

**WHY STRATEGIC MANAGEMENT THEORY
IS NOT ENTREPRENEURSHIP THEORY**

Accepted under the title:
“Market uncertainty and the theory of the firm”

Per L. Bylund
Department of Entrepreneurship
Hankamer School of Business
Baylor University
Waco, TX

Per_Bylund@baylor.edu

*

Robert Wuebker
Entrepreneurship & Strategy
David Eccles School of Business
University of Utah
Salt Lake City, UT

robert.wuebker@business.utah.edu

An important question in entrepreneurship is whether new theory to explain entrepreneurial firms is needed. This paper demonstrates that theories in strategic management, employed to explain how existing firms organize to capture value, necessarily cannot be employed to explain firm emergence, or the role of the firm in the creation of value. The entailing implications for developing a theory of firm emergence are then explored, showing that a theory of the entrepreneurial firm requires a more fine-grained conception of the entrepreneurial rent—in actuality, entrepreneurial rents, and an explanation as to why forming the firm is a necessary condition for the creation of at least one type of entrepreneurial rent. The entrepreneurial firm, in this view, is an organizational innovation that enables the generation of certain types of entrepreneurial rents that, without it, could not be.

WHY STRATEGIC MANAGEMENT THEORY IS NOT ENTREPRENEURSHIP THEORY

Creating a new theory is not like destroying an old barn and erecting a skyscraper in its place. It is rather like climbing a mountain, gaining new and wider views, discovering unexpected connections between our starting points and its rich environment. But the point from which we started out still exists, and can be seen, although it appears smaller and forms a tiny part of our broad view gained by the mastery of the obstacles on our adventurous way up.

Albert Einstein

There is a vast literature in strategy that attempts to explain firm organization in terms of value capture. These theories, derived mostly from economics, treat the firm as an entity that profits by engaging in economic activity generating specific revenue in excess of costs associated with organizing (Coase, 1937: 390). In this view, firms—as command structures for coordination—emerge when transaction costs are high and exist to appropriate economic rents (Barney, 1991; Williamson, 1985; Jensen and Meckling, 1978; Hart and Moore, 1991; Kogut, 1991). Entrepreneurship scholars have often employed theories from strategy to explain how entrepreneurs, given an identified opportunity, organize in pursuit of its exploitation (McGrath, 1999; Azoulay and Shane, 2001; Alvarez and Busenitz, 2001).

However, theories employed to explain—given a competitive imperfection—the capture of economic rents (Porter, 1991; Amit and Schoemaker, 1993; Spanos and Lioukas, 2001; Kim and Mahoney, 2005; Bowman and Moskowitz, 2001) do not automatically offer an explanation for how those rents are created (Alvarez and Barney, 2007; 2010; Klein, 2008). When an opportunity for profit is encountered, theories in strategy provide guidance for how firms organize to capture value. They struggle, however, to provide a rationale for economic organization and the emergence of a new firm during the creation of new value. As a result, questions in strategy such as where

strategically valuable resources come from, how competitive imperfections arise, and how firms create new markets (as opposed to diversifying into known markets) remain persistent questions for strategy scholars (Cockburn et al. 2000; Helfat and Liberman, 2002; McDonald and Eisenhardt, 2014).

While there have been several attempts to extend theories in strategy to provide insight into the sources of new value and a rationale for firm emergence (Alvarez and Busenitz, 2001; Alvarez and Barney, 2004; Madhok, 2002; Foss and Klein, 2012; Dew, Velamuri and Venkataraman, 2004) the entrepreneurial context reveals several challenges that have impeded progress. For example, it is difficult to envision how entrepreneurs can know *ex ante* the coordination costs and transaction costs that influence whether to organize through the market, or a hierarchy (Shelansky and Klein, 1995). Entrepreneurs may also find it difficult to calculate the cost of market factors or their new combinations, impeding the auction process, the crucial mechanism in strategic factor market logic (Amit and Schoemaker, 1993). The inability of entrepreneurs to estimate the terminal value of the endeavor makes exchange contracting and options-based reasoning challenging (Hart and Moore, 2007; Adner and Levinthal, 2004). Yet, as Coase (1937) notes, “it is improbable to imagine that a firm would emerge without the existence of uncertainty” (1937: 392). What do we make of this paradox?

The purpose of this paper is to bring clarity to this situation. We do so by, first, demonstrating that theories in strategy, while effective at providing a rationale for value capture given an extant opportunity, *necessarily* cannot be extended to provide a rationale also for the creation of new value. Said another way, this paper explains why a new theory of the entrepreneurial firm is required, and under what conditions it would apply.

Second, we analyze and contrast firm emergence and boundaries under conditions of value creation and capture, showing that given these two contexts, two complimentary rationales in entrepreneurship for firm emergence exist. Then, we discuss their entailing implications for economic organization arguing that in some cases of entrepreneurial action, the firm is one of several alternative governance structures the entrepreneur can elect to employ (emphasizing in these cases the importance of selecting an appropriate governance structure); in other cases the formation of the firm is a necessary condition for value creation (emphasizing in these cases the importance of selecting the right time to formalize); and, in other cases, the formation of the firm is not only a necessary condition for value creation, but is by necessity the first step in that process (emphasizing that in these cases, the firm itself is a value-creating experiment). We conclude by considering the implications of our perspective for the domains of entrepreneurship and strategy, and suggest directions for future conceptual and empirical work.

ENTREPRENEURSHIP: RENT CAPTURE VERSUS RENT CREATION

Entrepreneurship scholarship has historically focused on firm creation and growth, often treating all entrepreneurial activity equally. Examining the intentions of entrepreneurs (Baumol, 2010) revealed differences between entrepreneurs and their growth intentions, highlighting the need to not only empirically distinguish between high-growth entrepreneurial activity and traditional small enterprise (Acs and Audretsch, 1990), but also develop theory that takes this variance into account.

In recent years, conceptual and empirical work in entrepreneurship have come to clearly distinguish between the creator and promoter of new combinations (Schumpeter, 1934) and the creators of new firms that replicate thousands of other establishments—

innovative versus replicative entrepreneurship (Acs, 2008; Shane, 2008). Liebenstein (1968) distinguishes these two broad types of entrepreneurial activity as “routine entrepreneurship, *which is really a type of management* (italics ours) and for the rest of the spectrum we have Schumpeterian or ‘new type’ entrepreneurship” (1968: 72).

Routine entrepreneurship in this view is a coordinating function, in which the parts of the production function in use (and likely alternatives to current use) are well known, and operate in well established or clearly defined markets. Schumpeterian entrepreneurship, in contrast, represents a collection of different economic activities involved with developing an economic logic in environments in which markets are not well established or defined, and/or the relevant parts of the production function are not completely known. Said another way, replicative entrepreneurship operates under conditions of risk, and innovative entrepreneurship occurs under conditions that are fundamentally different from risk, as Knight (1921) stressed.

Under conditions of risk, market factors are known and, although individuals may differ in their assessment of the price of those factors or their value in its next best alternative use (Milgrom and Roberts, 1992), these prices are, at least in principle, calculable. Under conditions of Knightian uncertainty, the prices of market factors are not unknown, they are unknowable; and even the form of the potential outcomes are unclear. Many startups are “shrouded” in uncertainty (Audretsch, 1995) in this sense, or conditions closely approaching uncertainty (Simon, 1947).

Replicative entrepreneurship and rent capture

Under conditions of risk, entrepreneurs engage in the identification of existing imperfections in the product and factor markets and act such that they capture economic

rents. Those rents include *efficiency* rents, often generated through manipulating an existing production structure in ways that enable the firm to do more with the same sets of assets when compared to competitors; *exchange* rents, often generated by manipulating a known organizational structure in ways that enable the firm to capture more value from the exchange relationships related to its production structure; and *inefficiency* rents, often generated by “copying exact” through a fast-follower strategy, often doing nothing more than executing an existing, understandable production structure better than competitors.

In all of these cases, the role of the entrepreneur is to identify existing market imperfections and to organize to capture the rents associated with it. The deft recombining of market factors and exchange relationships, along with the re-contextualization of a production structure by altering the context (for example by selecting a new geography, or applying that production structure within a new industry) are well-understood ways through which entrepreneurs, operating under conditions of risk, engage in rent capture. Under these conditions, entrepreneurs are not—and cannot be—creating new value. They are engaged in value capture, battling over a particular slice of an existing rent pool¹.

Discriminating between replicative and innovative entrepreneurship and connecting these two types of entrepreneurial activities to their economic output—rent capture, or rent creation—is, as we shall see, a contribution that helps to explain why new theory is required in entrepreneurship, and what that new theory must explain.

Innovative entrepreneurship and rent creation

¹ We should stress that we are *not* suggesting that entrepreneurial activity under these conditions is unimportant economically or unworthy of scholarly study. We are suggesting that there is an important conceptual and empirical distinction between battling over a slice of an existing pie and baking a new one.

In the case of innovative entrepreneurship, actors are not capturing rents through the identification and exploitation of existing market imperfections. Rather, they have set themselves to a different task—creating market imperfections that represent new sources of value, some of which they intend to exploit². The creation of new value is only possible under conditions of uncertainty, with the entailing implication that entrepreneurs engaging in innovative entrepreneurship are not capturing existing rents, but rather are generating one of two outcomes: (1) an *entrepreneurial rent* (a return to innovation, localized to the entrepreneurial firm, representing a short-term monopoly rent, such as a technological breakthrough that enables a new product in an existing market) or (2) an entirely *new rent pool* (a return to innovation, with attendant spillovers that enable a new market).

We will argue that in the case of the former, the high levels of market uncertainty create transactions difficulties that are most efficiently managed through hierarchical governance. While in strategic management explanations for firm boundaries rooted in transaction costs require the threat of opportunism in the exchange, this is not the case here—the mechanism is not behavioral uncertainty, but market uncertainty.

In the case of the latter—an entirely new rent pool or “phase space in economic evolution” (Koppl, Kauffman, Felin and Longo, 2014)—hierarchical governance is also required, but the underlying rationale is different from those rooted in returns to innovative activity. In the case of the creation of an entirely new rent pool, the creation of

² Alvarez and Barney (2007) argue that human actions can form opportunities, and that action is what is required (not intention to create one, only one, or a particular one). There is no reason that one cannot assert consistently that there could be other things besides human action (Alvarez and Barney, 2007; Klein, 2008) and Shane and Ventaktaraman’s exogenous shocks that form opportunities, for example institutions (Alvarez, Young, and Wooley, 2015). It also follows that actors and institutions could form multiple opportunities, and that actors could identify some, but not all, of the opportunities formed through intentional action, and could choose to exploit some, all, or none of them.

a new production structure and new market factors necessitates the use of hierarchical governance—a firm—as a shelter to experiment and tinker with the hypothesized, yet-to-be-enacted production structure so that it can be validated through profit generation. While under conditions of uncertainty an entrepreneur often elects to use the firm as a governance structure to resolve transactions difficulties, these difficulties are not a necessary condition for the emergence of the firm. However, in some specific cases the firm is not merely one of several governance structures that the entrepreneur can elect to employ, but rather is a necessary condition for the creation of value. Said another way, we are suggesting that the firm is itself an organizational innovation that, through its invention and invocation, enables certain types of economic rents to be generated that, without it, could not be.

STRATEGIC MANAGEMENT THEORIES AND ECONOMIC RENTS

A fundamental problem facing organizations and strategy scholars has to do with a mismatch between strategic theories—which take the value of resources or the value of an exchange as given—and the increasing need to explain how this value is created in the first place. What, if anything, do theories in strategy have to say about value creation? While some theories in strategy do in fact explain the generation of certain types of rents, given existing transactions in a competitive market, but not how new rents are created given no transactions or incomplete or non-existent markets. Most of the theories of economic organization taken from economics—agency theory, transaction cost theory, and incomplete contract theory—are actually theories of why rents (in particular exchange rents) do not exist. Further, none of the received economic theories in strategy

have particularly well-developed explanations for the existence of Schumpeterian rents (Nickerson, Silverman and Zenger, 2007; Adner and Kapoor, 2010).

In transaction cost economics (TCE) (Williamson, 1975, 1985, 1996) governance choice is conceptualized as a means for actors in the market to deal with and ultimately avoid exchange rents. Hierarchies and hybrid forms are chosen by transacting parties specifically to preempt opportunistic behavior (Williamson, 1993; Klein, 2010) where the transaction requires specific investments and in markets where information asymmetry exists. The theory hinges on the existence of a particular type of market that supports the given transaction, and where that market is already subject to particular competitive pressures (Argyres and Bigelow, 2007). Given a set of priors that include both market exchanges and existing organizations, transactions cost logic can predict optimal organizational structures. It is silent about the emergence of new firms and markets. Incomplete contract theory is a theoretical alternative to TCE for explaining the existence of the firm (Grossman and Hart, 1986). Thus, not surprisingly, incomplete contract theory focuses on explaining the existence of the same kinds of rents, and suffers the same challenges as transaction cost logic for explaining firm emergence.

Agency theory observes that the separation of ownership and control (Berle and Means, 1932) can create conflict of interest between the agent and the principal due to information asymmetries (Jensen and Meckling, 1972). As it is prohibitively costly (if at all possible) for the principal to perfectly monitor the agent, the latter can extract quasi-rents by opportunistically rewarding him- or herself benefits at the expense of the principal. Agency theory further suggests that there may be inefficiency rents appropriable for firms relatively more efficient at eliminating residual agency costs. Real

options theory has its roots in finance (Kester, 1984; Myers, 1977) and prescribes that there can be value in keeping options open by reserving the right in investment projects to execute certain actions *ex post*. The theory holds that firms that appropriately apply the optionality logic may gain advantages over firms that failed to do so, and is therefore mostly concerned with inefficiency rents.

The resource-based view (RBV) (Wernerfelt, 1984; Barney, 1986; 1991; Peteraf, 1993) assumes the firm in an existing competitive situation where profitability depends on the deft recombination of its internal resources. As firms earn profits by using resources efficiently, the analysis is limited to a study of firms that have passed the market test and therefore are relatively efficient in their resource use. Resource-based logic focuses on the generation of competitive advantage through finding better uses for or more highly valued resources: efficiency (Ricardian) rents. Firms that are unusually skilled in addressing customer needs, and if it is difficult for competitors to imitate these skills, may generate higher performance levels (Demsetz, 1973). Underpinning the resource-based view is strategic factor market logic, which assumes that the markets in which factors are traded are (relatively) complete but imperfect. In the case of replicative entrepreneurship, strategic factor markets logic can be extended and applied to these entrepreneurial settings (Alvarez and Busenitz, 2001). In the case of innovative entrepreneurship—a setting in which markets are necessarily incomplete, the auction process—a crucial mechanism in resource-based logic—cannot apply (Dierickx and Cool, 1989; Barney, 1989) and resource-based logic is, at best, an incomplete explanation for firm emergence.

INSERT TABLE 1 ABOUT HERE

Boundaries of theory in strategy

As described in the previous section, theories in strategy are designed to explain rent capture, and struggle to explain rent creation and the rationale for firm emergence in entrepreneurial settings generally, and in the case of innovative entrepreneurship specifically. Transaction cost logic, incomplete contract theory, and agency theory rely on the potential for extractable quasi-rents due to market frictions (Mahoney and Qian, 2013) as an explanation for firm organization, not emergence. In the case of transaction cost logic and incomplete contract theory, organizing a firm is the means by which market actors avoid the costly risk of opportunism. In the case of agency theory the internal structure of the modern corporation, in particular the separation of ownership and control, makes for a situation where agents can opportunistically exploit information asymmetries. Williamson (1970; 1975; cf. Burton and Obel, 1980) has argued that the M-form lessens the information problem of large firms by arranging smaller units in a reporting hierarchy and therefore partially solves the problem of information asymmetry. But each of these theories are silent as to how organizing a firm can effect rent creation possibilities in an exchange (Rumelt, Schendel and Teece, 1991). We should note that Williamson (Riordan and Williamson, 1985) is not unaware of this particular boundary condition entailing from a consistent application of transaction cost logic.

The resource-based view emphasizes rent capture by obtaining and configuring valuable resources, and is imprecise with regard to whether a particular exchange will, or can, create value. RBV explains advantage by identifying the relative gain parties receive if value is created, and can for this reason be a useful heuristic for decision rights (Alvarez and Barney, 2005; Parker and Alvarez, 2009). In the case of replicative

entrepreneurial activity, this type of heuristic can produce estimates and predictions of sufficient accuracy to allow for proper decision-making under incomplete contracting (Alvarez, 2007). However, under conditions of uncertainty the nature of and changes to the business situation are fundamentally unknown and unknowable, and therefore estimates can provide no better guidance than pure guesses. In situations where markets are incomplete (rather than imperfect) the auction process for market factors—crucial to strategic factor market logic and the resource-based perspective—cannot provide guidance for rent creation. The resource-based perspective has the potential to extend into entrepreneurial settings concerned with value capture (replicative entrepreneurship) but its underlying priors make it unsuitable for value creation (innovative entrepreneurship).

To properly understand market dynamics it is insufficient to point to arbitrage as a method for capturing rents (Kirzner, 1976; Shane and Venkataraman, 2000). We need to also understand how and where those rents arise. The aforementioned theories provide explanations for how rents can be captured in the market. And, as detailed above, in some cases efforts have been made to extend these theories to offer a mechanism for rent capture in entrepreneurial settings. Yet each of these theories stops short of explaining how these rents come into being, or why the firm is (or is not) required to generate them.

GENERATING ENTREPRENEURIAL RENT(S)

Economic theories have a difficult time incorporating entrepreneurial rents, if their assumptions at all support such extension of the theory. This is not a novel observation on our part, as it has been known for decades. Indeed, to Schumpeter (1942:86) economic theory without entrepreneurship “is like *Hamlet* without the Danish prince.” Others have made similar observations, e.g. Baumol (1968), Kirzner (1973) and

Casson (1993). This absence has made the development of new theory exploring the returns to entrepreneurial activity challenging. And, as we have seen, attempting to extend theories in strategic management to entrepreneurial settings is, at best, an incomplete solution leaving open the question of how value is created, and the rationale for the firm as a governance choice for value capture (Bylund and Wuebker, 2015; Furr, Nickerson and Wuebker, 2015).

Entrepreneurship theory has had a historical interest in the capture of inefficiency rents (Kirzner, 1973; Shane and Venkataraman, 2000) but the larger—and arguably more “entrepreneurial”—question is where and how they arise. While recent advances in entrepreneurship has helped substantially by identifying the problem to solve—no mean feat (Alvarez and Barney, 2007; Klein, 2008)—the conversation thus far has been limited to extending strategy theories to a single, homogeneous “entrepreneurial rent” (Coase, 1937; Williamson, 1985; Langlois and Foss, 1999). We observe in strategy that there are several types of economic returns or rents that firms can capture and, given the existence of markets and firms, can generate. We suggest that, just like there are multiple rents in strategy, there are multiple entrepreneurial *rents*. We suggest that, just like there are multiple rents in strategy, there are multiple entrepreneurial *rents*, and provide a preliminary exposition of those rents in Table 2.

INSERT TABLE 2 ABOUT HERE

Replicative entrepreneurial activities amount to competing with existing entrepreneurs for profit opportunities by supplying similar or identical products and services in existing markets. It involves capturing value through exploiting imperfections in the product and factor markets and thereby takes place primarily in situations of risk.

Replicative entrepreneurship can thus be usefully conceptualized as a variant of strategy, since the aim or purpose is not to innovatively create new rents but to appropriate existing rents. Examples of where strategy theory has been applied to explain replicative entrepreneurship include Azoulay and Shane (2001), who use incomplete contract theory to explain franchising behavior.

We hold that specifically entrepreneurial action entails the creation of rents through innovation rather than the appropriation of rents already existing in the market. Value creation certainly suggests a need for the entrepreneur to develop a strategy for capturing the created rents. But whereas a value capture strategy should eventually be necessary for the continued viability of the entrepreneurial endeavor, this may not be the case at the outset since the creation of new rents initially provide the entrepreneur with a monopoly. The necessity for and urgency in developing a mechanism for capturing the rents that are generated depends on the market's capacity to produce a competitive situation around the new rents through imitation and emulation.

Immediately upon the creation of new rents, the entrepreneur enjoys a monopoly situation. Entrepreneurial firms creating new markets are producing monopoly rents, which limits the need for strategy to appropriate them. Monopoly rents exist when firms operate in markets with relatively few competitors, where demand is steadily greater than supply, and where there are significant barriers to entry—conditions that all violate the attributes of perfectly competitive markets (Marshall, [1890], 2009). This is the type of situation that necessarily emerges directly upon innovative creation of new rents. In these settings, firms can set prices for their goods or services higher than what would be the case in more competitive markets. This amounts to an entrepreneurial rent as return to

innovations that enable a new product in an existing market—the entrepreneurial firm has no direct competitors as the new product is introduced and can therefore set prices considerably higher than in a competitive market. These higher prices generate economic rents for entrepreneurial firms until competitors enter the market space aiming to appropriate part of the created rent. Strategy theory applies only as the first competitor enters the market in pursuit of already existing rents, but cannot explain the rent creation through the original firm’s innovation.

Innovation within an existing market, through the introduction of a new product or improved production process—or the “recombination” of existing factors—are Schumpeterian rents (see Table 2), earned by innovators under conditions of uncertainty, and occurring only during the period of time between the introduction of an innovation and its successful diffusion (either through supplying the market to satiety or through the introduction of rent-reducing price competition). These rents are earned under conditions of uncertainty where there is “no [empirically] valid basis of any kind for classifying instances to determine probability from past experience or statistical calculation” (Knight, 1921: 225). It is the *ex ante* uncertainty about whether or not these new resource combinations will yield greater rents, *ex post*, then applying these resources in alternative uses that distinguishes Schumpeterian rents—what Rumelt (1987) calls entrepreneurial rents—from other economic rents.

Schumpeterian rents do not necessitate but their appropriation may be facilitated through the creation of a new firm. Their creation and appropriation is supported by varying governance structures depending on the specific market situation in which the entrepreneurial action takes place (Furr, Nickerson, Wuebker, 2015). Whereas the

creation of new rents initially provide a monopoly situation in which the entrepreneur does not require a specific appropriation mechanism, this is a transitory state of affairs as there are no barriers for competitors to imitate and therefore appropriate at least part of the generated rents. For entrepreneurship occurring under conditions of Knightian uncertainty the organizational requirements differ, with different theory required to explain that activity. Indeed, innovative entrepreneurs must, somehow, both create rents and figure out how to appropriate them. As competitors emerge the entrepreneur's monopoly evaporates, and at this point (but no sooner) strategy theory applies.

The same competitive dynamic applies where entrepreneurship creates a new rent pool, which means the entrepreneurial innovation breaks new ground by creating a new market space. As there are no existing competitors in this market, the original entrepreneur may enjoy value appropriation through monopoly for an extended period of time. Appropriation does not here necessitate a firm until competitors enter the market space. However, the creation of a new market through the innovative generation of previously unseen rents requires a firm precisely because the implementation must take place outside the extent of the existing market (Bylund, 2015). The creation of a new rent pool through revolutionizing entrepreneurial innovation cannot be implemented through relatively simple “recombinations” of existing factors—it is dependent on the creation of new factors to support the generation of rents, which necessitates a firm (Bylund and Wuebker, 2015). The entrepreneurial firm, which is primarily and initially a means to create the imagined rent pool, here also provides the entrepreneur with a means to control and appropriate the created rents.

The introduction of a new innovation outside the existing market effectively generates market uncertainty as the rent-creation process proceeds. Indeed, the rent cannot exist until the innovation is fully implemented and therefore salable, and it is not known whether the rent will exist until the (hypothesized) market for a particular product or service can be, be offering it, validated. For this reason, the entrepreneur must bear the full uncertainty of the project until its completion; also, the uncertainty borne by the entrepreneur is one created by him as the outcome of offering the new product can only be known *ex post*. The entrepreneurial firm is therefore a means to create new rents, which also serves as a mechanism for appropriating those rents.

A RATIONALE FOR AN ENTREPRENEURIAL FIRM

Until the implications from Alvarez and Barney (2005; 2007; 2010; 2012; 2014) and Klein (2008) and Foss and Klein (2012) were instantiated into the collective conversation in entrepreneurship and strategy, no one thought you needed an answer the question of “why the firm” in entrepreneurship. It was easy. So easy, in fact, that many entrepreneurship scholars even today think that the proper domain of entrepreneurship is (should be) new venture formation and/or growth (Davidsson, 2013).

In contrast, under conditions of Knightian uncertainty the firm can be conceptualized as the fourth factor of production—it is the machine that *generates* heterogeneity (it produces new factors, and is an explanation for the source of heterogeneity) and generates new rents as a result (Bylund, 2014).

The firm can potentially be seen as a vehicle for creating capabilities through conducting controlled experiments, i.e. combining resources in order to discover means-end correspondence (Foss and Klein, 2012). Through the firm, the entrepreneur can more

easily coordinate resources as well as discover new attributes, and create capabilities to exploit and generate new opportunities. As market conditions are, at least partly, a function of (one's own and others') previously taken actions, their structure and characteristics in the future are inherently uncertain and the market state at any time cannot be known. There can hence be no *knowledge* about the future on which the entrepreneur can fully rely when making decisions (Knight, 1921).

In this view, the curious task of value creation is, first, composing a theory of value (Felin and Zenger, 2009) and then, coordinating resources through the firm to test that theory of value in a series of carefully-controlled experiments (Nickerson, Furr, and Wuebker, 2015). Where it turns out to be superior (a fact that is only recognizable *ex post*), the entrepreneur's judgment allows the firm to surpass competitors and reap profits by exploiting opportunities. The degree of novelty of the production structure, relative to competitors, determines what type of economic rents are generated, and how one sets about capturing them.

However, while the combining and configuring of resources to meet future market conditions provides a rationale for firm formation, it is not yet a necessary condition for them (and, thus, not yet a rationale for firm emergence). Resources used in production are commonly appropriable and traded in the market, which entails that a firm is but one of several alternative governance structures for coordinating production under uncertainty. Although entrepreneurship scholars have suggested that if there is no market for entrepreneurial judgment, entrepreneurship can earn no wage (Foss and Klein, 2012) this is in itself not a rationale for organization, as an entrepreneur could still coordinate and combine resources by contracting in the market rather than vertically integrate in a firm.

Economic integration by an entrepreneur, as Coase (1937) notes, seems to be caused by something other than productivity concerns.

Innovation—entrepreneurial rents generated by new combinations, or Schumpeterian rents—are also not a sufficient rationale for integration and, thus, cannot be invoked as a rationale for firm emergence. Producing combinations of heterogeneous resources already existent in the market can be thought of as similar to building structures using Legos. It may be difficult or costly to find, acquire, and fit the wished-for pieces (which is what Coase famously identified as “marketing” or transaction costs), but it could also be done through trade or long-term contracting.

Firms are necessary conditions in cases when resources become so highly complementary and specialized that they approach uniqueness and must be uniquely combined with other unique resources, less like Legos and more like pieces of a jigsaw puzzle. This implies a situation where resources are interdependent and no longer traded in the market—as those resources do not yet exist (Bylund and Wuebker, 2015). This type of situation generally occurs under productivity-enhancing innovation. The entrepreneur may imagine a new, more productive process to replace an existing task, but its exact nature will emerge only through its implementation.

The process of innovating novel production processes, therefore, *necessitates* integration because all the resources used do not—and, in fact, it appears they *cannot*, since the novelty of innovation implies the discovery of new attributes or uses—exist in their final and usable state prior to its implementation. In addition, the process that is eventually developed may require the creation of new non-human resources (new

machines, tools, molds, etc.), which further extends the entrepreneur's dependence on proxy-entrepreneurs to develop and produce such resources.

In this view, the firm is conceptualized as a coordinated resource structure guided by entrepreneurial foresight, and with a specific end or purpose, that facilitates innovation in production processes through developing, *creating*, and organizing resources. While the firm is a means for acting on entrepreneurial judgment, it here also emerges as a vehicle or catalyst for implementing productive innovations such as new products and create more roundabout production structures. The firm is in this sense a productive engine that aids the entrepreneur in establishing imagined production structures and, on an aggregate level, acts as a catalyst in economic development (Bylund, 2015).

DISCUSSION

Economists, strategic management, and entrepreneurship scholars have, for some time now, studied how the productive resources in an economy can be the sources of new economic rents. These resources—factors of production—and their rent-generating capabilities represent the bedrock upon which theories in strategy are built. Strategy explains variance in firm performance as a function of the firm's ability to capture the rents generated from these market factors through effective governance of the exchange relationships related to the firm, the development and maintenance of protected market positions, the clever combination of resources the firm owns and controls, and the routines that enable it to operate efficiently, capture new knowledge, et cetera.

As we have seen, when traditional explanations for firm organization are extended to entrepreneurial settings, a rationale for firm emergence becomes much less clear. What remains to explain the firm is that it is more productive than the parts it consists of:

resources, in other words, should be more valuable (provide greater and more valuable output) within the firm than without. The difference between a firm and a collection of individual actors must therefore be the scale of value creation, since creation necessarily precedes value capture. This reasoning suggests that value capture can be an important part of an existing firm's strategy (since without it the firm would eventually fail), but that the rationale for firm emergence is primarily *value creation*. Since firms (at least following Coase's and Williamson's conjecture) theoretically emerge in the open market, the rationale must support the complete process, from open market via any intermediate steps to integration in a firm. The firm, in other words, must be expected to and reasonably be considered able to do something *much better* than is possible in the open market. It cannot be simply a scheme for saving on market overhead through co-location, cooperation, and formal coordination. Consequently, the firm must essentially *be a value-creating capability compared to market production*.

It is not within the scope of this paper to produce a new theory of the firm. Our contribution is limited to identifying what a theory of the firm necessarily must explain: value creation. We have seen that no theory in strategy can explain firm emergence. They were not designed to do so; they were designed to explain how value is captured. Attempts to extend theories in strategic management to entrepreneurial settings will be fruitful insofar as entrepreneurial activity can be conceptualized as value capture; and, as our decomposition of the overarching entrepreneurial rent into a set of distinct entrepreneurial rents related to the economic function of the entrepreneur suggests, there is a role for theory in strategy in the domain of entrepreneurship (Hitt, Ireland, Camp and

Sexton, 2001; Ireland, Hitt and Sirmon, 2003; Kuratko and Audretsch, 2009). However, these theories are bounded to value capture in entrepreneurial settings.

One of the ways you can tell whether you have a distinct domain is if there is new theory. Historically, entrepreneurship has not had its own theory—at the individual level it has drawn eclectically from economics, psychology, and sociology and at the level of the firm it has focused on “strategic entrepreneurship” and employed economics-infused theory from strategy and finance. The evidence that entrepreneurship is its own domain is the development of its own theory, a theory of value creation—a theory that does not yet exist. This paper does not explain what that theory is—it does not formalize it. However, this paper explains precisely why this theory is needed, and why it is necessarily required. It is analogous to theorizing that produced the Higgs insight—scientists now understood that for the things that they wanted to explain where they needed to look, and what they needed to look for, and provided guidance for a minimum-viable theory to be developed and associated empirical tests that could provide boundary conditions tractable enough to test for its veracity. What would be the minimum viable theory? What does it mean to say that one would want to produce this theory? The big reveal is that, in entrepreneurship, if the conjectures above hold, there are two theories to be developed, not just one.

The first theoretical advance is at the level of the firm. A theory of the entrepreneurial firm would need to explain not just the emergence of firms, but why a firm is needed. In this paper, we tack closer to these questions, and proffer a tentative answer for both of them. We argue that in cases of Knightian uncertainty, firms are required to resolve transactions costs related to market uncertainty, irrespective of behavioral uncertainty. This applies when markets exist. And when they don't—when the

entrepreneur intends to produce something that novel and truly breakthrough, that this necessitates the creation of new market factors and specialization activity that can only be accomplished by forming the firm³.

The second theoretical advance is at the level of the individual, where new theory is required to describe what entrepreneurs are doing. In the case of shuffling existing pieces on the game board around—e.g. replicative entrepreneurship—we have everything we need and a rich literature in entrepreneurship explains that. Here, no new theory is required. However, what remains to explain is why anyone would want to engage in entrepreneuring to create value—or, why create value under conditions of uncertainty? A key assumption of the historical view of opportunity discovery and exploitation is a model of man as calculator. Entrepreneurs calculate during the discovery process, as discovery “requires that [the opportunity] exists, and has value.” (Shane & Venkataraman, 2000: 222). Once an opportunity has been identified, a potential entrepreneur must make the decision to act. In this view, entrepreneurs weigh the value of the opportunity against the costs to generate that value, and the costs to generate that value using different resource combinations. Thus, the received view of entrepreneurial action developed under the assumption that opportunities are exogenously encountered assumes that agents perform a series of calculations to determine the value of an opportunity, and that entrepreneurial actions result from those calculations. In the case of entrepreneurs operating under Knightian uncertainty, these calculations cannot be relied on as impetus for action (Klein, 2008; Alvarez and Barney, 2007; 2012; Corbett and Katz, 2012). Therefore, for at least some slice of entrepreneurial activity, calculation or

³ Propositionally, and curiously, this suggests that replicative businesses can and will be formed “earlier” as entrepreneurs can use the firm to harvest known value earlier, and innovative firms will form “late”.

rational-choice models are necessarily not suitable as a motive or explanation for action. A new frontier in entrepreneurship scholarship at the individual level is an explanation for the microfoundations of value creation under conditions of Knightean uncertainty (Felin, Wuebker and Zenger, 2015).

CONCLUSION

In Kuhn's (1962) analysis of the Copernican Revolution, he emphasized that the heliocentric model of the universe (1514) did not offer more accurate predictions of a host of celestial events when compared to its Ptolemaic alternative. Although advances in theory by Kepler, and the invention of the telescope in 1609 provided conceptual grounding and empirical evidence of a world both incompatible with the Ptolemaic perspective, and a natural consequence of a heliocentric perspective, Ptolemaics did not adopt a heliocentric model of the universe. Instead, they shifted their efforts to shoring up an alternative geocentric cosmology advocated by Brahe, in which the motions of the planets and the Sun relative to the Earth are equivalent to the motions in a heliocentric system (Gingerich, 1993; Blair, 1990).

While the chain of events described by Kuhn is often interpreted as a metaphor for the slow and lurching adoption of a new paradigm, many overlook Kuhn's own conclusion about the continued rejection by Ptolemaics of Copernican cosmology—specifically, *that they were quite right to do so*. One of the aims of science is to find model that will account for as many observations as possible within a coherent framework. For more than one hundred years after the publication of the *Commentariolus* (Copernicus, 1514), a heliocentric cosmology lacked a coherent framework capable of rivaling the durable, useful, and well-understood Aristotelian/Ptolemaic framework (or

the variant proposed by Brahe). While individuals engaged in what Kuhn calls “*revolutionary science*” occasionally generate a rival explanation that deftly resolves one or two outstanding anomalies in the existing paradigm, these nascent accounts are incomplete. As a result, the majority of the scientific community will oppose any conceptual change—and, as Kuhn emphasizes, so they should. It is the responsibility of those proposing a new paradigm to drive toward an alternative account of a phenomenon that is complete, coherent, provides useful, unambiguous answers to the core questions in the field, and moves the field forward by disclosing new avenues for research and new paradoxes to resolve.

Although entrepreneurship scholars have been interested in opportunity formation and action under uncertainty for more than a decade—Sarasvathy (2001), Baker and Nelson (2005), Alvarez and Barney (2005) and Klein (2008) are notable examples—these alternative accounts have not gained widespread adoption or developed paradigmatic status. This paper provides a rationale for a theory of the entrepreneurial firm, and is the first step toward a new paradigm in entrepreneurship focused specifically on the creation of value under conditions of uncertainty.

Our purpose in this paper is to provide an explanation for why new theory in entrepreneurship is required, and does so by arguing that if entrepreneurship (or at least some part of entrepreneurship) is concerned with the creation of new value, that theories in strategic management focused on organizing to capture value are necessarily not suited for this purpose. Here, we are consolidating, reflecting, and formalizing a growing consensus among a number of scholars that any theory of the firm that only explains the appropriation of economic rents and does not explain the conditions under which firms,

conceptualized here as a factor of production, might generate economic rents, is an incomplete explanation for economic organization.

We argue that under particular conditions—those of Knightian uncertainty—the firm is a necessary condition for the generation of entrepreneurial rents. This process of implementing an imagined productive innovation is subject to Knightian uncertainty. It must be carried out in an integrated organizational unit due to its open-ended and limitedly known nature, which is a result of the impossibility to foresee the exact nature of the final, optimized process and the inexistent market supply of sufficiently specialized resources with preferred complementarities and sufficient compatibility.

We also show that, analogous to theories in strategic management that focus on explaining the capture of several types of economic rents, that the missing “entrepreneurial rent” in strategy is, actually, a collection of missing rent(s), some of which can be generated without electing to use the firm as a governance mechanism, and at least one of which requires the governance mechanism of the firm for its generation. In so doing, we have provided an explanation for why at least one new theory in entrepreneurship is required, the rationale for that theory, and the broad contours for understanding what that theory might look like.

While we have detailed the implications for entrepreneurship, it is also clear that there are implications for strategy scholars as well. Scholars interested in explaining variance in the extent to which existing firms can capture rents, variance in the ability of existing firms to diversify into new markets, or variance in the ability to generate entirely new rent streams will need to rely on theory that provides both a rationale for why firms are needed, and why firms in some cases are needed to generate new sources of economic

value. An additional entailing implication of this study is that, beyond questions of economic organization, it may also be the case that there is need for another theory in entrepreneurship, focused not at the level of the firm but the individual, that provides a model for entrepreneurial activity under conditions of Knightian uncertainty. Both of these developments—firm level theoretical advances as well as the potential for individual-level theoretical advances—represent exciting opportunities for entrepreneurship scholars. Rather than simply going to the wellspring of economics, strategy, sociology, and psychology and drawing from it, scholars in entrepreneurship have the opportunity to develop novel theory that organizations, strategy, and management can draw from to advance work in their domain.

Table 1: Types of Rents Explained by Different Strategic Management Theories

	Monopoly	Quasi-Rents	Inefficiency	Efficiency	Entrepreneurial
Positioning Theory	**				
Agency Theory		**	*		
Transaction Cost Theory		**	*		
Resource-Based Theory			*	**	
Real Options Theory			*		
Incomplete Contract Theory		**	*		

** = Primary focus of a theory; * = Secondary focus of a theory

Table 2: A Preliminary Typology of Entrepreneurial Rents

	Type of rent	Type of entrepreneurship	Type of profit opportunity	Market condition	Means of exploitation
Kirzner	Arbitrage	Replicative	Market imperfection	Risk	Market exchange
Schumpeter	Innovation, recombination	Innovative	Optimizing	Uncertainty	Contracting, organization
	Innovation, new rent pool	Innovative, paradigm-changing	Revolutionizing	Uncertainty	Integrated within a firm organization

LITERATURE CITED

- Acs, Z. J. (Ed.). (2008). *Entrepreneurship, growth and public policy: prelude to a knowledge spillover theory of entrepreneurship*. Edward Elgar Pub.
- Acs, Z. J. and D. B. Audretsch (1990). Innovation and Small Business.
- Adner, R., & Kapoor, R. (2010). Value creation in innovation ecosystems: how the structure of technological interdependence affects firm performance in new technology generations. *Strategic management journal*, 31(3), 306-333.
- Adner, R., & Levinthal, D. A. (2004). What is not a real option: Considering boundaries for the application of real options to business strategy. *Academy of management review*, 29(1), 74-85.
- Alvarez, S. A., & Barney, J. B. (2013). Epistemology, opportunities, and entrepreneurship: Comments on Venkataraman et al.(2012) and Shane (2012). *Academy of Management Review*, 38(1), 154-157.
- Alvarez, S. A., Barney, J. B., McBride, R., & Wuebker, R. (2014). Realism in the Study of Entrepreneurship. *Academy of Management Review*, 39(2), 227-231.
- Alvarez, S. A. (2007). Entrepreneurial rents and the theory of the firm. *Journal of Business Venturing*, 22(3), 427-442.
- Alvarez, S. A., & Barney, J. B. (2004). Organizing rent generation and appropriation: toward a theory of the entrepreneurial firm. *Journal of Business Venturing*, 19(5), 621-635.
- Alvarez, S. A., & Barney, J. B. (2005). How do entrepreneurs organize firms under conditions of uncertainty?. *Journal of management*, 31(5), 776-793.
- Alvarez, S. A., & Barney, J. B. (2007). Discovery and creation: Alternative theories of entrepreneurial action. *Strategic entrepreneurship journal*, 1(1□2), 11-26.
- Alvarez, S. A., & Barney, J. B. (2010). Entrepreneurship and epistemology: The philosophical underpinnings of the study of entrepreneurial opportunities. *The Academy of Management Annals*, 4(1), 557-583.
- Alvarez, S. A., & Busenitz, L. W. (2001). The entrepreneurship of resource-based theory. *Journal of management*, 27(6), 755-775.
- Alvarez, S. A., & Parker, S. C. (2009). Emerging firms and the allocation of control rights: A Bayesian approach. *Academy of Management Review*, 34(2), 209-227.
- Amit, R., & Schoemaker, P. J. (1993). Strategic assets and organizational rent. *Strategic*

management journal, 14(1), 33-46.

Argyres, N., & Bigelow, L. (2007). Does transaction misalignment matter for firm survival at all stages of the industry life cycle?. *Management Science*, 53(8), 1332-1344.

Audretsch, D. B. (1995). Innovation, growth and survival. *International journal of industrial organization*, 13(4), 441-457.

Azoulay, P., & Shane, S. (2001). Entrepreneurs, contracts, and the failure of young firms. *Management Science*, 47(3), 337-358.

Baker, T., & Nelson, R. E. (2005). Creating something from nothing: Resource construction through entrepreneurial bricolage. *Administrative science quarterly*, 50(3), 329-366.

Barney, J. B. (1986). Strategic factor markets: Expectations, luck, and business strategy. *Management science*, 32(10), 1231-1241.

Barney, J. B. (1989). Asset stocks and sustained competitive advantage: A comment. *Management Science*, 35(12), 1511-1513.

Barney, J. B. (1991). Firm resources and sustained competitive advantage. *Journal of Management*, 17: 99-120.

Baumol, W. J. (1968). Entrepreneurship in economic theory. *The American economic review*, 64-71.

Baumol, W. J. (2010). *The microtheory of innovative entrepreneurship*. Princeton University Press.

Berle, Adolph A. and Gardiner C. Means, 1932, *The modern corporation and private property* (Macmillan, New York, NY).

Blair, A. (1990). Tycho Brahe's critique of Copernicus and the Copernican system. *Journal of the History of Ideas*, 355-377.

Bowman, E. H., & Moskowitz, G. T. (2001). Real options analysis and strategic decision making. *Organization Science*, 12(6), 772-777.

Burton, R. M., & Obel, B. (1980). A computer simulation test of the M-form hypothesis. *Administrative Science Quarterly*, 457-466.

Bylund, Per L. (2014). Explaining Firm Emergence: Specialization, Transaction Costs, and the Integration Process. *Managerial and Decision Economics*. doi: 10.1002/mde.2661

Bylund, Per L. 2015. *The Problem of Production: A New Theory of the Firm*. London: Pickering & Chatto.

Bylund and Wuebker, 2015. Where Do New Market Factors Come From? University of Utah Working Paper Series.

Casson, M. (1993) 'Entrepreneurship and Business Culture', in J. Brown and M. B. Rose (eds) *Entrepreneurship, Networks and Modern Business*, pp. 30–54. Manchester: Manchester University Press

Coase, R. H. (1937). The nature of the firm. *economica*, 4(16), 386-405.

Cockburn IM, Henderson RM, Stern S. 2000. Untangling the origins of competitive advantage. *Strategic Management Journal* , Special Issue **21(10 – 11)**: 1123 – 1145.

Corbett, A. C., Katz, J. A. (2012). Introduction: The action of entrepreneurs. *Advances in*.

Davidsson, P. (2013). Some reflection on research 'Schools' and geographies. *Entrepreneurship & Regional Development*, 25(1-2), 100-110.

Demsetz, H. (1973). Industry structure, market rivalry, and public policy. *Journal of Law and economics*, 1-9.

Dew, N., Velamuri, S. R., & Venkataraman, S. (2004). Dispersed knowledge and an entrepreneurial theory of the firm. *Journal of business venturing*, 19(5), 659-679.

Dierickx, I., & Cool, K. (1989). Asset stock accumulation and sustainability of competitive advantage. *Management science*, 35(12), 1504-1511.

Felin, T., & Zenger, T. R. (2009). Entrepreneurs as theorists: on the origins of collective beliefs and novel strategies. *Strategic Entrepreneurship Journal*, 3(2), 127-146.

Felin, Wuebker and Zenger, 2015
Firms, Cambridge, MA: MIT Press.

Foss, N. J., & Klein, P. G. (2012). *Organizing entrepreneurial judgment: A new approach to the firm*. Cambridge University Press.

Furr, Nickerson and Wuebker, 2015. A Theory of Entrepreneurship. Washington University Working Paper.

Gingerich, P. D. (1993). Quantification and comparison of evolutionary rates. *American Journal of Science*, 293(A), 453-478.

Grossman, S. J., & Hart, O. D. (1986). The costs and benefits of ownership: A theory of vertical and lateral integration. *The Journal of Political Economy*, 691-719.

- Hart, O., & Moore, J. (1991). *A theory of debt based on the inalienability of human capital* (No. w3906). National Bureau of Economic Research.
- Hart, O., & Moore, J. (2007). Incomplete contracts and ownership: Some new thoughts. *The American economic review*, 182-186.
- Helfat, C. E., & Lieberman, M. B. (2002). The birth of capabilities: market entry and the importance of pre-history. *Industrial and corporate change*, 11(4), 725-760.
- Hitt, M. A., Ireland, R. D., Camp, S. M., & Sexton, D. L. (2001). Strategic entrepreneurship: Entrepreneurial strategies for wealth creation. *Strategic management journal*, 22(6-7), 479-491.
- Ireland, R. D., Hitt, M. A., & Sirmon, D. G. (2003). A model of strategic entrepreneurship: The construct and its dimensions. *Journal of management*, 29(6), 963-989.
- Jensen, Michael C., and Meckling, William H. (1978). Can the corporation survive? *Financial Analysts Journal* (January/February): 2-8
- Kester, W. C. (1984). *Turning growth options into real assets*. Division of Research, Graduate School of Business Administration, Harvard University.
- Kim, J., & Mahoney, J. T. (2005). Property rights theory, transaction costs theory, and agency theory: an organizational economics approach to strategic management. *Managerial and Decision Economics*, 26(4), 223-242.
- Kirzner, I. 1973. *Competition and entrepreneurship*. Chicago: University of Chicago Press.
- Kirzner, I. M. (1976). *Economic Point of View, The*. Ludwig von Mises Institute. Klein, 2010
- Klein, P. G. (2008). Opportunity discovery, entrepreneurial action, and economic organization. *Strategic Entrepreneurship Journal*, 2(3), 175-190.
- Knight, F. H., 1921. Risk, uncertainty and profit.
- Kogut, B. (1991, Summer). Country capabilities and the permeability of borders. *Strategic Management Journal*, 12, 33-47 (Special Issue).
- KOPPL, R., KAUFFMAN, S., FELIN, T., & LONGO, G. (2014). Economics for a creative world. *Journal of Institutional Economics*, 1-31.
- Kuhn, T. S. (1962). Historical structure of scientific discovery. *Science*, 136(3518), 760-

764.

Kuratko, D. F., & Audretsch, D. B. (2009). Strategic entrepreneurship: exploring different perspectives of an emerging concept. *Entrepreneurship Theory and Practice*, 33(1), 1-17.

Langlois, R. N., & Foss, N. J. (1999). Capabilities and governance: the rebirth of production in the theory of economic organization. *Kyklos*, 52(2), 201-218.

Liebenstein, H. (1968, May) Entrepreneurship and development. *American Economic Review*, 58, 72-83.

Madhok, A. (2002). Reassessing the fundamentals and beyond: Ronald Coase, the transaction cost and resource-based theories of the firm and the institutional structure of production. *Strategic Management Journal*, 23(6), 535-550.

Mahoney, J. T., & Qian, L. (2013). Market frictions as building blocks of an organizational economics approach to strategic management. *Strategic Management Journal*, 34(9), 1019-1041.

McDonald, R., & Eisenhardt, K. M. (2014). *Competing in New Markets and the Search for a Viable Business Model*.

McGrath, R. G. (1999). Falling forward: Real options reasoning and entrepreneurial failure. *Academy of Management review*, 24(1), 13-30.

Milgrom, P. R., & Roberts, J. (1992). *Instructor's manual [for] Economics, organization and management*. Prentice-Hall Internat..

Myers, S. C. (1977). Determinants of corporate borrowing. *Journal of financial economics*, 5(2), 147-175.

Nickerson, J. A., Silverman, B. S., & Zenger, T. R. (2007). The 'problem' of creating and capturing value. *Strategic Organization*, 5(3), 211-225.

Peteraf, M. A. (1993). The cornerstones of competitive advantage: a resource-based view. *Strategic management journal*, 14(3), 179-191.

Porter, M. E. (1991). Towards a dynamic theory of strategy. *Strategic management journal*, 12(S2), 95-117.

Riordan, M. H., & Williamson, O. E. (1985). Asset specificity and economic organization. *International Journal of Industrial Organization*, 3(4), 365-378.

Rumelt, R. P., Schendel, D., & Teece, D. J. (1991). Strategic management and economics. *Strategic management journal*, 12(S2), 5-29.

Sarasvathy, S. D. (2001, August). Effectual reasoning in entrepreneurial decision making: existence and bounds. In *Academy of management proceedings* (Vol. 2001, No. 1, pp. D1-D6). Academy of Management.

Schumpeter, J.A. 1934. *Theory of Economic Development: An Inquiry into Profits, Capital, Credit, Interest, and the Business Cycle*. Cambridge, MA: Harvard University.

Schumpeter, J.A. 1942. *Capitalism, socialism, and democracy*. New York: Harper & Row.

Shane, S. A. (2008). *The illusions of entrepreneurship: The costly myths that entrepreneurs, investors, and policy makers live by*. Yale University Press.

Shane, S., & Venkataraman, S. (2000). The promise of entrepreneurship as a field of research. *Academy of management review*, 25(1), 217-226.

Shelanski, H. A., & Klein, P. G. (1995). Empirical research in transaction cost economics: a review and assessment. *Journal of Law, Economics, & Organization*, 335-361.

Simon, H. A. (1947). *Administrative Behavior*. Macmillan, New York.

Spanos, Y. E., & Lioukas, S. (2001). An examination into the causal logic of rent generation: contrasting Porter's competitive strategy framework and the resource-based perspective. *Strategic management journal*, 22(10), 907-934.

Wernerfelt, B. (1984). A resource-based view of the firm. *Strategic management journal*, 5(2), 171-180.

Williamson, O. E. (1970). *Corporate control and business behavior*.

Williamson, O. E. (1985). *The economic institutions of capitalism*. Simon and Schuster.

Williamson, O. E. (1993). Calculativeness, trust, and economic organization. *Journal of law and economics*, 453-486.

Williamson, O. E. (1996). *The mechanisms of governance*. Oxford University Press.

Williamson, Oliver, 1975, *Markets and hierarchies: Analysis and antitrust implications* (Free Press, New York).