Editors' Corner

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The Theory of Entrepreneurship

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Abstract: The theory of entrepreneurship, namely the entrepreneurial value creation theory, explains the entrepreneurial experience in its fullest form, from the entrepreneurial intention and the discovery of an entrepreneurial opportunity, to the development of the entrepreneurial competence, and the appropriation of the entrepreneurial reward (Mishra and Zachary 2014). The theory of entrepreneurship provides in sufficient detail the interiors of the entrepreneurial process using a two-stage value creation framework. In the first stage of venture formulation, the entrepreneur driven by a desire for entrepreneurial reward (i.e., entrepreneurial intention) leverages the entrepreneurial resources at hand to sense an external opportunity (cue stimulus) and effectuate the entrepreneurial competence that is sufficient to move to the second stage. Several ventures fail at this stage. In the second stage of venture monetization, the entrepreneur may acquire external resources such as venture capital or strategic alliance to effect growth. Investors face an adverse selection problem when entrepreneurial ability and venture quality are difficult to ascertain. Entrepreneurs may use incentive signals to secure a higher valuation offer from the investors. A business model design with embedded dynamic capabilities can reconfigure the entrepreneurial competence to create sustained value and appropriate the entrepreneurial reward.

Keywords: entrepreneurship, entrepreneurial opportunity, entrepreneurial intention, effectuation, business model

Entrepreneurship is not merely the process of founding a new venture. Entrepreneurship is defined as a process of value creation and appropriation led by entrepreneurs in an uncertain environment (Mishra and Zachary 2014). The entrepreneurial process of value creation is driven by the entrepreneur and her entrepreneurial intention (an aspiration for entrepreneurial reward). The

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entrepreneurial process is not an autonomous process; the entrepreneur is integral to the entrepreneurial process. Thus, the entrepreneurial intention and resources are intrinsic to the entrepreneurial process.

The entrepreneurial process involves the entrepreneur identifying an external opportunity; matching the entrepreneurial resources at hand with the opportunity to effectuate an entrepreneurial competence; acquiring external resources, if necessary; creating sustained value; and appropriating the entrepreneurial reward. In *The Theory of Entrepreneurship*, the entrepreneurial value creation theory examines the interiors of the entrepreneurial process using a two-stage value creation and appropriation framework (Mishra and Zachary 2014).

In the first stage of venture formulation, the entrepreneur, driven by the entrepreneurial intention or an aspiration for entrepreneurial reward, discovers an external opportunity (or the opportunity may precede the entrepreneurial intention), and the opportunity is leveraged by the entrepreneurial resources at hand using an effectuation mechanism. The entrepreneurial opportunity is reconfigured to develop an entrepreneurial competence, an asymmetric advantage for the entrepreneur. The entrepreneurial competence embeds the entrepreneurial resources and the reconfigured opportunity (e.g., the proof of concept). The entrepreneurial competence thereby created is not constrained to follow the valuable resource conditions specified by the resource-based theory, namely the VRIN conditions (or the valuable, rare, inimitable, and nonsubstitutable conditions). For example, entrepreneur will engage in effectuation throughout the first stage of venture formulation and she may do so within and among her social network through a phenomenon known as bricolage where resources are shared and traded (Baker and Nelson 2005). Simply put, the entrepreneur will make with the resources available and seek assistance from others; namely, other entrepreneurs and customers. It is sufficient that the entrepreneurial competence created in the first stage of value creation provides a differential advantage to the entrepreneur allowing her to move to the second stage.

In the second stage of venture monetization, the entrepreneur may obtain external resources such as venture capital or strategic alliances, if necessary, and build or acquire complementary dynamic capabilities. The venture's dynamic capabilities embedded in the business model design reconfigure the entrepreneurial competence to sustain value creation and appropriate the entrepreneurial reward. *The Theory of Entrepreneurship* (Mishra and Zachary 2014) details the two stages of the entrepreneurial process and all the subprocesses therein. Mishra and Zachary derived 190 testable propositions using the entrepreneurial value creation theory. Several additional propositions are possible when the entrepreneurial value creation theory is applied to a specific entrepreneurial context or an entrepreneurial activity.

Figure 1: Entrepreneurial value creation.

A detailed diagram of the two-stage value creation framework is available in *The Theory of Entrepreneurship* (Mishra and Zachary 2014). In Figure 1, a synopsis of the value creation process is presented. In stage 1, an external opportunity that has potential value is discovered by the entrepreneur. An inventor may create an invention but the entrepreneur need not be the inventor (also see Schumpeter 1934). The entrepreneurial opportunity is thus exogenous to the entrepreneurial process and the entrepreneur. However, the entrepreneur is instrumental in sensing or seeing the opportunity with the resources at hand and reconfigures it, levered by the resources to create an entrepreneurial competence. The subprocesses of the opportunity discovery and the formulation of the entrepreneurial competence, driven by the entrepreneurial intention or an aspiration for entrepreneurial reward, comprise the stage 1 value creation.

The stage 1 processes are iterative until a real marketable opportunity is discovered and sufficient entrepreneurial competence is developed to move to stage 2. The entrepreneurial competence embeds the entrepreneurial ability and venture quality and offers a temporary advantage to the entrepreneur to move to the second stage. The entrepreneurial competence formulated in stage 1 is assessed for whether the entrepreneur and her team have a winning strategy relative to the competition (Mishra 2015).

The entrepreneurial competence drives the value creation and appropriation in the second stage. In the second stage, the business model design embedded along with the dynamic capabilities sustains the value creation and finally the entrepreneurial reward is realized. The second-stage subprocesses are iterative such that the entrepreneurial competence and dynamic capabilities sustain value creation and make the entrepreneurial reward worthwhile (Mishra 2015).

Prior theories of entrepreneurship focused mainly on the role of the entrepreneur and the entrepreneurial opportunity, not on the entire entrepreneurial process, its components or segments, and their interrelationships. In *The Theory of Economic Development*, Schumpeter (1934) emphasized the role of the

entrepreneur as the “man of action” and the bearer of the mechanism of economic change. According to Schumpeter, the role of the entrepreneur is to combine the productive factors, which is to bring these factors together and to coordinate the productive resources. Schumpeter defined the economic development in terms of entrepreneurial activities, that is, in carrying out new combinations, such as the introduction of a new good, the introduction of a new method of production, the opening of a new market, the discovery of a new source of supply of raw materials, or the carrying out of a new organization of an industry. Thus, for the first time, the researcher has an entrepreneurial value creation theory which models all the inputs, throughputs, and outputs of the entrepreneurial process with exponential results to explore both the entrepreneur and the entrepreneurial in its totality along with in-depth examination of its interiors or subprocesses.

Coase (1937), in *The Nature of the Firm*, posited that the entrepreneur is central to the firm formation, and the firm minimizes the market-related transaction costs. The entrepreneur brings a firm into existence. The entrepreneur provides coordination of the resources within the firm more efficiently than the market transactions may permit. However, the theory of the firm that followed Coase’s theory focused on the transaction-related contracting costs and the firm governance costs, not on the role of the entrepreneur or the entrepreneurial process. *The Theory of Entrepreneurship* (Mishra and Zachary 2014) is truly the theory of the entrepreneurial firm. In all these theories of firm formation, the role of the entrepreneur is central. In Schumpeter’s theory of economic development and Coase’s theory of the firm, the authors did not explain the interiors of the entrepreneurial process leading to the formation of the firm. Mishra and Zachary fill that void.

Among other theories of entrepreneurship, the entrepreneurial discovery theory was advanced by Kirzner (1973), in which Kirzner emphasized the role of the entrepreneur in eliminating price discontinuities in the market, driving the market toward equilibrium. The entrepreneur buys goods at lower prices and sells at higher prices, motivated by profitable opportunities. Kirzner emphasized that entrepreneurs are price makers, not price takers. The market forces are driven by bold and alert entrepreneurial action. The entrepreneur is driven by potential profit opportunities in the market.

Kirzner’s (1973) entrepreneur-driven price discovery theory is built on Mises’ (1949) theory of human action. In *Human Action*, Mises (1949) posited that the market mechanism and price system are driven by entrepreneurial action. Kirzner and Mises both emphasized the role of the entrepreneur in driving the market forces and price mechanism toward equilibrium, whereas Schumpeter and Coase emphasized the role of the entrepreneur within a firm in coordinating

the firm resources to improve operating efficiency and aid in economic development; however, none of these authors delved into the interiors of the entrepreneurial process leading to the formation of the firm. *The Theory of Entrepreneurship* by Mishra and Zachary (2014) provides the details of the firm formation process.

Kirzner's (1973) emphasis on entrepreneurial opportunities in achieving market equilibrium, that is, entrepreneurs buying goods at a lower price and selling at a higher price motivated by profitable opportunities, led to the subsequent development of the individual-opportunity nexus by Shane and Venkatraman (2000). Shane and Venkatraman defined entrepreneurial opportunities as situations in which new goods, services, raw materials, markets, or organizing methods can be introduced through the formation of new means, ends, or means–ends. Shane and Venkatraman (2000) emphasized the role of entrepreneurial opportunities as central to the entrepreneurial process and defined entrepreneurship as the process of discovery and exploitation of profitable opportunities: namely why, when, and how opportunities for the creation of goods and services come into existence; why, when, and how some people and not others discover and exploit these opportunities; and why, when, and how different modes of action are used to exploit these opportunities.

Sarasvathy (2001) advanced the theory of effectuation to describe the nature of the entrepreneurial process. Sarasvathy posited that the entrepreneurial process is an effectuation process, not a causation process. Causation processes take a particular effect as a given and focus on selecting the means to create that effect, whereas effectuation processes take a set of means as given and focus on selecting between possible effects using the available means (Sarasvathy 2001). Using a causation process, for example, an individual develops a menu for making a specific meal, garners the necessary ingredients, and consequentially produces the planned meal. On the other hand, if this same situation of meal preparation follows an effectuation process, the preparer looks to see what ingredients are on hand and then combines these resources to produce an eatable mean. Sarasvathy posited that the entrepreneurial process begins with a set of limited means at hand and the entrepreneur selects between the potential effects, consistent with a predetermined level of affordable loss.

The role of the entrepreneur is central to the effectuation process. The entrepreneur chooses between the effects and exploits the contingencies accordingly using the means at hand. Sarasvathy (2001) advanced the four principles that comprise her theory of effectuation, namely that decisions are based on affordable losses rather than on expected returns, the utilization of strategic

alliances rather than competitive analyses, the exploitation of contingencies rather than the exploitation of preexisting knowledge, and the control of an unpredictable future rather than the prediction of an uncertain one. The effectuation theory explains the nature of the decision-making process in an entrepreneurial firm versus that in an established firm.

None of the previous authors have explained the interiors of the entrepreneurial process or the “black-box” of entrepreneurship. In *The Theory of Entrepreneurship*, Mishra and Zachary (2014) provide a unified and comprehensive view of the interior of the entrepreneurial process, from the entrepreneurial intention and discovery of an entrepreneurial opportunity to the formulation of the entrepreneurial competence and the appropriation of the entrepreneurial reward.

The Theory of Entrepreneurship does not provide a review of the extant literature on entrepreneurship. The authors instead make use of sample studies to demonstrate the basic ideas underlying the value creation associated with the entrepreneurial process. Since the entrepreneurship field is multidisciplinary, the theory of entrepreneurship integrates the ideas from several disciplines, including economics, psychology, sociology, finance, decision sciences, and strategy, among others, to explain the dynamics of a complicated and disorderly entrepreneurial process with a parsimonious model. In the next sections we elaborate on the two stages of the entrepreneurial value creation theory, and following that, we discuss some potential areas for expanding entrepreneurship research.

From Entrepreneurial Opportunity and Intention to Entrepreneurial Competence

In this section, we explain the first stage of the entrepreneurial value creation theory, namely the venture formulation stage. The entrepreneurial process driven by the entrepreneurial intention is not an autonomous process; the entrepreneur is integral to the entrepreneurial process and the entrepreneurial intention is intrinsic to the process. The entrepreneur process is driven by the entrepreneur’s aspiration for entrepreneurial reward. The entrepreneurial process is not limited to the founding of a venture; the process continues to the realization of the entrepreneurial reward. The external entrepreneurial opportunity (cue stimulus) that triggers the entrepreneurial process may precede or follow the entrepreneurial intention. The entrepreneur drives the process and is integral to the process.

The entrepreneurial intention modulates the entrepreneurial resources on hand to sense and reconfigure the entrepreneurial opportunity into formulating an entrepreneurial competence through an effectuation mechanism (i.e., the effectuation multiplier). Thus, the effectuation multiplier reconfigures and enhances the value of the entrepreneurial opportunity. The entrepreneurial competence thus created provides an asymmetric advantage for the entrepreneur, but the competence is sufficiently developed to enable the entrepreneur to move to the second stage of value creation.

The entrepreneurial intention, intrinsic to the entrepreneurial process, regulates the entrepreneurial resources that sense and leverage the entrepreneurial opportunity. The theory of entrepreneurial intentionality, included in the entrepreneurial value creation theory, explains the intentionality continuum. The entrepreneur moves along the intentionality continuum involving multiple and sequential levels of intention development as well as different stages of the venture life cycle. Intention sustains the entrepreneurial effort and modulates the resources to formulate sufficient entrepreneurial competence.

The entrepreneurial intention, the entrepreneur's aspiration for entrepreneurial reward, is adaptive, according to the theory of entrepreneurial intentionality, and the intention adjusts to the changing conditions, challenges, and disturbances in the entrepreneurial environment. The adaptive intention thus sustains the entrepreneur's action and effort. Entrepreneurial resiliency, self-efficacy, passion, adaptability, and flexibility determine the level of entrepreneurial intentionality. These concepts are defined, and the relations between these variables and the entrepreneurial intention are explained in detail in Mishra and Zachary (2014).

Entrepreneurial opportunity, whether created by an inventor (e.g., with an invention) or discovered serendipitously, is external to the entrepreneurial process. The opportunity matches with the entrepreneurial resources and is thus dependent on the entrepreneurial resources or characteristics, a result consistent with the individual-opportunity nexus. The entrepreneur, unlike an inventor, does not create an opportunity (also see Schumpeter 1934). The two functions can be carried out by the same individual but the entrepreneurial process is different from the invention process. Schumpeter (1934) emphasized the difference between the action of the entrepreneur and that of the inventor. In other words, the entrepreneurial process is the broader process including the formulation and monetization of a venture that enables the production and supply of an invention to the market.

The entrepreneur discovers an external opportunity and reconfigures the opportunity to effectuate an entrepreneurial competence sufficient enough to move to the second stage. Entrepreneurial competence includes a value-

enhanced state of opportunity (e.g., proof of concept). Furthermore, entrepreneurial cognition, the ability of the entrepreneur coupled with entrepreneurial resources, is critical to aid in the search and discovery of the entrepreneurial opportunity. The entrepreneur's cognitive adaptability and prior knowledge drive the discovery of the entrepreneurial opportunity. Mishra and Zachary (2014) provided a typology of entrepreneurial opportunities based on the cognitive adaptability of the entrepreneur and the complexity of the opportunity.

Entrepreneurial capital resources include the entrepreneur's human capital, knowledge capital, social capital, family capital, emotional capital, and tangible capital including their financial and physical assets. Absorptive capacity is a property of the capital resource that determines the resource's effectiveness. Bricolage and process improvisation are integral to the feedback loop that ensures the development of sufficient entrepreneurial competence in stage 1. Bricolage is managing a process with the resources at hand. Bricolage may be selective (a single resource exchanged) or parallel (multiple resources exchanged). Selective bricolage is associated with venture growth as opposed to parallel bricolage which results in a greater allegiance to the social network involved and thus overrides the possible growth or otherwise needs of any individual entrepreneur within the network.

Network bricolage uses social networks to enhance the entrepreneurial resources at hand. Improvisation occurs when entrepreneurial planning and execution are simultaneous or near-simultaneous. Improvisation enhances entrepreneurial flexibility and adaptability. Bricolage and improvisation are built into the effectuation mechanism and the feedback loop that reconfigure the opportunity and develop entrepreneurial competence. In our framework, the effectuation mechanism adjusts the means and effects simultaneously or near-simultaneously. The means are available to the entrepreneur through the available network bricolage using social and family networks.

The effectuation multiplier in stage 1 leverages the entrepreneurial resources to reconfigure and enhance the entrepreneurial opportunity. The effectuation mechanism is explained in detail by the theory of the entrepreneurial competence of the entrepreneurial value creation theory (Mishra and Zachary 2014). A feedback loop from the effectuation multiplier to the feasibility modulator (that regulates the availability of the entrepreneurial resources) ensures that the entrepreneurial competence is sufficiently developed prior to when the entrepreneur transitions to the second stage.

The entrepreneurial competence formulated in stage 1 embeds the enhanced entrepreneurial opportunity (including the proof of concept) and the entrepreneurial resources (including the entrepreneurial ability). The entrepreneurial competence, however, may not be sustainable; therefore, the entrepreneur

needs to move to the second stage to create a sustainable advantage. For example, in stage 1, the venture may be incurring losses or experience low profitability, and the competitive gap between the venture and its rivals may be narrow or negligible. In stage 2, the competitive gap widens and the venture may achieve sustained profitability and growth. A venture might fail in stage 1 or may remain or stagnate in stage 1 indefinitely on a small scale (i.e., as a small business) without making a transition to stage 2.

From Entrepreneurial Competence to Entrepreneurial Reward

In the second stage of value creation, the venture, to sustain growth and profitability, builds or acquires dynamic capabilities. The venture may obtain external resources, if necessary, such as venture capital or strategic alliance to acquire dynamic capabilities. In the second stage, the due diligence modulator regulates the availability of external resources based on whether the entrepreneurial competence is sufficiently developed in stage 1 and whether the potential entrepreneurial reward is worthwhile for the investor.

If the venture cannot obtain the needed external resources, the capital constraint forces the venture to recycle back to stage 1 wherein the entrepreneurial competence is further developed. The investor due diligence occurs in two steps. In the first step, an investor or a strategic partner assesses the risk of loss and determines if the loss is affordable. In the second step of due diligence, the investor or the strategic partner maximizes the expected return at a given level of affordable loss.

Two problems may arise when the entrepreneur acquires external resources, namely the adverse selection problem and the adverse incentives problem. First, with the adverse selection, the entrepreneur, who knows more about her venture, may overstate the potential profitability of the venture to obtain financing or strategic alliance. Second, with the adverse incentives, the entrepreneur may work less hard or might alter the venture strategy to transfer the risk to the investor when the entrepreneur owns less than a hundred percent of equity in the venture.

Solutions to the adverse selection problem include the screening and sorting mechanisms built into the due diligence modulator. In addition, the entrepreneur may use incentive signals such as the resources embedded in the entrepreneurial competence to signal their ability and venture quality to potential investors and strategic partners. A high-ability entrepreneur waits to approach

potential investors or strategic partners until after the entrepreneurial competence is sufficiently developed. A low-ability entrepreneur may approach investors and strategic partners too early.

Solutions to the adverse incentives problem include an active involvement of the investor or strategic partner in the venture. Furthermore, the design of the venture capital contract aligns the incentives of the entrepreneur with those of the investor. The venture capital investor is not a passive investor like a stock or bond investor seen in public capital markets. The venture capital investor is actively involved in the venture with the building and growing of the business. By being actively involved in the venture, the investor can observe the entrepreneur's effort closely and shape the venture strategy that guides the venture growth.

The more complex is the venture strategy, the more flexibility the entrepreneur needs. In this case, the entrepreneur may retain the control of the venture but the investor would then provide the entrepreneur with sufficient equity incentives to control the adverse incentives problem. Moreover, when the venture strategy is more complex, the execution risk is greater and the investor may seek contingent control terms such that if the venture performance deteriorates, the control of the venture is transferred from the entrepreneur to the investor. Furthermore, the stronger the entrepreneurial competence, the more equity the entrepreneur keeps and the less severe is the adverse incentives problem. However, when the entrepreneurial competence is weak, there is a greater likelihood of the investor retaining the control of the venture.

Investor control and equity incentives for the entrepreneur are substitute mechanisms to control the adverse incentives problem when the entrepreneurial competence is strong. However, when the entrepreneurial competence is weak, investor control and the entrepreneurial incentives are complementary mechanisms. Furthermore, when the external uncertainty is high, to provide decision-making flexibility to the entrepreneur and align her incentives with those of the investor, the entrepreneur retains the control of the venture but is provided with greater equity incentives.

When there is perfect information (i.e., in the absence of adverse selection), the entrepreneur always accepts the investor's valuation offer. But with an adverse selection, the investor's valuation offer may be lower than a high-ability entrepreneur is willing to accept. Thus, when the external uncertainty is low but the entrepreneur ability is uncertain, the investor is willing to offer a higher valuation but may seek contingent control terms. With contingent control, the control of the venture is transferred to the investor under certain predetermined conditions.

Low-ability entrepreneurs will always accept the investor's valuation and terms. Furthermore, low-ability entrepreneurs approach the investors early when the entrepreneurial competence is insufficiently developed. In contrast, high-ability entrepreneurs will wait to develop the entrepreneurial competence sufficiently, so they can secure a higher valuation offer and better terms from the investors. In addition, some high-ability entrepreneurs, especially when the entrepreneurial competence is not sufficiently developed, may turn down the investor's valuation offer.

A venture is funded in several stages so that the investor can minimize the risk of investment loss. When the external uncertainty is high, a tighter staging or more frequent rounds of financing will mitigate the risk and provide the right incentives to the entrepreneur. Also, by staging the investment into several rounds, the investor has the option to abandon the venture if the venture performance turns out to be unfavorable. The investor thus minimizes the risk of investment loss by staging.

Several incentive-alignment mechanisms the investors may use to minimize the risk of investment loss and control the entrepreneur's adverse incentives are tighter staging, time vesting of the entrepreneur's equity, contingent control terms, and protective provisions in the venture capital contract, among others (Mishra 2015). The adverse incentives of the entrepreneur increase as the investor's equity increases in the venture. An investor is thus better off not investing at all rather than asking for a higher equity stake in the venture. The investor is also better off waiting to invest in a venture until after its entrepreneurial competence is sufficiently developed.

The investor is a value arbitrageur, in that the investor invests at a lower valuation (when the valuation uncertainty is high) and exits at a higher valuation (when the valuation uncertainty is low). The investor hedges the risk by being actively involved in the venture. The investor invests when the venture beta is high and exits the venture when the venture beta is low. The venture beta can be obtained using the venture capital asset pricing model (VCAPM). The investor's expected return can be obtained from the venture delta. The venture delta is the investment return multiplier (Mishra and Zachary 2014; Mishra 2015). The VCAPM and the venture delta can be used to compute the investor's excess returns at venture financings to study the effectiveness of investor criteria and venture investment strategies.

Venture capital investors and strategic alliance partners provide the venture with the dynamic capabilities that widen the gap of competitive position between the venture and its rivals. Dynamic capabilities are organizational routines that are not rare, inimitable, or nonsubstitutable. The acquisition of dynamic capabilities may be based on their asset specificity (i.e., how specialized or unique they

are to the innovation) and appropriation specificity (i.e., how critical they are to the venture success). The greater the capability's asset specificity or appropriation specificity, the greater is the need to internalize the capability within the venture.

Strategic alliances and outsourcing can be used when the venture's competitive position is strong. Furthermore, the shorter the economic life of a product or technology, the greater is the use of strategic alliances. Moreover, the stronger the competition, the shorter is the economic life of the product, in which case strategic alliances are sought when the venture's competitive position is strong. However, when the venture's competitive position is weak but the competition is strong, the venture may seek a merger partner.

The business model design embeds the dynamic capabilities. The business model leverages and reconfigures the entrepreneurial competence to generate entrepreneurial reward. Entrepreneurial reward is the value appropriated by the entrepreneur and investors from an entrepreneurial venture. A business model design can provide increasing returns to scale (i.e., the venture's operating margin increases with sales volume) when the four elements of the business model construct are high, namely customer lock-in, resource novelty, resource efficiency, and product-market complementarities. The four elements of the business model design reinforce each other, thereby enhancing the venture returns or scale economies. The business model construct that constitutes the four elements of the business model design can be employed to study the likelihood of the venture's survival and the rate of growth.

Dynamic capabilities speed up the time to bring a product to market and the time for a venture to achieve positive cash flow. Dynamic capabilities are developed when the investors professionalize the venture. The dynamic capability construct, namely the timing, cost, and speed of deployment of the capability, can be employed to assess the venture's competitive position and performance. Dynamic capabilities widen the competitive gap between the venture and its rivals. Dynamic capabilities also enhance the business model design and its elements.

The relation between the dynamic capability construct and the business model construct can be investigated to ascertain the utility and effectiveness of a dynamic capability and to determine its appropriation specificity (i.e., how critical the capability is to the venture success). Next, we consider the implications of the entrepreneurial value creation theory and offer several new avenues of research to enhance the field of entrepreneurship.

New Vistas for Expanding Entrepreneurship Research

The entrepreneurial value creation theory provides 190 propositions to guide the empirical research in entrepreneurship (Mishra and Zachary 2014). Several additional propositions are possible when the entrepreneurial value creation theory is applied within a specific entrepreneurial context or to a specific situation.

Stage 1 value creation subprocesses contain several testable relations between entrepreneurial opportunity, entrepreneurial resources, entrepreneurial intention and its antecedents, cognitive adaptability, entrepreneurial competence, and the effectuation mechanism. Stage 2 value creation subprocesses contain several testable relations between entrepreneurial competence, acquisition of external resources, due diligence, venture risk and return, venture valuation, venture capital investment terms, the dynamic capability construct, the business model construct, asset specificity, appropriation specificity, competitive position, and entrepreneurial reward.

Venture Formulation Highlighted as Stage 1

In stage 1, the entrepreneur may begin her venture formulation processes with intention. Such intention arises from the entrepreneur's desires/dreams, values, goals, and attention/planning, as well as her adaptability and interactions with others. For example, selected propositions suggest that greater levels of entrepreneurial intentions are related to more intense expression of values and goals as well as the greater the amount shared expression of these values and goals with others. Also, the more time spent strategically planning and sequencing of entrepreneurial activities strengthens the entrepreneur's intention.

Stage 1 portrays a relationship between entrepreneurial opportunities and intentions. For example, the greater the number and types of entrepreneurial opportunities will increase the likelihood that entrepreneurial intention will emerge. Also, entrepreneurial resources, modulated by the entrepreneurial intention, are matched with the entrepreneurial opportunity. Thus, the relations between the opportunity discovery and the various entrepreneurial capital resources, such as knowledge capital, human capital, social capital, family capital, and emotional capital, among others, can be studied. The absorptive capacity of an entrepreneurial capital source can be linked to the quality of the opportunity and the resulting entrepreneurial competence. The effectiveness of bricolage and improvisation can be studied to understand the timing and level of entrepreneurial competence.

The relations between the entrepreneurial intentionality, including its antecedents, and the entrepreneurial capital resources and their absorptive capacity can be investigated. The relation between the entrepreneurial opportunity and the resulting entrepreneurial competence can be studied. The process of effectuation and the time to develop sufficient entrepreneurial competence can be examined. The need for detail business planning and its relation to the level of entrepreneurial competence can be determined.

The antecedents of the entrepreneurial intentionality, such as entrepreneurial passion, self-efficacy, flexibility, adaptability, and resiliency, among others, and their impact on the likelihood of venture success and the level of entrepreneurial competence can be examined. The entrepreneurial intentionality continuum can be observed at different stages of the venture life cycle. The likelihood of venture survival in stage 1 can be studied to understand the determinants of the venture failure rate; the measures can be identified to maximize the likelihood of venture success. The stress and disturbances an entrepreneur endures during the stage 1 process can be observed relative to the levels of entrepreneurial capital resources.

The current research on entrepreneurial opportunity focuses on the implications of the individual-opportunity nexus. However, using the entrepreneurial value creation theory, the opportunity identification process and the quality of entrepreneurial opportunities identified can be studied relative to the entire entrepreneurial process. The entrepreneurial opportunity construct thus can be improved. Pattern recognition models and their effectiveness under various entrepreneurial resource conditions and intentionality conditions can be investigated.

The effectiveness of bricolage and improvisation can be studied in the context of all entrepreneurial variables associated with stage 1. The levels of entrepreneurial capital resources, such as knowledge capital, human capital, social capital, family capital, and emotional capital, among others, and their impact on the level of entrepreneurial competence can be studied. For example, the types and extent of available social networks can be examined as well as how entrepreneurs might differ in their respective engagement to these networks. The relation between the level of cognitive adaptability of the entrepreneur and the level of entrepreneurial competence can therefore also be examined.

The concept of absorptive capacity is studied in the context of established corporations, but not in the context of emerging ventures. The relation between a resource's absorptive capacity and the likelihood of the venture's survival can be examined. The relations between the absorptive capacity of a resource with the venture growth rate and the likelihood of the venture receiving funding can

be investigated. The role of family capital resource and trust and their relations to the level of the entrepreneurial competence and the likelihood of venture survival can be observed.

Moreover, the role of emotional capital in the venture formulation is understudied and can be further investigated. A greater focus on the abilities of the entrepreneur such as emotional intelligence can be explored. The relations among the entrepreneurial process variables for family-owned ventures can be investigated. The effects of stress and disturbance on the levels of entrepreneurial intentionality, including entrepreneurial adaptability, flexibility, and resiliency, can be examined. The likelihood of the venture's survival under various stress and disturbance conditions can be linked to the levels of entrepreneurial resources and their absorptive capacity.

A scale can be developed to measure the level of entrepreneurial competence that embeds the entrepreneurial ability and the quality of opportunity. The entrepreneurial competence should be sufficiently developed for the venture to receive venture funding or form strategic alliances. The relation between the level of entrepreneurial competence and the venture growth rate may be examined.

The effectuation process that yields the entrepreneurial competence can be studied in more detail. For example, under what conditions does the effectuation process result in developing sufficient competence and under what conditions might the effectuation mechanism fail. The entrepreneurial competence drives the second stage of value creation, just as the entrepreneurial intention drives the stage 1 subprocesses. Note that the entrepreneurial intention as well as the entrepreneurial competence is intrinsic to the entrepreneurial process. The relationship between the entrepreneurial competence and the second stage value creation process variables can be studied, including the dynamic capability construct, the business model construct, the entrepreneurial reward, the amount of venture funding received, the due diligence process and investor criteria, and the likelihood and types of strategic alliances, among others.

Venture Monetization Highlighted as Stage 2

Investor criteria and the effectiveness of a venture investment strategy can be linked to the dynamic capability construct and the business model construct under different levels of entrepreneurial competence, and the likelihood of the venture receiving funding can be predicted. The entrepreneurial value creation theory predicts that the faster the product is brought to market or the sooner the venture achieves positive cash flow, the greater is the likelihood of the

venture's survival and the sooner will the investors exit. These relationships can be examined under different levels of entrepreneurial competence. These relationships and conditions can be examined for different types of strategic alliances as well. The dynamics of venture capital negotiation and the venture valuation received can be studied. The venture valuation may be linked to the level of entrepreneurial competence and the elements of the business model construct.

The risk of investment loss can be estimated and the venture failure rate can be predicted. The relation between the venture delta and the level of entrepreneurial competence can be examined. The relation between the venture delta and the investor's realized return may be examined to assess the effectiveness of the venture investment strategy. The venture delta and the VCAPM may be employed to study venture capital excess returns and venture portfolio diversification strategies. These models can be used to study venture capital risk and return relationships and the investor's investment and exit strategies.

The entrepreneurial value creation theory predicts that the lower the ability of the entrepreneur, the weaker is the entrepreneurial competence and the greater is the likelihood that the investor would require a more detailed business plan. Furthermore, the more complex the venture strategy, the greater is the likelihood that the investor would need a more detailed business plan. The level of details in the business plan and the level of entrepreneurial competence may thus be linked. The conditions under which an entrepreneur may accept more or less equity incentives such as time or performance vesting of their equity may be examined. The specific conditions under which the investors may seek contingent control terms, including the details of contingent control criteria, may be examined.

The stage financing frequency or the number of financing rounds can be linked to the level of entrepreneurial competence and the exogenous risk. The stage frequency may be studied for first-time entrepreneurs versus serial entrepreneurs. The stage financing frequency may be linked to the product market conditions and the business model complexity. The business model complexity may be measured using the business model construct.

The level of investor involvement may be linked to the dynamic capability construct and the business model construct. The timing and the level of the professionalization of a venture may be linked to the dynamic capability construct. Under what conditions the investor may retain control of the venture and under what conditions the entrepreneur retains control can be studied. The relation between the level of entrepreneurial competence and the investor control strategies can be examined. The timing of the venture professionalization may be linked to the business model construct and the entrepreneurial reward.

The timing and the level of the venture professionalization may be linked to the likelihood of the venture going public, and in predicting the time to investor exit as well as the exit valuation.

The effects of strategic alliances and corporate venture capital investments on the elements of the dynamic capability construct and the business model construct may be studied. The determinants of the types of strategic alliances and the likelihood of a strategic alliance formation may be studied under different entrepreneurial competence and business model conditions. The likelihood of outsourcing a dynamic capability may be linked to the capability's asset specificity and appropriation specificity. The business model design elements such as customer lock-in, resource efficiency, product market complementaries, and resource novelty may be linked to the venture survival rate and growth rate, as well as to the valuation offers received from the investors during the venture's financing rounds.

Moving Forward on a New Research Horizon

The theory of entrepreneurship posits for the first time a new unified and comprehensive theory to enable expanded theoretical vistas and more rigorous empirical investigations. Our purpose is to offer an enhanced theoretical structure, heretofore missing, and which will guide and enhance future entrepreneurship research. Several additional testable propositions are outlined in *The Theory of Entrepreneurship* (Mishra and Zachary 2014). The entrepreneurial value creation theory enables researchers to pursue new vistas of theoretical and empirical research in entrepreneurship across several disciplines. The entrepreneurial value creation theory provides a comprehensive view of a complicated and disorderly entrepreneurial process. Relative to two distinct stages of formulation and monetization, the value creation elements are delineated and their relationships are explained by the entrepreneurial value creation theory.

The theory of entrepreneurship, namely the entrepreneurial value creation theory, challenges entrepreneurship scholars across disciplines to reexamine the extant theoretical and empirical research so that the empirical designs incorporate the overall entrepreneurial experience. Such empirical designs would correct for empirical misspecifications, explain confounding results, and minimize biased and misinterpretations of results. Furthermore, the entrepreneurial value creation theory, by extending the scope of entrepreneurship research from merely venture formulation to the entire entrepreneurial process, including the realization of entrepreneurial reward, opens up several new

avenues of promising research opportunities. The theoretical premise is to model the entrepreneurial experience to its fullest and as closest to reality as possible. We offer this challenge to rethink and recast our theoretical approaches as well as our empirical tools to encompass the overall entrepreneurship process as well as its inputs, interior subprocess, and outputs. The research rewards will be unprecedented.

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