	21	82	63	9
Primarily Services	54	14	0	74
Heavy Mix	25	5	38	18
2. Customization:				
Standardized	0	82	44	9
Some Customization	64	14	56	18
High Customization	36	5	0	77
3. Breadth:				
Broad Line	36	18	19	6
Medium Breadth	14	9	44	3
Narrow Line	50	73	38	91
4. Depth:				
Deep Line	82	55	19	27
Medium Depth	11	23	25	32
Shallow Line	7	23	56	41
5. Product Form:				
Access to Product	18	18	0	3
Product Itself	43	82	13	44
Bundled with Other Firms' Products	39	0	88	53
6. Distribution:				
Direct	93	91	100	100
Indirect	7	9	0	0
7. :Source of Production				
Internal Production/Service Delivery	64	59	25	88
Outsourcing	4	5	0	3
Licensing	11	9	38	0
Reseller	0	9	19	0
Value-added Seller	21	14	19	12
Market Factors				
8. Organization Type:				
B2B Organization	75	32	81	74
B2C Organization	0	41	0	0
Government/Other	11	9	6	18
Combination	18	27	19	27
9. Market Scope:				
Local	7	0	0	9
Regional	11	14	19	27
National	43	59	44	50
International	39	27	38	15

Table 4 (cont'd)

	Cluster			
	Technical Service (n=28)	**Standardized Producer (n=22)**	**Product Franchiser (n=16)**	**Customized Service (n=34)**
10. Value Chain:				
Wholesale	82	32	63	68
Retail	61	32	63	59
Up-stream Supplier	57	14	38	44
Down-stream Supplier	68	14	56	65
Service Provider	54	41	56	68
Customers	4%	46%	6%	3%
11. Exchange Type:				
Transactional	11%	59%	69%	0%
Relational	86	41	31	100
Internal Capability Factors				
12. Core Competence: Product/Operating Systems	11	5	6	15
Selling and Marketing	11	27	6	6
Information Management	3	9	31	0
Tech./ R&D Innovative Capability	46	32	38	62
Networking/Resource Leveraging	25	18	6	12
Supply Chain Management	4	0	6	3
Financial Transactions	0	9	6	3
Competitive Strategy Factors:				
13 Source of Differentiation Image of Operational Excellence	18%	5%	13%	12%
Product/Service Quality	32	73	38	50
Innovation Leadership	32	5	25	18
Low Cost/Efficiency	0	5	19	3
Intimate Customer Relationships	18	14	6	18
Economic Factors:				
14. Pricing and Revenue Source:				
Fixed	4	77	50	6
Mixed	39	18	44	9
Flexible	57	5	6	85
15. Operating Leverage:				
High	39	55	13	38
Medium	25	27	50	18
Low	36	18	38	44
16. Volume:				
High	32	46	44	3
Medium	29	46	50	35
Low	39	9	6	65
17. Margins:				
High	36	27	63	97
Medium	61	55	19	3
Low	4	18	19	0
Personal or Investor Factors:				
18. Time, Scope, and Size Ambitions:				
Growth Model	100%	100%	100%	100%

national or international in scope. With a high operating leverage, firms in this group employ moderate margins to maintain a fixed revenue source with consumers or other businesses. Product distribution is direct and, though some service is provided, most business is transactional, rather than relational, in nature. Capabilities for selling and manufacturing, as well as technology or R&D, are noted as internal factors relevant to the survival of standardized producers.

Accounting for 16 percent of the sample, the smallest of the clusters represents the "Product Franchiser Model", as 38 percent of this cluster's firms indicated licensing as a major value offering of the firm. These firms compete on several factors including product quality, innovation leadership, and some cost or efficiency considerations. Franchisers have fixed or somewhat mixed revenue sources, a low-to-medium leverage position, and usually operate at a high margin, generating medium-to-high volumes. They primarily sell products to other businesses in national or international markets, equally to wholesalers and retailers, on a transactional basis. Value is created mostly for down-stream or service suppliers, although 38 percent of the firms also note doing business with up-stream suppliers. These firms tend to offer fairly standardized lines that are narrow to medium in breadth but shallow in depth. Products are bundled with other firms' products and distributed directly to customers. Information management and technical or innovative capabilities were key internal factors that provide competitive advantage.

The largest of the clusters was named the "Customized Service Model" because these firms primarily offer a narrow line of highly customized services mostly to other businesses (74%). They are internal service providers operating nationally both up- and down-stream in the value chain, as well as to other service providers. The service may be bundled with other firms' products, but the distribution is direct and all business is conducted on a relational basis. Firms in this group may have either a low or high operating leverage, flexible revenue sources, and operate with high margins at low-to-medium volume. Compared to the other three groups, a greater percentage of these firms indicate a technical or R&D capability as their internal source of advantage.

DISCUSSION

This article has sought to demonstrate the potential benefits of a standardized framework for advancing our understanding of the nature and role of business models. A key benefit of this standardization is the ability to make comparisons across models from a broad universe of ventures. New avenues for empirical research become possible, ranging from the creation of general model taxonomies, and investigations of relationships among the variables that constitute the components of the model, to causal modeling of the relationships between the business model and a host of endogenous and exogenous variables.

The empirical potential of the framework was demonstrated using a sample of entrepreneurial firms. The analysis produced four distinct, stable clusters which can be characterized as generic business models. These are models that appear to work. That is, the focused technical service, standardized producer, product franchiser, and customized service models are all associated with high levels of growth over a number of years. This growth is produced in a wide range of industries. No one model was associated with higher rates of growth than the others. The emergence of these dominant models is noteworthy given the extremely large number of model possibilities.

It would seem likely that different categories of ventures will vary in terms of their heterogeneity when it comes to reliance on a fewer or greater number of business models. Thus, if the focus was on a cross-section of lifestyle firms, one might expect more

heterogeneity. Alternatively, if a researcher concentrated on single industries, such as packaging or architectural services, the expectation might be more homogeneity. It may also be that size contributes to heterogeneity in terms of models that work. The firms in this study were emerging and somewhat comparable in terms of size. As firms evolve from small to large, the realities of scale and scope may lead to reliance on a narrower set of business models.

These clusters are presented not as a definitive typology of high-growth venture models but, instead, as an illustration of the potential of a common framework for enhancing understanding regarding business models. A similar methodology could be used to establish common model types at the industry level or to link types of models to a variety of antecedent variables (e.g., characteristics of the entrepreneur, the entrepreneur's resource base and network, environmental conditions) and outcome variables (e.g., company performance). Further, for a given model, one could determine the relative importance of the various components in explaining firm performance under differing industry and environmental conditions. This, then, is a first step in facilitating a business model research agenda.

Even where standard models emerge, as in the current study, a critical question concerns the longevity of a given model. The life of a model may well be tied to the growth aspirations of the entrepreneur. Smaller life-style ventures likely go through a period of experimentation but, ultimately, settle on a model which sustains them for some time. Only the appearance of a major new model (e.g., the impact of Wal-mart on local retailers) forces them to abandon the model. With high growth entrepreneurs, a key issue would seem to be the extent to which new opportunities result in diversification, exposing the firm to threats from new types of business models. Market-driving companies such as Dell, Southwest Airlines, and IKEA have tended not to diversify and so have been able to successfully remain with a core business model over two or more decades. Of course, none of these firms has faced a serious competitive threat from a firm with a radically new business model. Rather, others have attempted to mimic their models. Based on research methods such as the one employed in the current study, it becomes possible to track a given cohort of firms over time, noting the extent to which the cluster structure changes.

Efforts such as these can make it possible to identify a business model life cycle. Hence, an initial period may exist in which the model is fairly informal or implicit. It emerges through a process of trial and error. During this time, a number of core decisions are made which may delimit the directions in which the model can evolve. At some point, however, a fairly definitive, formal model is in place. Subsequently, a number of adjustments are made and ongoing experiments are undertaken (e.g., a new distribution channel, an enhanced customer service method). These tend to be modest changes in that the components of the model are typically highly interdependent, with changes in any one having major implications for the others. Petrovic, Kittl, & Teksten (2001) note that models tend to be both combinatorially and dynamically complex. In any case, the resultant model may sustain the venture for a relatively long period of time. However, at some point, conditions are likely to require model reformulation.

A limitation of the current research is the focus on what Morris, Schindehutte, and Allen (2005) referred to as the "foundation" level of the business model. While an important first step, the framework also has a proprietary level. This is the level where considerable scope exists for innovation within each of the six components of the model. Thus, the model becomes a form of intellectual property. Considerable work remains to be done to understand business

model innovation and how it can be objectively measured Mitchell & Coles, 2004). Further, there is a need to determine whether innovation is more critical in certain components of a model than others, and whether the relative importance of innovation applied to a given component varies depending on the environmental context.

The current study also provides direction regarding how entrepreneurs, investors, and others can assess various business model qualities. By mapping and quantifying the various components of a model, as in column 1 of Table 4, it becomes possible to better evaluate model comprehensiveness and internal consistency, and to compare models from different ventures. Further advances in measurement might allow for the assessment of other qualities, such as uniqueness or adaptability.

In addition, it is important to further explore the relationship between the business model and company strategy. On the one hand, the business model transcends strategy in that it covers a number of strategies and operational aspects of the business. Outsourcing and a particular approach to differentiation are strategies, and the economic model implies a strategy. On the other hand, based on the firm's business model, various strategies might be derived and implemented over time. Thus, a particular type of positioning strategy or a strategy for growth might be developed consistent with the business model. Once a model is in place, the question becomes: How do the competitive strategies selected by entrepreneurs impact the firm's ability to achieve sustainability and ongoing growth? The architecture around which the business is built should make possible certain strategic directions. Other types of opportunities the firm might pursue are inconsistent with or not supported by the architecture and so produce failure or mediocre results. In some instances, the new effort generates poor results on its own but, in other instances, it can undermine the foundation (or architectural structure) of the core business. Alternatively, if the model is well-conceived, it should allow for expansion and growth – such that one can add new floors, extensions, and even parallel structures that are distinct but fit well with the basic structure.

A good business model captures the core logic and dominant strategy of a venture, reflecting the creative manner in which a set of critical questions is addressed by the entrepreneur. A useable business model framework captures the ways in which key decision variables are integrated, including the need for unique combinations that are internally consistent. Approached in this manner, the business model can become a primary element of the unique domain that constitutes the field of entrepreneurship. Yet, business models are complex and multi-faceted. Realizing their potential as a vehicle for advancing the discipline requires agreement on the conceptual foundation and the theoretical basis of business models, together with an aggressive agenda of empirical research. By providing evidence regarding how to move from conceptualization to empirical measurement, this study represents an important first step in the implementation of such an agenda.

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