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How Do Entrepreneurs Organize Firms Under Conditions of Uncertainty?

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Entrepreneurs looking to exploit market opportunities and create economic value must concern themselves with both value creation and value appropriation. In this context, entrepreneurs face an unusual challenge: they must accomplish these two tasks before the economic value of the market opportunity is known, even probabilistically. The purpose of this article is to describe how entrepreneurs in these settings organize a firm to solve their resource coordination and profit appropriation problems. Three different ways of organizing firms in these settings are examined, and their implications for research in entrepreneurship and other fields are discussed.

Keywords: entrepreneurship; uncertainty; transactions cost economics; incomplete contracts

Entrepreneurs often assemble and coordinate the resources needed to exploit market opportunities by organizing a firm (Alvarez & Barney, 2004; Barney, 1986; Peteraf & Barney, 2003). In organizing these firms, entrepreneurs must make numerous choices. Two of the most
important of these have been described in the literature: (a) establishing who in a firm has the
right to make what kinds of decisions (Grossman & Hart, 1986; Hart & Moore, 1988) and (b)
determining the claims of various individuals to the residual cash flows created by exploiting
an opportunity (Coff, 1999). Indeed, some have argued that a firm exists only when decision
rights among exchange partners have been allocated and when the nature of residual claims to
a firm’s cash flows have been settled (Holstrom & Tirole, 1989).

Several theories in the literature—including transactions cost economics (Williamson,
1985) and incomplete contract theory (Grossman & Hart, 1986)—describe how these deci-
sion rights and residual claims choices are made. However, entrepreneurs must make deci-
sions about organizing a firm under conditions that are not currently incorporated within these
established theories. In particular, because entrepreneurs are often exploiting new, untried
market opportunities (Schumpeter, 1934; Shane & Venkataraman, 2000), they must often
make decision rights and residual claims choices before the economic value associated with
exploiting a market opportunity is known, even probabilistically. If the economic value associ-
ated with a new market opportunity is uncertain, then it is difficult to know, for sure, which
resources should be assembled and coordinated, how resource assembly and coordination
decisions should be made, and what the residual profits from exploiting such an opportunity
might be. In such settings, it is difficult to know who should control what decision rights and
how any residual profits generated should be allocated if a firm is organized. That is, in such
settings, it is difficult to know how to organize a firm.

The purpose of this article is to describe how entrepreneurs in these uncertain settings can
solve these decision rights and residual claims problems and thus organize a firm to facilitate
the assembly and coordination of the resources needed to exploit a market opportunity. The
article begins by distinguishing between risky and uncertain investments and then shows how
transactions cost and incomplete contracts explanations of how firms are organized fail to
account for firm creation under conditions of uncertainty. Next, three different ways that firms
can be organized in these settings are examined, and the implications for research on entrepre-
neurship and related fields are discussed.

Risky and Uncertain Investments

There is widespread agreement that most business decision making does not take place
under conditions of certainty. Shifts in consumer demand and preferences that affect the sys-
temic risk in the economy (Brealey & Myers, 1988), unanticipatable events in a firm’s envi-
ronment (Schumpeter, 1934), poor understanding of cause-and-effect relationships in a firm’s
business activities (Lippman & Rumelt, 1982), and information-processing limitations of
human beings (Simon, 1947) all make it impossible for the outcomes of many business deci-
sions to be known with certainty at the time they are made (Alchian, 1950; Cyert & March,
1963).

Managers can engage in a variety of actions to try to increase the certainty of the outcomes
associated with making their decisions. For example, data on consumer preferences can be
collected, the successes and failure of other firms can be analyzed, and a variety of strategic
and financial tools can be applied, all in an effort to increase the level of certainty associated
with making a decision. However, it will often be the case that—even after all that can be done—the outcomes of decisions will often not be certain.

In this setting, decision making can be “less than certain” in at least two ways: It can be risky or it can be uncertain. Much of the literature in strategic management and entrepreneurship uses the terms risk and uncertainty as if they were synonyms (e.g., Shane, 2003: 7). However, there is a long tradition in economics that distinguishes between these concepts (Knight, 1921). Moreover, there is growing agreement that one of the most important differences between nonentrepreneurial and entrepreneurial decision making is that the former takes place under conditions of risk, whereas the latter takes place under conditions of uncertainty (Alvarez & Busenitz, 2001; Loasby, 2002).

**Risky Investments**

The decision to exploit a market opportunity is defined as risky when two conditions exist: first, when all possible future outcomes of exploiting that market opportunity are known at the time the decision is made and, second, when the probability of each of these outcomes occurring is also known at the time a decision is made (Wald, 1950). The outcomes of these decisions are governed by well-defined probability distributions. A well-defined probability distribution has three characteristics (Triola, 2003): (a) All possible future outcomes are known before a decision is made; (b) the probability of any one of these outcomes occurring is less than or equal to one, but greater than zero; and (c) the probability of any of these outcomes occurring sums to one.

Making risky investment decisions is analogous to rolling a die known to have six sides and known to be fair and balanced. The outcome of rolling this die is not certain. However, the full range of possible outcomes from rolling this die is known, and the probability of each outcome occurring (1/6) is also known. This makes it possible to calculate a probability distribution that can be used to anticipate the possible outcomes from rolling this die.

Most economic and financial models of business decision making are applicable to risky decisions (Brealey & Myers, 1988; Cyert & DeGroot, 1987). For example, to calculate the present value of a new investment, both the possible outcomes associated with this investment and the probability of these outcomes must be known. These concepts find their analogues in the net cash flow an investment is expected to generate (i.e., possible investment outcomes) and the discount rate applied to that projected net cash flow (i.e., the likelihood that this outcome will occur). As long as the discounted present value of the cash flows generated by making a risky investment in a market opportunity is positive, those seeking to maximize their economic wealth will have an incentive to make this investment (Brealey & Myers, 1988).

**Uncertain Investments**

On the other hand, the decision to invest in a market opportunity is uncertain when the possible outcomes of this decision and the probability of those outcomes are not known when a decision is made (Knight, 1921). In these situations, decision makers are often ignorant of possible future outcomes (Shackle, 1972, 1979). Making uncertain investment decisions is
also analogous to rolling a die. However, in the uncertain case, the number of sides on the
die—is it two, three, four, eight, or an infinite number of sides—and whether the die is bal-
anced and fair are not known when the die is rolled.

Note that whether a decision to invest in a market opportunity is risky or uncertain depends
on the objective properties of that investment, not on the perceptions of decision makers.
There is good reason to believe that many decision makers, facing risky or uncertain decisions,
will be systematically overconfident about their ability to anticipate the results of a decision
(Kahneman & Tversky, 1972, 1973). In this sense, these decision makers may believe that
they can estimate the probability distribution of outcomes associated with a decision even
though the data required to estimate this distribution are not known. Thus, often decision mak-
ers underestimate the level of uncertainty in their environments. Indeed, entrepreneurs have
been shown to be particularly overconfident in this way (Busenitz & Barney, 1997). That is,
entrepreneurs often believe they can estimate the probability distribution associated with a
decision, even in uncertain settings (Kirzner, 1973). A willingness to generalize from small
samples and high levels of overconfidence in one’s decision-making capabilities may be the
primary reasons that entrepreneurs are willing to invest in uncertain settings (Busenitz &
Barney, 1997).

However, no matter how a decision maker feels or what a decision maker believes or per-
ceives about the outcomes of a decision, if the outcomes of a decision are not certain, then they
are either risky or uncertain. If prior experience with that decision makes it possible to estimate
a probability distribution associated with a decision, then that decision is risky. If it is not pos-
sible to estimate such a probability distribution, that decision is uncertain.

Prior Theories of the Firm and Uncertainty

As suggested earlier, two theories—transactions cost economics (Williamson, 1975, 1985)
and incomplete contract theory (Grossman & Hart, 1986)—currently dominate discussions of
how firms are organized. Transactions cost theories focus on the role of hierarchical gover-
nance in reducing the threat of opportunism due to transaction-specific investment in eco-
nomic exchanges (Barney & Hesterly, 1996; Williamson, 1985). The central prediction of this
theory is that economic actors will adopt hierarchical forms of governance—a firm—when
the threat of opportunism because of transaction-specific investment is very high. Incomplete
contract theories of the firm, on the other hand, focus on how residual rights of control are
assigned to parties in an exchange. The central prediction of this theory is that these residual
rights will be assigned to that party in an exchange that has the most to gain from an exchange
(Hart, 1995).

Transactions Cost Economics and Uncertainty

Transactions cost theories of the firm are based on the seminal insights of Coase (1937) that
there is a cost associated with using markets to govern certain economic exchanges. This the-
ory begins with the observation that economic actors will often find it in their self-interest to
make specific investments to complete particular economic exchanges. However, making spe-
cific investments in a transaction increases the threat of opportunism—in particular, the threat that the party that makes these investments will not receive appropriate compensation for doing so (Williamson, 1975, 1985). Indeed, the inability to receive appropriate compensation for making specific investments can be so significant that economic actors will not make these investments in the first place (Klein, Crawford, & Alchian, 1978).

Transactions cost theory suggests that hierarchical governance addresses this issue by bringing a problematic exchange within the boundaries of a firm where a manager can monitor and control the behavior of all parties to that exchange (Alchian & Demsetz, 1972; Williamson, 1985). The ability to monitor and control behavior within a firm to reduce the threat of opportunism in an exchange is known as “managerial fiat.” Williamson stated that “fiat is the distinguishing feature of internal organization” (1991: 274).

However, the ability to exercise managerial fiat in a way that ensures the efficient operation of a firm requires that “the boss” has the information required to value the specific investments made by parties to an exchange, the information required to determine whether parties to an exchange are fulfilling their obligations, the information required to know how the profits generated by an exchange should be distributed among parties to that exchange, and so forth. Indeed, the reason that hierarchy is thought to be able to control threats of opportunism in an exchange is that this form of governance makes it possible for those exercising managerial fiat to have sufficient information to manage an exchange in ways that are acceptable to all parties to that exchange (Foss, 1996; Williamson, 1975, 1985).

But what happens to the ability to exercise managerial fiat when the information required to exercise fiat does not exist—when the value of specific investments is not known, when the level and type of commitments required to complete an exchange are not known, and when the possible economic outcomes of an exchange are not known? In these uncertain settings, it becomes difficult for “the boss” to efficiently monitor and control an exchange. Traditional transactions cost theory seems to suggest that because “managerial fiat” is not likely to be effective in monitoring and controlling uncertain exchanges, firms will not be organized in such settings. And yet, entrepreneurial firms are often organized in such settings (Casson, 1982).

The assertion that managerial fiat is difficult to exercise under uncertainty may seem ironic to many transactions cost theorists because some very influential transactions cost theorists assign a central role to uncertainty in their theory (e.g., Williamson, 1975, 1985). However, the uncertainty that is part of transactions cost economics is not uncertainty about the economic value that exploiting an opportunity may create. Rather, this uncertainty has to do with the inability to anticipate whether an exchange partner will behave opportunistically and all the different ways that an exchange partner may behave opportunistically. Although transactions cost theory clearly incorporates what might be called behavioral uncertainty into its theoretical framework, it is less obvious that it incorporates uncertainty about the economic value that might be created by investing in a market opportunity.

Indeed, some transactions cost theorists acknowledge that transactions cost theory takes the economic gains from an exchange as given and instead focuses on how hierarchical and other forms of governance are used to allocate the gains from this exchange to parties to that exchange (Riordan & Williamson, 1985: 366; Williamson, 1985: 81). Although entrepreneurs
clearly must concern themselves with threats of opportunism in any exchanges they engage in, they also face a prior uncertainty—uncertainty about the value these exchanges create in the first place.

Empirically, it may be the case that behavioral uncertainty and uncertainty about the value that might be created by exploiting a new market opportunity may be correlated. However, that correlation will not always be high. For example, it may well be the case that two economic parties who trust each other completely and thus who face very little behavioral uncertainty may nevertheless face substantial uncertainty with respect to the economic value their joint investments in new market opportunities may create. This lack of distinction between behavioral uncertainty and uncertainty about the value an economic exchange might create may be one reason why empirical tests of transactions cost theory routinely support the theory’s central prediction about the relationship between transaction-specific investment and hierarchical governance but generate less consistent support for its predictions about uncertainty and governance (Balakrishnan & Wernerfelt, 1986; Mahoney, 1992; Walker & Weber, 1984).

These limitations of transactions cost are particularly apparent when considering it from the point of view of entrepreneurs contemplating whether they should use a firm to exploit a new market opportunity. Although transactions cost economics may be helpful in deciding whether to use hierarchical governance to respond to possible opportunism, it has little to say about whether to use such governance to exploit opportunities whose value is currently unknown.

Incomplete Contracts and Uncertainty

The other dominant theory of the firm in the literature, incomplete contract theory, suggests that it is frequently not possible to write and enforce detailed and complete contracts to manage economic exchanges when those exchanges are initially conceived (Grossman & Hart, 1986). In such settings, a firm emerges as an institutional framework where the rights to make specific decisions in an exchange are assigned to different parties to that exchange. The key decision rights are “residual rights of control,” that is, the right to make decisions not otherwise specified by law, tradition, or contract.

Given the important role of residual rights of control in incomplete contract theory, it is not surprising that a central prediction of this theory concerns who in an exchange should have these rights. This theory suggests that residual rights of control should be assigned to the individual in an exchange who has the most to gain from that exchange (Hart & Moore, 1988). This person has the greatest incentives to manage this transaction in a way that maximizes its total value (Grossman & Hart, 1986). Those who benefit less from an exchange will find it in their self-interest to delegate residual rights of control to those who have the most to gain from an exchange, for these individuals have the strongest incentives to create the most value in an exchange. By assigning residual rights to those who will most benefit from an exchange, all parties to that exchange will be benefited when it is managed in a way that maximizes its value.

However, current formulations of incomplete contract theory also face difficulties in the face of uncertainty—as defined in this article. In particular, the information required to make a decision about who in an exchange should have residual rights of control—information about
who will benefit the most from an exchange—is not known at the time when a firm is being organized under conditions of uncertainty. When parties to an exchange cannot know who has the most to gain from an exchange, they cannot know who should control residual rights in that exchange, and thus they cannot know how to organize a firm in this setting. And yet, decisions about firms—including decisions about who should hold residual rights of control—must sometimes be made by entrepreneurs organizing firms under conditions of uncertainty.

Organizing the Firm Under Uncertainty

Both transactions cost and incomplete contract theories of the firm—as currently constituted—have limited implications for decisions about organizing a firm under conditions of uncertainty. This would not be an important limitation of these theories if uncertainty was not an important setting within which decisions about organizing a firm are made. However, far from being unimportant, uncertainty is characteristic of a large number of decisions that have important economic consequences—including decisions about exploiting new and untested technological and market opportunities by entrepreneurs. In such settings, how can questions about decision rights and residual claims be made?

Fortunately, it is possible to extend transactions cost and incomplete contracts arguments in ways that do apply in uncertain settings. These extensions, it turns out, are the basis for the development of at least a partial typology of entrepreneurial firms. This typology is discussed below.

Clan-Based Entrepreneurial Firms

Current transactions cost theory suggests that the primary reason to organize a firm is to facilitate the use of managerial fiat to solve opportunism problems associated with transaction-specific investments. However, it has already been suggested that under conditions of uncertainty, managerial fiat as it has traditionally been described will be difficult to exercise efficiently.

Suppose, for the time being, that parties to an exchange under uncertainty could make transaction-specific investments without concern for opportunism on the part of exchange partners. In this setting, a firm might still be organized, if only to coordinate the specific investment process (Hart, 1995). However, the ability of the firm to facilitate the use of managerial fiat to resolve opportunism problems would not be relevant because opportunism is not likely to emerge in this setting. In this context, it would be possible for parties to an exchange where significant transaction-specific investments are being made to organize a firm even though, under conditions of uncertainty, managerial fiat is likely to be less effective than in other settings.

What would this entrepreneurial firm look like? It would be characterized by a high degree of trust on the part of those involved in making transaction-specific investments (Barney & Hansen, 1994; Jones, 2001; Kogut & Zander, 1996). Decision making in this firm would not be hierarchical—with a “boss” telling others in the firm what to do. Rather, decision making would be more democratic and consistent with searching for a consensus among all those who
have made specific investments in the firm (Conner & Prahalad, 1996). In short, this firm would be managed more as a clan (Ouchi, 1980) than as a traditional hierarchy.

The idea of using a “clan” to manage an exchange is not new. Indeed, Alchian and Demsetz (1972) argued that “managerial fiat” is never a sufficient reason for creating a firm and that sometimes a firm can be organized on the basis on voluntary cooperative relations between exchange partners. However, Alchian and Demsetz’s conclusions were based on the observation that sometimes it is difficult to measure the productivity of parties to an exchange, even when the value of that exchange is known, and that cooperation can be helpful in realizing the full economic potential of an exchange in that setting. This article extends Alchian and Demsetz’s argument by suggesting that one of the reasons it may be difficult to measure the productivity of exchange partners is that the value of an exchange may not be known, ex ante.

Another difference between the view of the clan developed here and prior uses of the concept concerns whether clans can be developed to solve exchange problems or only exploited to solve those problems. One reading of Ouchi (1980) suggests that the clan is simply one of several different governance devices, including internal markets and bureaucracies, that can be created to solve specific types of exchange problems. Here, the notion is not that a clan is developed to solve an exchange problem but rather that an exchange only becomes possible if a clan already exists. In this sense, the ability to organize a firm, in the form of a clan, is actually logically prior to the ability to engage in economic exchanges under conditions of uncertainty. In this setting, it would not be surprising for those looking to exploit new and untested technological or market opportunities that require significant transaction-specific investments to seek exchange partners they already trust.

Clan-based entrepreneurial firms can be described with respect to how decision rights in these organizations are distributed and how residual claims are allocated. Those in clan-based entrepreneurial firms share all decision rights and residual claims. Individuals are part of these firms because they are thought to be both essential to the creation of value and trusted by others in the firm. As individual decisions are made, a firm’s essential employees will rely on those members of the firm they believe are most appropriate to take the lead. In this way, decision-making leadership will be shared among essential firm employees, and all will have equal decision rights. When it comes time to allocate residual claims, individuals in these firms will trust that each will receive compensation in accordance to his or her contributions (Simon, 1947).

Despite the fact that clan governance can be an efficient way to organize a firm under conditions of uncertainty, it does not follow that clans will continue as a basis for organizing a firm over long periods of time. As parties to an exchange gain experience in that exchange, they may begin to gain enough data to be able to estimate the likelihood that it will actually generate economic value. At this point, uncertainty has been replaced by risk, and traditional transactions logic explaining when and how a firm will be organized applies. Of course, as described by Ouchi (1980), in these risky situations, clans might still be efficient governance mechanisms for managing exchanges characterized by very high levels of transaction-specific investment. However, other governance options, including traditional managerial fiat, may also be appropriate.

These observations help explain why entrepreneurs who specialize in clan governance must often be replaced by professional managers—people who specialize in exercising mana-
gerial fiat—if the uncertainty facing a firm changes into risk. The cooperative skills required to be successful in a clan are often inconsistent with the monitoring and control skills required to be successful in a more traditional hierarchy characterized by managerial fiat.

Expert-Based Entrepreneurial Firms

Extensions of incomplete contract theory suggest another way that firms can be organized under conditions of uncertainty. This theory suggests that the party to an exchange who has the most to gain from an exchange should obtain residual rights of control to that exchange. However, under uncertainty, it is not possible to know, ex ante, the future value of the specific investments in an exchange and thus not possible to know who has the most to gain from these specific investments.

However, although it is not possible to use information about the future value of an exchange to organize a firm under uncertainty, it may be possible to use information about the value of the opportunity costs of individuals as the basis for making a decision about whether and how to organize a firm.

Consider the following scenario. Two individuals, Person A and Person B, come together and make significant transaction-specific investments. The probability distribution of outcomes associated with these specific investments is assumed to be not known, and thus the condition of uncertainty exists. Also, assume that no prior relationships exist between these individuals and thus that clan governance cannot be used as a basis on which a firm in this setting can be organized. On what basis is organizing a firm in this setting then possible?

In addition to the specific investments these two people have made, they each are likely to have opportunity costs associated with investing in this firm. The value of their opportunity cost does not depend on this particular exchange continuing. Rather, it depends on how they can use the assets they control in other economic settings. Moreover, the value of each individual’s opportunity costs can vary substantially. One person in this exchange might be able to use his or her nonspecific skills in a wide variety of highly lucrative alternative exchanges; the other person might have fewer such opportunities.

Under uncertainty, it is not possible to know who has the most to gain from a particular exchange. However, it may be possible to get some sense of who might be most committed to maximizing the value of an exchange by examining the value of each individual’s opportunity costs. If Person A could earn $10,000 in some alternative exchange, and Person B could earn only $1,000 in some alternative exchange, Person A (assuming he or she makes decisions that maximize his or her personal wealth) will only be willing to engage in the transaction-specific investments associated with a particular exchange if he or she believes that more than $10,000 can be gained from making these investments. Person B would be willing to make these investments even if they only generated slightly more than $1,000 in value.

So, who has the most incentive to maximize the value of the specific investments that are being made? It is, of course, Person A, the person who knows that these specific investments must create at least $10,000 in value to justify sacrificing alternatives that would have generated $10,000, whereas Person B would be satisfied if these specific investments only generated $1,000 in value.
Thus, even though the probability distribution of outcomes associated with making a bundle of specific investments may not be known, by examining the total value of the opportunity costs—both in terms of income foregone and time expended—of parties to an exchange, it may be possible to identify who in an exchange has the strongest incentive to maximize the value of that exchange and thus who in an exchange should have the decision-making rights in that exchange. In this example, that individual is Person A.

This conclusion depends, of course, on the assumption that the value of Person A and Person B’s opportunity costs are known, at least probabilistically. Under these conditions, incomplete contract theory seems to suggest that it will be in the self-interest of all parties to this exchange for the person whose opportunity costs are known to be the most valuable to obtain decision-making rights in this exchange. This, then, becomes a basis for organizing a firm under uncertainty, where no prior trusting relationships might exist.

What would this entrepreneurial firm look like? First, it would be a much more traditional hierarchy than the clan-based entrepreneurial firm described earlier. However, unlike the hierarchy described in the transactions cost literature, “the boss” would not be chosen on the basis of his or her ability to monitor and control but rather on the basis of his or her opportunity cost of joining the firm. This “boss” is likely to be seen as possessing expert knowledge that is essential to the firm’s success. It would not be surprising if most others associated with this firm deferred to this “expert.”

Decision rights in this firm would be centered in this expert. He or she may not make all decisions but is likely to decide who will make those decisions. The allocation of decision rights in this firm will be based on the expert’s specific knowledge and expertise. Similarly, although residual claims may be distributed to all essential employees in this firm, this distribution will be done by the expert around whom the firm is organized. Other parties to this exchange will continue to defer to the judgment of the expert as long as they believe that the value they can obtain from working with this individual is greater than the value they can obtain in some alternative exchange.

These observations have a variety of empirical implications. For example, if parties to an exchange have opportunity costs that are approximately equal in value, then these individuals will have difficult problems organizing a firm under conditions of uncertainty, unless, of course, these parties share prior trusting relationships. On the other hand, if the value of the opportunity costs are known, at least probabilistically, and if there is a large difference in the expected value and riskiness of these opportunity costs, then the person with the most valuable opportunity costs should have decision-making rights of control in any firm that is organized, that is, they should be the “expert” in this expert-based entrepreneurial firm.

This theory also predicts when these expert-based entrepreneurial firms will face important organizational challenges to their survival: when the relative value of the opportunity costs of parties associated with a firm reverses. An example would be when Person A’s opportunity cost was $10,000 and Person B’s opportunity cost was $1,000 but when the relative value of these two individuals reversed at some later time. This could happen, for example, when broader changes in the economy make Person B’s resources much more valuable than Person A’s resources. Or, it may occur as, over time, information about the probability distribution of outcomes associated with an exchange becomes known and uncertainty changes into risk and the value of each person affiliated with a firm can be determined.
In this setting, employees in a firm would have to renegotiate their decision rights and residual claims. If this renegotiation occurs, the firm will continue, albeit in a new form. If a new agreement cannot be reached at low cost, it would not be surprising to see firms dissolve.

**Charisma-Based Entrepreneurial Firms**

In the previous discussion, it was assumed that the value of a person’s opportunity costs could be known, if only probabilistically. If this is the case, then the relative value of these opportunity costs can be used to determine who in an exchange should have decision-making rights of control. However, what if the opportunity costs of the individuals making specific investments in the firm cannot be known or are similar enough that a distinction between them might be trivial? For example, suppose Party A has an opportunity cost of $10,000 and Party B has an opportunity cost of $9,500? When this is the case, on what basis can a firm be organized?

When opportunity costs of individuals cannot be used to organize a firm, and when prior trusting relationships cannot be used to organize a firm, decisions about who should have decision rights and residual claims in an exchange may depend on the relative charisma of parties to that exchange. The literal translation of charisma is “gift of grace” (Gerth & Mills, 1976: 52). It is a sense that some individuals have of themselves, of their vision of the future, and of the inevitable success of their cause. Charismatic individuals can sometimes gather others around them in a form of hierarchical organization. In the extreme, the values, beliefs, and logic of subordinates are replaced by the vision of the charismatic leader (Weber, 1903/1949).

Weber (1903/1949) noted that charismatic leaders may provide order and direction in organizations that are not bureaucratized or operated according to traditions. However, the study of charismatic leaders has evolved beyond that of religious, social, or political movements that Weber studied to the study of charismatic leaders in complex organizations (Bass, 1990). Charismatic leaders in complex organizations typically have the unique ability to transcend the bounds of everyday routines and, in conditions of uncertainty, they are able to influence individual followers of the correctness of their vision. Charismatic leadership has been found to be more prevalent in conditions where the workforce or the market is rapidly changing or during changes in technology when bureaucratic or traditional rigidities are replaced by teamwork (Quinn & Cameron, 1983; Robbins, 1983; Weber, 1903/1949).

Individuals who follow charismatic leaders do so because of their belief that these leaders are extraordinarily qualified to lead or can make sense of uncertain conditions (Weber, 1903/1949). Indeed, some scholars define charismatic leadership with respect to its effects on followers. Bass, for example, defined a charismatic leader as one who “induces a high degree of loyalty, commitment, and devotion in the followers; identification with the leader and the leader’s mission; and the correctness of the leaders beliefs” (1990: 205). In addition, some individuals might gravitate toward a charismatic leader to experience some of the excitement that might be found during conditions of uncertainty. By gravitating toward such a leader, the follower might not have to bear the cost of uncertainty to the same degree as the leader.

Charisma is likely to be a particularly effective basis for organizing a firm under uncertainty, especially when alternatives—including prior trusting relationships and clear opportu-
nity costs—do not exist. In a sense, the purpose and clarity that charismatic leaders bring to an exchange ignore the reality of uncertainty and replace it with a kind of certainty—derived not from the objective analysis of the information available to decision makers but derived from the clarity of vision articulated by one particular party to an exchange (Mahoney & Michael, 2005).

What would an entrepreneurial firm led by a charismatic leader look like? This firm will also be hierarchical. However, rather than the “boss” exercising control based on his or her ability to monitor and adjust incentives, and rather than the “boss” exercising control based on his or her expertise, this boss exercises control through his or her charisma and vision. If other firm members “buy into” this vision, they give decision-making power to their charismatic leader. This charismatic leader would also establish residual claims in this organization.

If it turns out that the person chosen to hold decision-making rights of control actually is the person who has most to gain from an exchange, then the firm that was organized on the basis of charisma may continue for some time. On the other hand, if, over time, it becomes possible to estimate the actual probability distribution of outcomes associated with an exchange, it may turn out that this charismatic leader may not have the most to gain from an exchange and thus should not have residual control rights. In this situation, the charismatic leader may continue to have significant influence over others in the firm, an influence that can ultimately reduce the level of a firm’s performance. Just as was the case with expert-based firms, costly renegotiation of these incomplete contracts can also threaten a firm’s survival.

**Discussion**

This analysis of how firms can be organized under uncertainty has a variety of theoretical and empirical implications. Some of these are discussed here.

*Distinguishing Between Risk and Uncertainty*

First, the arguments developed here depend on the distinction between risk and uncertainty. Current transactions cost and incomplete contract theories apply quite well under conditions of risk; they must be extended and modified under conditions of uncertainty.

As suggested earlier, despite the existence of a substantial literature in economics (Dequech, 2003; Knight, 1921; Loasby, 2002) that distinguishes between risk and uncertainty, this distinction is often muddied in the strategic management and entrepreneurship literature. Although it certainly may be the case that, sometimes, organizing processes are unaffected by whether conditions of risk or uncertainty exist, other times, these conditions can have a significant impact on organizing processes (Alvarez & Barney, 2005).

For example, it seems reasonably clear that present value and related techniques apply very well under conditions of risk. They apply less well under conditions of uncertainty. Under uncertainty, then, what decision-making tools can individuals use to make decisions? Under risk, a variety of business planning techniques—including scenario planning—seem to apply. Under uncertainty, flexibility in business planning seems likely to be more important. Under
risk, banks and venture capital firms seem likely to be reasonable sources of capital. Under uncertainty, trusting relationships among parties to an exchange—the preexisting clans mentioned earlier—seem likely to be a more important source of capital than banks or venture capital firms. Finally, under risk, it may be reasonable to think of opportunities as objective phenomena waiting to be discovered by unusually alert entrepreneurs (Kirzner, 1973; Shane, 2003). However, under uncertainty, entrepreneurs do not “discover” opportunities as create them through their organizing efforts (Alvarez & Barney, 2005).

The Purpose of Entrepreneurial Firms

Second, these arguments help distinguish between entrepreneurial and nonentrepreneurial firms. Entrepreneurial firms are organized under conditions of uncertainty, and their primary purpose is to solve transaction difficulties associated with the inability to know the value of an exchange at the time that exchange is commenced. Nonentrepreneurial firms, on the other hand, are organized under conditions of risk, and their primary purpose is to solve transaction difficulties associated with allocating the value that a transaction is known to create among those that have made specific investments in an exchange.

For some time now, entrepreneurship scholars have suggested there is something unusual or distinctive about entrepreneurial firms compared with more established firms (Covin & Slevin, 1997). Efforts to identify the source of this distinctiveness have historically focused on the personality and related attributes of individual entrepreneurs (McClelland, 1961). These efforts have largely failed (Gartner, 1988).

This article suggests a difference between entrepreneurial and nonentrepreneurial firms that does not depend on the personality attributes of entrepreneurs that have traditionally been studied. This difference stems from the kinds of transactional difficulties entrepreneurial and nonentrepreneurial firms are designed to resolve. Efforts to resolve these different transactional problems can lead to very different organizational forms.

By recognizing that entrepreneurial and nonentrepreneurial firms have different purposes, it is possible to begin to distinguish between these types of firms, both theoretically and empirically. Ultimately, this may help define the boundary of entrepreneurship as a research discipline. It may also help in identifying the points of transition between entrepreneurial and nonentrepreneurial firms.

Types of Entrepreneurial Firms

However, not only does this article suggest that entrepreneurial firms are designed to solve a transactional difficulty not faced by nonentrepreneurial firms, but this analysis also suggests that there are different organizational mechanisms to resolve these difficulties in uncertain settings. For example, if partners in an uncertain exchange already trust each other, they can use this trust to organize a clan-based entrepreneurial firm. If one party to an uncertain exchange has currently more valuable expertise than other parties to an exchange, that expertise can be used to organize an expert-based entrepreneurial firm. Also, if one party to an uncertain
exchange has high levels of charisma, this can be used to organize a charisma-based entrepreneurial firm.

This typology of entrepreneurial firms is derived from extending two well-established theories of the firm in the literature—Williamsonian (Williamson, 1985) transactions cost economics and incomplete contract theory (Grossman & Hart, 1986). However, other theories of the firm exist in the literature. These include Alchian and Demsetz's (1972) measurement cost theory of the firm, Conner and Prahalad’s (1996) capabilities theory of the firm, Kogut and Zander’s (1996) social community theory of the firm, and Cyert and March’s (1963) behavioral theory of the firm, to name just a few. A more complete typology of entrepreneurial firms could be derived by examining the implications of each of these other theories of the firm for organizing exchanges under conditions of uncertainty. There is little doubt that such an effort will yield important insights about the purpose and prospects of organizing entrepreneurial firms.

Indeed, one of the ironies of the entrepreneurship literature as it has developed so far is that entrepreneurial firms have been treated—by entrepreneurship scholars—as if they were relatively homogeneous. The typology developed here, and the extended typology that could be developed, suggests that entrepreneurial firms may vary in some systematic ways and that research that fails to appreciate the different ways that entrepreneurial firms can be organized may come to some misleading conclusions.

The Stability of Entrepreneurial Firms

One of the ironies of the typology of entrepreneurial firms developed here is that because the condition of uncertainty is often not stable over time, the bases of organizing entrepreneurial firms described in this article are also not likely to be stable over time. That is, these organizational forms carry within them the seeds of their own destruction. As parties to an exchange gain sufficient experience to estimate the probability distribution of outcomes associated with that exchange, clan-based, expert-based, and charisma-based entrepreneurial firms are likely to be replaced with more traditional forms of hierarchical governance described in the transactions cost and incomplete contracts literature. This would only not be the case if it turned out that the form of organization chosen under conditions of uncertainty happened to be the optimal form of organization under conditions of risk. How often this will occur is an important empirical question.

However, that these entrepreneurial forms of organization are likely to be temporary does not discount their importance. Indeed, without these often temporary entrepreneurial firms, it is unlikely that the resources required to exploit a market opportunity would have been brought together and coordinated in the first place. In this sense, the act of organizing a firm under uncertainty may help create the opportunities that entrepreneurs are then able to exploit (Alvarez & Barney, 2005).

Moreover, without these firms, uncertainty is not likely to ever evolve into risk because there would be no coordinated resources brought together to try to exploit market opportunities. Without this initial coordination of resources, information about the probability distribution of outcomes associated with an exchange may not become known. In this setting, the
potential value of exploiting an opportunity—to investors and to society more broadly—may not be realized.

Clearly, although these three types of entrepreneurial firms may be thought of as institutional “place holders” until the most efficient form of organization under risk can be discovered, they are also essential to the process of changing uncertainty into risk and thus essential to the process of discovering the most efficient way to manage a particular set of economic exchanges.

The Costs of Organizational Change

Of course, it will often be the case that a firm will be unable to transform itself from a temporary entrepreneurial firm to a more permanent nonentrepreneurial firm. The costs of renegotiating decision rights and residual claims may simply be too great to enable the exchanges around which a firm is organized to continue. In this sense, these temporary entrepreneurial firms actually “fail,” either going out of existence altogether or being replaced by more traditional risk-based organizations.

These arguments explain the often-cited empirical result that many entrepreneurial firms have a difficult time transitioning from small to large or from an emerging to a more established firm. Often, professional managers replace entrepreneurs during this stage of a firm’s evolution. When uncertainty evolves into risk, the basis for organizing a firm is likely to change. The trust, expertise, or charisma around which an entrepreneurial firm was organized may need to be abandoned in favor of the ability to monitor and control in risky decision-making settings. But this transition can be difficult, especially for those associated with a firm from its earliest beginning. As the basis of organization within a firm changes, it would not be surprising to see high turnover—both voluntary and involuntary—among a firm’s original founders.

Implications for the Field of Strategic Management

Finally, these arguments also have implications for the field of strategic management. Strategic management scholars have traditionally applied transactions cost and incomplete contract theories of the firm to understand how any economic profits created by a firm are appropriated among parties to an exchange. These scholars have spent relatively less time contemplating the organization of the profit-generating process, that is, how governance choices affect the size of the profits an exchange might create, profits that can later be appropriated by parties to an exchange (Mahoney, 2001). However, it is clear from the logic developed in this article that governance choices concerning how the creation of profits is organized can be just as important as governance choices about how these profits are appropriated by parties to an exchange. Indeed, if the former governance choice is not made correctly, parties to an exchange may be unwilling to make specific investments, and no profits will be generated. Clearly, without profits, questions about how to organize the appropriation of profits become moot.
In other words, although the fields of entrepreneurship and strategic management have historically been rather separate, the theory developed here suggests that a theory of how to organize to create economic profit is logically prior to a theory of how to organize to appropriate that profit. Although the transactions cost approach of taking the value created in an exchange as given and then seeking the optimal way to allocate this value across exchange partners has served the field of strategic management as a useful simplification for some time, the arguments presented here point to some important limitations of this simplification.

Notes

1. A third decision-making setting, between risk and uncertainty—called ambiguity—can also be identified. In ambiguous settings, decision makers know, ex ante, the possible outcomes associated with making a decision but not the probability of these different outcomes (Dequech, 1999). In the die analogy, in ambiguous settings, decision makers may know that the die has six sides but not know if, and how, the die is balanced. Although ambiguity is an important decision-making setting, for simplicity, this article only examines the implications of the two extremes—risk and uncertainty.

2. The firm, in this context, is Williamson’s “simple firm,” that is, it consists of one “boss” monitoring and controlling the parties to one transaction. This is “the firm” in transactions cost and incomplete contract “theories of the firm.”

References

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