Administrative Science Quarterly

Opportunity Structures in Established Firms : Entrepreneurship versus Intrapreneurship in Mutual Funds

Aleksandra J. Kacperczyk

The online version of this article can be found at:

Published by:

⑤SAGE

On behalf of:

JOHNSON
Cornell University

Samuel Curtis Johnson Graduate School of Management at Cornell University

Additional services and information for *Administrative Science Quarterly* can be found at:

Email Alerts: http://asq.sagepub.com/cgi/alerts

Subscriptions: http://asq.sagepub.com/subscriptions

Reprints: http://www.sagepub.com/journalsReprints.nav

Permissions: http://www.sagepub.com/journalsPermissions.nav

>> Version of Record - Oct 1, 2012

What is This?

Opportunity Structures in Established Firms: Entrepreneurship versus Intrapreneurship in Mutual Funds

Aleksandra J. Kacperczyk[1]

Abstract
This study revisits the well-established notion that large and mature organizations stifle an employee's ability and motivation to become an entrepreneur. Using unique data on U.S. mutual funds founded between 1979 and 2005, I examine whether large and mature firms, which are typically associated with lower individual rates of entrepreneurship, are also associated with lower individual rates of intrapreneurship. The findings show that, though employees in large and mature organizations are less likely to transition to entrepreneurship, they nonetheless exhibit a higher propensity to pursue venturing opportunities inside the established firm than employees in smaller and younger firms. The results suggest that the observed negative effect of large, mature organizations on entrepreneurship arises partly due to high rates of intrapreneurship and that the stultification processes in such organizations are far less important than has been generally assumed.

Keywords: entrepreneurship, intrapreneurship, labor markets, innovation

In examining the factors that govern the founding of new organizations, studies in sociology and organization theory have increasingly focused on established organizations to explain the transition into entrepreneurship, or the decision to leave current employment in order to organize, operate, and assume the risk for a new business (Thornton, 1999; Aldrich and Ruef, 2006). Recent research has identified a variety of workplace attributes, including a firm's status, size, and performance as key predictors of an employee's propensity to become an entrepreneur (e.g., Audia and Rider, 2006; Sørensen and Fassiotto, 2011). A well-established finding is that organizational size and age are particularly important because they have a negative impact on entrepreneurship rates (e.g., Shane and Venkataraman, 2000; Dobrev and Barnett, 2005; Gompers, Lerner, and Scharfstein, 2005; Sørensen, 2007; Elfenbein, Hamilton, and Zenger, 2010). The magnitude of this effect is dramatic: the rate of entrepreneurial

[1] Sloan School of Management, Massachusetts Institute of Technology

entry among employees of large and mature organizations is almost three times lower than among employees of small firms (Sørensen, 2007).

Yet despite the rich empirical evidence, the precise mechanisms underlying this well-documented effect remain obscure. Most studies have attributed the low rates of entrepreneurship emanating from established organizations to the stultification of entrepreneurial drive. According to this view, large and mature firms generate bureaucratic processes that hinder development of the kinds of employee skills, motivations, and aspirations conducive to new venture formation. For example, past research has suggested that established organizations stifle entrepreneurial will by exposing employees to highly specialized and closely monitored tasks, shown to inhibit the ability to challenge the existing order and to engage in creative problem solving (e.g., Dobrev and Barnett, 2005; Sørensen, 2007).

But though bureaucratic stultification has been commonly alleged to reduce entrepreneurship rates, past studies have not provided direct evidence for this mechanism. Rather, stultification has been generally inferred based solely on firm size and age. Because size and age reflect a number of common organizational processes, however, the empirical evidence available to date is consistent with more than one theoretical explanation. In fact, an alternative mechanism that raises a particularly important challenge to the existing accounts is the generation of internal venturing opportunities in established organizations. This view implies that, as firms grow and mature, they become increasingly able to absorb the entrepreneurial drive of their employees. Consistent with this claim, a rich empirical literature, motivated by Schumpeter's (1942) insights, indicates that established organizations are better positioned than their smaller and younger counterparts to foster internal venturing (e.g., Stinchcombe, 1965; Galbraith, 1973; Nelson and Winter, 1982; Burgelman, 1983a; Cohen and Levinthal, 1990; Zahra, Jennings, and Kuratko, 1999). The possibility that large and mature firms generate attractive opportunities for new ventures within the firm considerably complicates the causal inference of the principal mechanisms behind the impact of established firms on entrepreneurship. Because scholars of entrepreneurship have not considered the availability of opportunities inside the firm, research in this area has been generally unable to distinguish whether the low rates of entrepreneurship emanating from established firms result from the positive influence of internal opportunities or the negative influence of bureaucratization on entrepreneurial will.

Consequently, this study is motivated by the need to unpack the causal processes by which large and mature organizations might reduce individual rates of exits to entrepreneurship. The core argument about the overall effect of large and mature firms on entrepreneurship can be usefully reframed in terms of the contextual processes that underlie two separate outcomes: the pursuit of intrapreneurship, which involves initiating new ventures inside the current firm (e.g., Burgelman, 1983a; Pinchot, 1985, 1987; Zahra, 1991), and the pursuit of entrepreneurship, which involves initiating new, independent ventures outside the firm (e.g., Thornton, 1999; Aldrich and Ruef, 2006). Moreover, whereas bureaucratic stultification has only been assumed in past research, by testing the relationship between bureaucratization and new venture formation directly and elaborating a richer set of possible career pathways inside and outside the firm, it is possible to examine more precisely the key mechanisms

underlying the well-documented finding that established organizations depress entrepreneurship rates.

The limited understanding of the causal processes reflects, in part, the empirical challenges found in past research. Assessing factors behind the impact of established organizations on new venture formation hinges on identifying a context in which to observe the pursuit of opportunities inside and outside the firm. Yet because instances of intrapreneurship are generally not visible to researchers and therefore are difficult to measure on a large scale, opportunities to examine the causal mechanisms empirically are rare. Even when the transition into entrepreneurship has been precisely measured, internal venturing opportunities have often been ignored in past studies. Consequently, the existing research on entrepreneurship has been unable to distinguish between two sets of employees: those who refrain from launching new ventures externally because they do not pursue any venturing opportunities at all, and those who refrain from launching new ventures externally because they take advantage of venturing opportunities inside the firm. Although work in strategy and economics has focused on the choice between intrapreneurship and entrepreneurship, these studies have rarely addressed the issue empirically, being largely limited to theoretical models of an employee's choice between venturing inside and outside the firm (e.g., Anton and Yao, 1995; Hellman, 2007).

To provide insight into the effect of large and mature firms on entrepreneurship rates and the key causal processes behind it, this study examines the range of career opportunities available to employees: (1) no venturing activity either internally or externally; (2) a departure from current employment to found a new firm (i.e., entrepreneurship); (3) internal venturing within the current firm (i.e., intrapreneurship); and (4) a departure from current employment to launch a new venture in another firm. I focus on professional service firms that rely primarily on human capital and the expertise of the professionals employed in those firms (Greenwood and Suddaby, 2006), an empirical setting in which new venture formation occurs largely at the individual level. In particular, I focus on the mutual fund industry, in which intrapreneurship and entrepreneurship can be easily observed and the locus of a new venture is shaped to a lesser extent than in other industries by institutional barriers, such as intellectual property rights (IP) or non-compete clauses. Finally, the mutual fund context provides a setting in which new ventures (i.e., new funds) represent sustaining innovations that can be relatively easily assimilated within an established firm; mutual funds are less prone than ventures in other industries to act as technologically disruptive threats to the existing competencies of an established firm (Christensen, 1997; Christensen and Raynor, 2003). With the threat of disruption mitigated here, mutual funds represent an empirical setting in which the decision to launch a new venture internally versus externally is influenced more by venturing opportunities within existing firms than by any attributes of a new venture itself. In this study, I examine fund managers' decisions to pursue either intrapreneurship or entrepreneurship using the U.S. mutual fund industry data in the period of the industry's highest growth, between 1979 and 2005.

THE EFFECT OF ESTABLISHED FIRMS ON NEW VENTURE FORMATION

Many studies have argued that large and old firms exhibit a high degree of bureaucratization, which stultifies the kinds of skills, motivations, and aspirations that enable employees to start new ventures (Saxenian, 1994; Dobrev and Barnett, 2005; Gompers, Lerner, and Scharfstein, 2005; Sørensen, 2007; Elfenbein, Hamilton, and Zenger, 2010). But, while commonly implicated, the stultification of entrepreneurial drive has not been directly tested. Sørensen (2007: 395) attributed the absence of direct evidence to significant empirical challenges, noting that ''. . . constructing and collecting specialized measures of hierarchy, role specialization, and routinization in large samples needed to capture transitions to entrepreneurship is prohibitively difficult.'' Most existing accounts have inferred the stultification of entrepreneurial will only by virtue of large and mature firms being bureaucratic. Because bureaucracies have traditionally been associated with a number of processes that generate conservative and timid workers (e.g., Bendix, 1956; Whyte, 1956; Merton, 1968; Weber, 1968; Blau and Schoenherr, 1971), it has generally been assumed that the same bureaucratic processes account for the low rates of entrepreneurship emanating from large and mature firms.

Two key forces of bureaucratization have been considered to stultify the motivation, willingness, and skills conducive to launching a new venture. First, a number of studies suggest that large and mature firms reduce entrepreneurship rates because they involve rigid and closely monitored tasks that constrain an employee's discretion to challenge the existing status quo (e.g., Dobrev and Barnett, 2005; Sørensen, 2007). This argument is based on the insights gleaned from organization and sociological research that considers job discretion as one of the fundamental ingredients of an employee's intellectual flexibility and willingness to undertake and experiment with novel ideas (e.g., Burns and Stalker, 1961; Thompson, 1965; Kanter, 1983, 1988; Kalleberg and Van Buren, 1996). Because pressures for routinization increase as organizations grow and age, past studies have argued that employees in established firms act in a strongly conformist fashion that inhibits the pursuit of entrepreneurial opportunities (e.g., Whyte, 1956; Merton, 1968; Blau and Schoenherr, 1971; Kohn and Schooler, 1982).

Furthermore, the low rates of entrepreneurship in established firms have been commonly attributed to high role specialization, another characteristic of work in large and mature organizations (Schumpeter, 1950; Lazear, 2004, 2005; Dobrev and Barnett, 2005; Sørensen, 2007). This argument builds on sociological and organizational theory that emphasizes the negative influence of rigid job descriptions on creative problem solving and the generation of new ideas (e.g., Thompson, 1965; Pierce and Delbecq, 1977). Convergent empirical findings have provided strong support to this claim by establishing a systematic relationship between an individual's prior exposure to multifunctional tasks, which requires a mastery of a wide range of functional areas, and a subsequent pursuit of entrepreneurial opportunities (Lazear, 2004, 2005; Lumpkin and Dess, 1996). Because the average employee's diversity of experiences and role differentiation decrease with organizational age and size (Burns and Stalker, 1961; Baron, Davis-Blake, and Bielby, 1986), prior studies of entrepreneurship have further concluded that employees in established firms are unable to develop a

broad range of skills that would incline them to initiate independent ventures (e.g., Dobrev and Barnett, 2005; Sørensen, 2007).

Despite the prominence of these arguments in the literature to date, the conclusion that established firms tend to suppress entrepreneurship rates by stifling one's drive to start new ventures rests on fragile foundations. In the absence of direct evidence, the existing accounts remain vulnerable to the possibility that the well-established finding is driven by alternative processes that are less easily observable to researchers, being perhaps masked by firm size and age. In fact, the size and age of an organization may not only gauge the degree of bureaucratization but also the availability and attractiveness of internal venturing opportunities. Hence, as organizations grow and mature, they may influence the rates of entrepreneurship by altering the structure of career opportunities for employees with entrepreneurial bents.

The Enabling Effect

The fundamental choice between two alternative career structures, intrapreneurship and entrepreneurship, has been well documented in past research (e.g., Anton and Yao, 1995; Hellman, 2007). An employee may choose to become an entrepreneur by pursuing career opportunities in the external environment or become an intrapreneur by pursuing career opportunities within a broader opportunity structure inside the firm. Intrapreneurship differs from the pursuit of other internal opportunities and tasks in that it is largely predicated on proactive initiatives and the entrepreneurial spirit of individual employees. Such initiatives typically lead to the formation of new businesses and entry into new or established markets with new or existing goods (Burgelman, 1983a; Stevenson and Jarillo, 1990; Lumpkin and Dess, 1996). In fact, the administrative and strategy literatures posit that intrapreneurs, while operating inside an organization, act like entrepreneurs by engaging in opportunity-seeking behavior and implementing strategic initiatives inside an organizational opportunity structure (Burgelman 1983a, 1983b; Stevenson and Jarillo, 1990). Consistent with this notion, numerous studies have further shown that intrapreneurs take autonomous initiatives to mobilize resources dispersed inside the firm (e.g., Burgelman, 1983a, 1983b, 1984; Kanter, 1988; Stevenson and Jarillo, 1990; Lumpkin and Dess, 1996), much like entrepreneurs who take autonomous initiatives to mobilize resources dispersed in the environment (e.g., Kirzner, 1973). As Burgelman (1983b: 1353) noted, ''the expansion of current business and diversification through internal development are the major ways in which the opportunity-seeking behavior of such participants [employees] can exert itself.''

Intrapreneurship further holds the promise of internal career advancement. Past research suggested that, rather than being attracted by uncertain rewards and payoffs, workers may opt instead for an intrapreneurial path to leverage the scale and scope of the established organization while also positioning themselves for corporate leadership, whether as the manager of the new business or in other senior roles within their organizations (Kirzner, 1973; Burgelman, 1991). Burgelman (1991), based on March's research (1988), further argued that the motivation to become an intrapreneur may be rooted either in an ''obligatory logic,'' related to an individual's self-image, or a ''consequential logic,'' related to an individual's belief that his or her initiatives involve favorable

tradeoffs between risks and rewards in light of his or her skills. From the consequential logic perspective, potential opportunities for internal advancement via intrapreneurship may appear particularly attractive when access to the organization's regular opportunity structure remains limited (Stevenson and Jarillo, 1990; Burgelman, 1991).

Given the implicit choice between intrapreneurship and entrepreneurship, there are several ways that organizational size and age can structure these alternative career opportunities. There is compelling evidence suggesting that as firms grow and mature, they expose their workers to increasingly attractive and feasible opportunities for new venture formation inside an organization. Going back to Schumpeter (1934, 1942), large organizations have been viewed as the engines of innovation, which can diversify and grow through vigorous internal development. Considerable subsequent scholarship has followed this tradition by regarding intrapreneurship in large firms as an important substitute for entrepreneurship (e.g., Burgelman, 1983a; Pinchot, 1985). In particular, organizational and administrative research indicates that established organizations enhance the attractiveness of internal venturing options in at least two fundamental ways: they provide exposure to novel opportunities and offer ample resources to support a new venture's development internally.

First, employees in established organizations often have significant advantages in being able to learn about opportunities for new products or offerings. Large and mature firms typically have efficient, highly routinized internal systems for processing complex streams of information that can be invaluable for identifying new opportunities (Galbraith, 1973; Tushman and Anderson, 1986; Cohen and Levinthal, 1990; Henderson, 1993). Similarly, established organizations, with their extensive networks of customers and suppliers, are likely to provide employees with access to more heterogeneous contacts that, in turn, facilitate access to new and diverse information, enhancing employees' abilities to recognize opportunities for new ventures (Stinchcombe, 1965).

Moreover, large and mature firms are more responsive to new initiatives and better positioned to bring novel, creative ideas to fruition inside the firm. In this respect, organizational learning theorists have offered systematic evidence that large and mature firms are efficient at executing and accommodating new projects because they develop well-specified routines, competencies, product development expertise, and accumulated knowledge, all of which allow new ideas to be absorbed more easily (Stinchcombe, 1965; Galbraith, 1973; Nelson and Winter, 1982; Cohen and Levinthal, 1990; March, 1991). Lending support to this claim, Sørensen and Stuart (2000) found that older organizations in the high-tech industry are more likely to exploit established competencies and well-known innovation domains than are their younger and smaller counterparts.

Similarly, as organizations grow older and more complex, they provide employees with more ample resources to launch internal ventures (e.g., Burgelman, 1983a, 1983b; Pinchot, 1985; 1987). The notion that access to resources fosters intrapreneurial opportunity-seeking behavior has been well-documented in organizational research. Since Penrose (1959), scholars have claimed that an unused pool of resources inspires an impulse toward growth that motivates employees to take advantage of opportunities for intrapreneurship. Numerous studies have further suggested that slack resources facilitate an employee's initiative to start new ventures by permitting extensive search for new strategies (Cyert and March, 1963; von Hippel, 1977), fostering a

culture of experimentation and tolerance of potential losses resulting from a new venture's failure (e.g., Burgelman and Sayles, 1986; Damanpour, 1992), and channeling free cash flow toward the development of new ventures. Consistent with this claim, Burgelman (1991) found that organizational resources allocated to intrapreneurs by top management at Intel proved critical to an employee's ability to pursue autonomous strategic initiatives.

There is further evidence that the amount of unused resources increases with organizational size and age and that established firms act as repositories of slack resources that can be allocated to advance the development of new initiatives and new venture divisions generated by employees (Schumpeter, 1942; Burgelman, 1983a), especially ventures that represent sustaining innovations (Dewar and Dutton, 1986; Frost and Egri, 1991). For example, convergent findings indicate that large firms spend more on research and development (R&D) than do small organizations and that organizational size is positively related to R&D activity (e.g., Cohen and Klepper, 1996). This line of research suggests that, instead of being constrained by limited access to resources, employees in large and mature firms can conveniently use abundant resources within those firms, earmarked for the development of new projects inside. Prior research thus provides systematic evidence that large and mature organizations are generally more likely than their smaller and younger counterparts to absorb the development of internal ventures by providing employees with exposure to new opportunities and with access to ample resources.

Figure 1 presents the causal pathways theorized to link organizational size and age with entrepreneurship. As depicted above the horizontal arrow, firm size and age gauge the degree of bureaucratization, as manifested by low task discretion and narrow task breadth, which has been argued to hinder entrepreneurial drive. Depicted below the horizontal arrow is an alternative causal pathway, in which firm size and age gauge the availability of internal venturing opportunities, whereby large and mature organizations are more likely to expose their employees to attractive and feasible internal-venturing options. An increase in opportunities for career advancement via intrapreneurial means is likely to reduce the number of entrepreneurial exits, as entrepreneurial employees choose to develop novel ideas inside an established firm, rather than

Figure 1. The causal model underlying the impact of established organizations on entrepreneurship.
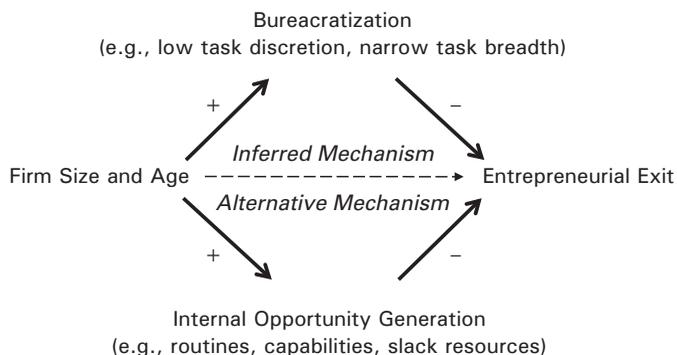
launching new ventures outside. Hence, the pursuit of intrapreneurship will depress the overall rates of entrepreneurship emanating from established organizations. In the study presented here, I model the causal pathways depicted in figure 1.

METHODS

Empirical Context

This study uses data from the U.S. mutual fund industry to identify and explain variation in an individual's propensity to pursue a new venture either inside or outside a firm. A mutual fund is a financial company that pools money from multiple investors to make investments in securities such as stocks or bonds. Each fund is supervised by a manager responsible for buying and selling securities based on investment judgment and extensive financial research (Chevalier and Ellison, 1999). A collection of funds bound together by a brand name, shared distribution channels, research managers, and traditions—such as Fidelity, Vanguard, American Funds, T. Rowe Price, and Janus—constitutes an organization called an asset management firm. Over the past three decades, the mutual fund industry has experienced an unprecedented growth, as the population of new funds and new management firms has expanded exponentially. The number of mutual funds grew from 564 in 1980 to over 8,000 in 2010. By 2010, there were more mutual funds in the United States than companies listed on the U.S. stock exchanges, and mutual funds have become the most significant corporate owners in the United States, holding 25 percent of the outstanding shares of all publicly traded U.S. companies. At the end of 2009, mutual funds managed more than $12 trillion in assets for nearly 90 million U.S. investors (Investment Company Fact Book, 2010).

This rapidly growing industry provides a fruitful laboratory in which to probe the determinants of intrapreneurship and entrepreneurship for several reasons. First, though isolating individual rates of intrapreneurship and entrepreneurship has been notoriously difficult in previous research, the mutual fund sector provides a unique opportunity to identify employees who launch new ventures inside the firm, as well as employees who launch new ventures outside the firm. In the asset management industry, new ventures reflect knowledge and skills that reside in the minds of the product-level professionals, called fund managers, who sell their expertise in selecting stocks to buy and sell (Darragh, Dodig, and O'Hanley, 1997; Chevalier and Ellison, 1999). Fund managers often become entrepreneurs by launching their own external funds. A manager's role in launching a new venture is enhanced by weak institutional barriers, such as intellectual property rights (IP) or non-compete clauses, which generally affect other new ventures. Moreover, the ability and motivation to initiate and develop a new fund are rarely constrained by the available technology, as new mutual funds rely on new investment strategies rather than on technological advances. Multiple examples demonstrate entrepreneurship in mutual funds. An ''industry giant,'' Gerald Tsai, left Fidelity to start the Manhattan Fund, which attracted $100 million in one year, largely due to Tsai's management style and performance (Gerber, 2005). John Deysher, the founder of Bertolet Capital, had spent twelve years at Royce and Associates, a company specializing in small-cap equity, prior to launching his own fund. Similarly, Tom Laming and James

McBride, who co-managed the top-performing Buffalo Small Cap Fund, founded their own company, the TrendStar Fund. Finally, prior to founding Ameristock, Nicholas Gerber served as a portfolio manager with Bank of America Capital Management.

Similar to entrepreneurial activity in other industries, launching a new fund outside involves substantial uncertainty and risk. A considerable challenge pertains to raising capital, which typically originates from other management firms, wealthy investors, private savings, or financing from family and friends.[1] Managers often use their own capital to start the firm, having their own stake in the business. Although launching a new fund may be lucrative, the odds of failure are high. From 1990 to 2001, more than 6000 funds closed or were absorbed (Gerber, 2005).

An alternative pathway of new-venture founding involves initiating and developing a new fund inside an established organization. An internal fund represents an autonomous strategic business unit largely independent of other funds in the management firm. It has its own legal entity, its own officers and board of directors to provide an independent check on the fund's operations, as well as its own separate personnel to support its investment research, administration, trading and security settlement, information systems and technology, financial and portfolio accounting, and regulatory compliance duties. Internal fund formation typically occurs at the individual level because the formation of a new venture in professional services hinges primarily on the employee's specialized knowledge (Groysberg and Lee, 2009; Groysberg, 2010). Being directly exposed to changes in market conditions and customers, fund managers hold deep knowledge of demand that helps them recognize new market opportunities (Gerber, 2005). Beyond identifying opportunities, managers initiate, champion, and grow a new fund inside the firm, utilizing their talents, skills, experiences, and knowledge to combine tangible and intangible assets in new ways and deploy them to meet customers' needs. Equipped with considerable autonomy over the new business division, they make daily choices as to how to attract investors to increase the inflows of assets into a new fund. Their entrepreneurial initiative helps establish a new fund's performance record and shape its long-term reputation. For example, Peter Lynch's name has long been associated with the extraordinary performance of Fidelity's flagship fund, Magellan.

Although new funds typically reflect managers' independent initiatives, the asset management firm provides important complementary assets to support internal fund development. First, because funds are formally launched and registered by the parent company (Evans, 2010), the firm is in charge of organizing the fund under state law, registering it with the U.S. Securities and Exchange Commission, and registering its shares for sale to the public. Moreover, new funds rely extensively on distribution and marketing channels provided by the firm. Similarly, capital needed to start a mutual fund is usually contributed by the firm in the form of an initial investment raised by the fund manager. Such capital is further supplemented by the manager's own money (Palmiter and Taha, 2009; Evans, 2010).

---

[1] Gerber (2005) estimated the minimum capital needed to start a fund to be approximately $150,000–$225,000.

Finally, an important advantage of the mutual fund context pertains to the attributes of new ventures themselves. A common explanation behind the emergence of external ventures is that disruptive ventures are founded externally due to the inability or unwillingness of established firms to assimilate innovations that threaten a firm's established competencies (Tushman and Anderson, 1986; Henderson and Clark, 1990; Henderson, 1993). The mutual fund context provides a setting in which this explanation is less likely to account for the variation in a new fund's locus. Although a new fund must be distinct from other funds to survive in the industry, most equity and bond funds are unlikely to represent innovations that would disrupt the existing competencies of the parent firm. Instead, funds differ minimally along their investment objectives, or the composition of stocks that they buy and sell. Hence, in mutual funds, a new venture's attributes are less likely to influence whether it is launched internally or externally.

Data Sources

I obtained data on mutual funds from the Center for Research in Security Prices (CRSP) Survivorship-Bias-Free U.S. Mutual Fund Database on all live and defunct funds in the United States between 1979 and 2005. The main advantage of this database is that it provides rich monthly data on all types of mutual funds, including equity, bond, money market, and international funds. The main fund characteristics include information on funds' returns, age, and investment objectives. The complete database includes the entire population of 8,013 mutual funds. I also compiled data on fund managers to construct each manager's monthly career history in the industry. Using the Morningstar Mutual Funds OnDisc databases, I identified manager names, mutual fund employers, dates when their tenures began and ended in any asset management firm, and the particular funds they supervised during the period of the study. The total sample includes 7,447 fund managers with complete career history data between 1979 and 2005. I used the manager-month as the unit of analysis in identifying the focal manager's transition to different venturing states. To that end, I aggregated observations across funds for any manager who supervised more than one fund in a mutual fund company. For robustness, I conducted the analyses on non-aggregated data and obtained the same results.

Dependent Variable

I used a categorical variable as the main dependent variable in my analyses. The variable specifies four distinct career routes available to an employee and varies monthly between the years of 1979 and 2005: (1) absence of venturing activity, (2) entrepreneurship, (3) intrapreneurship, and (4) lateral moves.

I coded *Absence of venturing activity* as 0 if an employee did not engage in any form of venturing activity inside or outside at time t and $t + 1$. This category encompasses managers who continue supervising their current fund at time t and $t + 1$, as well as managers who are appointed to supervise an already existing internal fund at $t + 1$.

Entrepreneurship equals 1 if an employee acts as an entrepreneur at time $t + 1$. Entrepreneurship indicates an event whereby a fund manager exits the parent company to launch an independent mutual fund. Entrepreneurship was

coded as 1 if the manager's appearance in the company coincided with the company's founding year and month. Unfortunately, the database does not report with precision the founder of a new mutual fund, but it is reasonable to assume that a manager who joined a new fund at the time this fund was founded is likely to be either the fund's founder or one of the fund's co-founders. To further improve identification, I only focused on cases in which a manager's appearance in the newly founded venture was followed by that manager's disappearance from the previous company.

Intrapreneurship was coded as 2 if an employee entered intrapreneurship at time $t + 1$. Operationally, intrapreneurship is distinct from other changes in tasks and functions inside the firm: it indicates an event whereby a fund manager is associated with launching a new mutual fund that did not exist inside the current firm before (e.g., Burgelman, 1983a; Lumpkin and Dess, 1996). The variable equals 2 if the fund manager's starting date of a new fund's supervision coincided with that fund's inception date inside the firm, and 0 otherwise. By contrast, I coded as 0 other internal job changes, which include the instances in which a manager joins an already existing fund inside the parent firm. Moreover, I limited the set of fund managers at risk to enter intrapreneurship in the current firm to individuals employed in the firm for at least six months prior to the new fund's inception to mitigate the possibility that my measure of intrapreneurship could be confounded with the firm's decision to hire external talent to supervise a new venture.[2]

Lateral moves were coded as 3 if an employee made a lateral move to launch a new venture in another existing firm at time $t + 1$. A well-established line of research has documented that employees often leave to join competing firms to exploit innovative ideas (Rao and Drazin, 2002; Groysberg and Abrahams, 2006; Groysberg and Lee, 2009; Groysberg, 2010) and introduce their own strategic initiatives (Boeker, 1989). I consider those instances as a conceptually distinct category because lateral moves combine features of both intrapreneurship and entrepreneurship. On the one hand, lateral moves are similar to intrapreneurship in that they occur inside an established firm and rely on complementary assets provided by that firm. On the other hand, lateral moves are similar to entrepreneurship in that they involve an employee's exit from the current firm in pursuit of an external venture. To measure lateral moves, I coded the variable as 3 if an employee's joining of the outside organization at time $t + 1$ coincided with (a) the formation of a new fund inside that organization and (b) an employee's appointment to supervise the new fund.

Explanatory and Control Variables

The main explanatory variables are the investment company's *Firm size* and *Firm age.* To measure *Firm size,* I used a natural logarithm of the total assets under management, observed monthly. While the total assets under management represent a standard measure of firm size in mutual funds, I used two alternative measures for robustness: (1) the count of fund managers employed in the firm (the natural logarithm) and (2) the count of funds inside an organization. All results (see table A.1) are robust to those alternative measurements of

---

[2] The results are robust to alternative interval specifications, such as ten months or one year.

size. *Firm age* is the number of years since the firm's inception. I used the CRSP data to extract the date of incorporation for each mutual fund company.

Bureaucratization: Task discretion and task breadth. While previous studies have inferred bureaucratic stultification based on firm size and age, I instead used direct measures of bureaucratization. I used task discretion and breadth to reflect the extent of bureaucratization in the firm. To measure *Task discretion*, I focused on managers' decision-making power over the supervised funds. Relative to individually managed funds, team-managed funds impose greater constraints on a manager's discretion to select stocks to buy and sell. Consistent with this claim, past research suggested that managers supervising funds with others experience reduced discretion (Bar, Ciccotello, and Ruenzi, 2010). Hence, for each manager, I counted the number of co-managers with whom the focal manager supervised any given fund. Because a higher number of co-managers indicates lower discretion, I took the inverse of this measure to facilitate interpretation. Finally, I calculated average discretion for any manager who supervised more than one fund. To proxy for task breadth, I counted the number of distinct investment objectives associated with funds currently under the focal manager's supervision. The greater the variety of funds' objectives, the greater the probability that a manager had the variety of skills necessary to satisfy different customer segments. To identify a fund's investment objectives, I used the Standard & Poor's Classification System. which distinguishes 176 unique fund categories. I divided the number of distinct funds supervised by the focal manager by the total number of distinct funds in the firm to adjust for firm-level attributes.

Opportunity cost. An important determinant of entrepreneurial transition is the opportunity cost of leaving current employment. A higher opportunity cost should reduce the probability that an employee will launch a new venture outside. Fund managers are likely to face higher opportunity costs of leaving current employment when present returns to funds they supervise are greater relative to returns that they could earn outside. To proxy for one's opportunity cost of leaving current employment, I constructed a measure that calculates a fund's return for the focal manager at time t relative to the return of funds supervised by other managers in the industry. To this end, I subtracted the focal manager's monthly fund return from the average monthly fund return of other managers in the industry. For managers who supervised multiple funds, I calculated an average monthly fund return. To facilitate the results' interpretation, I took the inverse of the measure to indicate that the opportunity cost of leaving current employment increases with higher values of the measure.

Individual attributes. Various individual-specific characteristics further explain the variation in one's propensity to form a new venture internally versus externally. I accounted for standard demographics, including gender and age. Previous studies have documented that women are less likely to transition to entrepreneurship, as compared with their male counterparts (e.g., Dobrev and Barnett, 2005; Kacperczyk, 2012b). Moreover, I controlled for employee performance, measured as monthly total fund returns available via CRSP. For managers who supervised multiple funds, I calculated an average monthly total fund return. Previous literature suggests that high-performing knowledge workers are more likely to found new organizations to derive returns from their talent (Groysberg, Nanda, and Prats, 2009). Similarly, I included a control for human

capital; I proxied for an employee's human capital with educational attainment, coded as 1 if the focal individual received a bachelor's degree (B.B.A. or B.A./ B.S.), as 2 if the individual earned an M.B.A., M.A./M.S., or J.D., and as 3 if he or she obtained a Ph.D. degree. I also controlled for tenure in the firm and tenure in the job. Prior research has shown a negative influence of tenure in the job on interorganizational mobility and a negative influence of tenure in the firm on intraorganizational mobility (e.g., Tuma, 1976; Haveman and Cohen, 1994). Because entrepreneurship and intrapreneurship are essentially a form of job mobility, it is necessary to formally account for employee tenure. To do so, I constructed two variables: (a) tenure in the current firm as dating from the first month an individual was recorded as having worked in the firm and (b) tenure in the job as dating from the first month an individual was recorded as having worked as a portfolio manager. These variables were measured in years. Because both measures were highly skewed, I winsorised them at the 5-percent level to reduce the effect of outliers (Dixon, 1960). For robustness, I took a natural logarithm of job and firm tenure and found the same results.

Organizational attributes. I also controlled for firm performance. Better performing organizations may equip their entrepreneurs with resources that facilitate the formation of independent ventures, but they may also provide slack resources to exploit opportunities internally. Firm performance was calculated as the average fund return for the focal firm using a value-weighted approach that involved multiplying each fund's return by its relative size in the investment firm and taking the sum across all weighted fund returns in the firm. I excluded the performance of the focal fund manager. Moreover, I included a control for the extent to which a firm was diversified. On one hand, diversified firms may be more open to implementing new ventures and enhancing an employee's initiative to pursue a new venture internally. On the other hand, diversified firms may be less likely to assimilate new ventures because of a higher probability of cannibalizing existing ventures by any new venture. To measure the extent of firm diversification, I counted the number of funds with different investment objectives within any given firm. In addition, I controlled for firm cash flow because cash flow proxies for slack resources in the firm and the firm's ability to better promote internal ventures. I proxied for cash flow using outside fund flows, measured as firm total assets at time t minus firm total assets at time $t - 1$ multiplied by return on the firm from period $t - 1$ to t. For ease of comparison, I divided cash flow by firm total assets at time $t - 1$. Hence, this variable measured monthly changes to proxy for how much new money flowed into funds period by period.

Model Specification

I employed continuous-time event-history techniques to examine an employee's pursuit of any venturing activity. An important advantage of event-history analyses is that they take into consideration the possibility of temporal variations in the probability of transition to available states. While event-history techniques have been implemented as the main specification, I was able to replicate all findings using multinomial logit and multinomial probit models (McFadden, 1973). The dependent variables in my analyses are instantaneous rates of transition to a venturing activity, defined as,

$$r_m(t) = \lim_{dt \downarrow 0} prob\left(\frac{t \leq T < t + dt \mid T \geq t}{dt}\right),$$

where $r_m(t)$ is the hazard rate of movement from one state to another, prob(.) is the probability of movement between times t and $t + dt$, given that an individual is in the sample at time t. The main analyses were performed at an individual level and were modeled as competing risks: each individual is at risk of transitioning to one of the three events (i.e., entrepreneurship, intrapreneurship, and a lateral move). I defined duration as time (in months) elapsed since an individual entered the sample or the time since the last transition. Because repetitions of events are possible, an individual was reentered into the risk set once he or she chose any given venturing state. An important concern with this design is the potential lack of independence between repeated transitions, as second transitions are likely to be influenced by and therefore differ from first transitions, possibly leading to biased estimates. I assuaged this concern by reestimating models to examine time to first transition only. The results (available from the author) are substantively similar, lending strong support to the main conclusions.[3] Moreover, because virtually all individuals are represented more than once, this may lead to inflated t-statistics of the effects of individual-level characteristics. I therefore adjusted for clustering standard errors at the individual level to provide robust variance estimates (Lin and Wei, 1989).

The main analysis produces three sets of parameter estimates, one corresponding to each of three types of transitions. I modeled the hazard rate using semiparametric Cox models (Cox, 1972), a common approach used to model competing-risk survival data (e.g., Box-Steffensmeier and Jones, 2004). This technique involves conducting analysis for each event type separately, while treating other competing events as censored categories. The Cox model takes the form,

$$h(t) = q(t)\exp\{\alpha'X(t)\},$$

where $h(t)$ is the hazard rate of transitioning to a venturing destination at time t, $q(t)$ is a (possibly time-dependent) unspecified baseline rate, $X(t)$ is a vector of covariates, some of which may vary over time, and α' is the vector of coefficients corresponding to covariates. An important advantage of the Cox model is that this analysis technique does not make any particular assumptions about the effect of time on the hazard rate. Instead, the coefficient estimates α' measure changes in the baseline rate due to the covariates in X, assuming that $q(t)$ does not depend on the covariates and that all such changes are proportional. This model is particularly appropriate for my analyses because the initial non-parametric results fit no simple parametric formulation and reveal no clear pattern for the effect of time on the hazard rate. Moreover, a notable feature of this technique is that the Cox model provides high-quality estimates even when many observations are right-censored (Tuma and Hannan, 1984). By contrast, discrete-time analyses discard information on censored events, leading potentially to biased estimates (Blossfeld and Rohwer, 1995).

---

[3] Additionally, I estimated the Cox model, in which I explicitly controlled for previous events by including a cumulative count of previous transitions for each manager in the sample. The results showed substantively similar findings.

Despite its advantages, an important concern with my research design is the possibility of left truncation that occurs when data are unavailable on the initial conditions and past history of the actors under study (Cox and Oakes, 1984). Because the study begins in 1979, individuals who worked in the industry before 1979 are included in the sample. Including such individuals in the sample may bias estimates because factors that account for an individual continuing to work until 1979 may be related to factors that drive an individual's transition to any venturing state after 1979. But such sample-selection bias is attenuated to the extent that a large proportion of individuals under study entered the sample after the beginning of the observation period (98.5 percent). Nonetheless, to assuage this concern, I performed several robustness checks. First, I included a control for left truncation to account for the fact that some fund managers may have worked in the mutual fund industry before 1979. These additional results reestimated with a dummy variable are the same as the main findings (available from the author upon request). Second, I addressed the problem of left-truncated observations by eliminating data on the individuals with left-truncated work histories. Although this technique has the disadvantage of eliminating useful information, it nonetheless helps address the possible bias that may arise when using the complete data. These results did not differ from the main analyses (available from the author upon request), providing additional confidence in the primary findings.

RESULTS

Table 1 reports descriptive statistics and correlations for the main variables. The unit of analysis is the manager-month to facilitate the assessment of a manager's transition to any venturing state. During the period between 1979 and 2005, I identified 3,688 instances of fund managers' transitions to intrapreneurship, 137 instances of transitions to entrepreneurship, and 981 cases of lateral moves to launch a new fund in another firm. Of 3,688 instances of intrapreneurship, 2,288 cases represented first-time transitions.

Multivariate Regressions

Table 2 presents results from continuous-time event-history analyses, estimated using competing-risk Cox models at the individual level. Employees who do not launch new ventures are treated as a base category. First, I estimated the Cox regression to examine the relationship between organizational size and age, and entry into entrepreneurship (model 1). Results reported for model 1 are consistent with the findings documented in other studies (e.g., Dobrev and Barnett, 2005; Sørensen, 2007; Elfenbein, Hamilton, and Zenger, 2010). The probability that an employee enters entrepreneurship decreases with organizational size and age. Without any further analyses, this finding may be easily interpreted as evidence for the stifling influence of bureaucratic organizations on entrepreneurship.

To further identify the mechanisms behind the observed negative association, I estimated the competing-risk Cox models, model 2 and model 3. In these analyses, I report the estimates of the probability that an employee will pursue intrapreneurship (model 2) and that an employee will move to another organization to start a new venture (model 3). The analyses produced two

Table 1. Descriptive Statistics and Correlations for the Main Covariates

Variable	Mean	S.D	1	2	3	4	5
1. Firm size	8.10	2.75					
2. Firm age	33.4	23.5	.536				
3. Firm performance	.01	.04	−.117	−.011			
4. Employee's age	44.4	7.94	.145	−.031	−.018		
5. Employee's performance	.01	.04	−.019	−.007	−.017	−.060	
6. Employee's gender	.89	.30	−.059	−.023	.003	.047	.003
7. Firm diversification	13.32	14.20	.703	.524	−.021	.047	−.008
8. Firm cash flow	4.62	1975	−.052	−.032	−.000	−.002	−.008
9. Employee's education	1.70	.40	.059	.039	−.001	.051	.001
10. Employee's opportunity cost	.001	.036	−.001	.002	−.296	−.005	−.737
11. Task discretion	.673	.290	−.008	.006	.006	−.061	.002
12. Task breadth	.310	.333	−.753	−.398	.019	.028	.010
13. Employee's firm tenure	3.29	1.20	.052	.092	.002	.223	.001
14. Employee's job tenure	3.68	1.36	.070	.043	−.014	.299	−.004

Variable	6	7	8	9	10	11	12	13
7. Firm diversification	−.052							
8. Firm cash flow	.001	−.031						
9. Employee's education	.031	.045	−.003					
10. Employee's opportunity cost	−.002	−.001	−.001	−.002				
11. Task discretion	−.001	.017	.012	.006	.009			
12. Task breadth	.072	−.569	.051	−.031	−.001	−.014		
13. Employee's firm tenure	.032	.031	.005	.016	−.002	.029	.128	
14. Employee's job tenure	.046	.023	.005	.052	−.003	−.004	.029	.658

important findings. First, they provide clear support for the hypothesis that large and mature organizations are associated with the availability of internal venturing opportunities. Model 2 shows a positive and statistically significant coefficient of firm size and age, indicating that employees are more likely to take advantage of internal opportunities for new ventures, as organizations grow and mature. Finally, model 3 reveals a negative and statistically significant coefficient of firm size and age, suggesting that relative to employees in established firms, employees in smaller and younger organizations exhibit a higher propensity to leave to join another firm in pursuit of a new venture. This finding is consistent with the notion that established firms, due to their capabilities to generate opportunities for new ventures inside, are better positioned to prevent employees with entrepreneurial bents from making lateral moves. Taken together, these results suggest that the pursuit of internal venturing opportunities is an important process that governs the relationship between firm size, firm age, and new venture formation.

Further, the results are substantial in magnitude. As reported in model 1, a one-standard-deviation increase in the level of organizational size decreases the hazard that an employee will transition to entrepreneurship by 43 percent [exp(–0.207*2.75) – 1]. Similarly, a one-standard-deviation increase in the level of organizational age decreases the hazard that an employee will launch an external venture by 23 percent [exp(–0.011*23.6) – 1]. Model 2 further demonstrates the substantial effect of organizational size and age on the pursuit of intrapreneurship. A one-standard-deviation increase in the level of organizational

Table 2. Competing-risk Cox Model Regressions of Transition to Entrepreneurship, Intrapreneurship, and Lateral Moves*

Variable	Entrepreneurship Model 1	Intrapreneurship Model 2	Lateral Moves Model 3
Firm size (log total assets)	−0.207•••	0.158•••	−0.052•••
	(0.043)	(0.016)	(0.019)
Firm age	−0.011••	0.002••	−0.013•••
	(0.005)	(0.001)	(0.002)
Employee's performance	19.443•••	−0.115	15.422•••
	(4.007)	(0.860)	(1.842)
Employee's age	−0.275•••	−0.113•••	−0.139•••
	(0.052)	(0.023)	(0.045)
Employee's age squared	0.003•••	0.001••	0.001
	(0.001)	(0.000)	(0.001)
Gender (1 if male)	0.612•	−0.220•••	−0.094
	(0.366)	(0.067)	(0.113)
Employee's education (degree)	0.378•	0.216•••	0.235••
	(0.213)	(0.063)	(0.095)
Task discretion	−0.167	0.676•••	−0.413•••
	(0.334)	(0.079)	(0.136)
Task breadth	−1.725•••	1.570•••	−0.678•••
	(0.388)	(0.108)	(0.156)
Firm performance	−3.011••	1.500••	−0.430
	(1.212)	(0.729)	(1.239)
Firm cash flow	−0.002	−0.031••	0.003•••
	(0.014)	(0.015)	(0.001)
Firm diversification	−0.023•	−0.011•••	−0.026•••
	(0.013)	(0.002)	(0.005)
Employee opportunity cost	−18.771•••	−2.366•••	14.954•••
	(3.968)	(0.823)	(1.828)
Employee's firm tenure	0.005	0.006•••	0.003••
	(0.003)	(0.001)	(0.001)
Employee's job tenure	−0.010•••	−0.006•••	−0.008•••
	(0.002)	(0.001)	(0.001)
Spells	517002	517002	517002
Log likelihood	−1604.9	−44144	−11430
Wald chi-square	249	714.7	696

•$p <$ .10; ••$p <$ .05; •••$p <$ .01.
* Robust standard errors are in parentheses.

size increases the hazard that an employee will engage in internal venturing by 54 percent [exp(0.158*2.75) − 1]. Moreover, a one-standard-deviation increase in the level of organizational age increases the hazard of launching an internal venture by 0.5 percent [exp(0.002*23.6) − 1]. Model 3 shows that a one-standard-deviation increase in the level of organizational size decreases the hazard that an employee will move to another organization to start a new venture by 13 percent [exp(−0.052*2.75) − 1]. A one-standard-deviation increase in the level of organizational age decreases the hazard that an employee will launch a new venture in another organization by 26 percent [exp(−0.013*23.6) − 1].

Additional results in table 2 show the impact of various individual and organizational attributes on an individual's choice between entrepreneurship and intrapreneurship. Unlike in previous studies, the models in table 2 explicitly account

for bureaucratization by controlling for task discretion and task breadth. An increase in bureaucratization, as indicated by narrower task breadth, reduces the hazard of intrapreneurship but increases the hazard of entrepreneurship. Similarly, employees with lower task discretion are more likely to pursue intrapreneurship than employees with higher task discretion. By contrast, the results show no effect of task discretion on the transition to entrepreneurship. The results further indicate a positive correlation between employee performance and entrepreneurship, consistent with the extant research documenting that higher performers are more likely to become entrepreneurs (Groysberg, Nanda, and Prats, 2009). But the pursuit of intrapreneurship is not significantly correlated with employee performance. This suggests that talented employees are not more or less likely to consider intrapreneurship as a viable pathway to derive returns from their human capital. Additionally, the findings indicate that employee age is an important predictor of transition to both entrepreneurship and intrapreneurship. The negative effect of an employee's age on the pursuit of intrapreneurship and entrepreneurship is non-linear, as indicated by the negative coefficient of age squared. I interpret this finding as indicating that younger employees are more likely to take risks associated with intrapreneurship and entrepreneurship but that this negative effect of age tends to decrease as an employee's age increases. Moreover, consistent with previous studies (e.g., Dobrev and Barnett, 2005; Kacperczyk, 2012b), male employees are more likely to become entrepreneurs than are their female counterparts. The results further show a negative and statistically significant effect of gender on transition to intrapreneurship. The analyses also demonstrate a negative correlation between firm performance and the hazard to launch a new venture externally, which may suggest that employees in better-performing firms are less likely to assume the risk and uncertainty associated with entrepreneurship than are employees in worse-performing organizations. By contrast, firm performance is positively correlated with the pursuit of intrapreneurship. I further find a negative association between firm diversification and an employee's transition to all available venturing states, which indicates that more diversified firms reduce employees' willingness to start new ventures internally as well as externally. Similarly, an employee's human capital, as indicated by highest degree earned, is positively associated with an individual's engagement in all venturing activities: better-educated employees are more likely to become intrapreneurs and entrepreneurs, as well as to make lateral moves. The results further show that the opportunity cost of leaving current employment is negatively correlated with the hazard that an employee will launch a new venture. Employees are less likely to start new ventures when present returns to funds they supervise are greater relative to returns that they could earn externally. This suggests that the opportunity cost strongly shapes the motivation and willingness to pursue novel opportunities. Finally, the results show that firm tenure and job tenure are important predictors of transition to venturing states. An increase in firm tenure increases the hazard of intrapreneurship. Conversely, the results show a negative relationship between job tenure and venturing inside as well as outside the firm. This finding is consistent with prior research that documents a negative influence of job tenure on interorganizational mobility (e.g., Tuma, 1976; Haveman and Cohen, 1994).

Overall, even when accounting for individual and firm-level attributes, the results in table 2 provide clear evidence that large and mature organizations

provide attractive and viable internal opportunities for new venture development inside an established firm.

Evidence from Mergers

To further separate out the positive influence of internal venturing opportunities and the negative influence of bureaucratization in established firms, I used data from mergers of mutual fund companies. Mergers provide particularly useful data because they lead to an increase in the size of a firm, as well as an increase in internal venturing opportunities, while maintaining general levels of bureaucratization. On one hand, almost by definition, firms pursuing growth through mergers experience a sudden increase in size that should instantly expand the level of resources available to generate venturing opportunities inside the organization. On the other hand, the same increase in size is unlikely to increase the negative effects of bureaucratization on employees (on their attitudes, dispositions, skills, and overall entrepreneurial drive) because such effects generally require a long-term exposure to bureaucratic work environments. Hence, by estimating the impact of mergers on the rates of entrepreneurship and intrapreneurship, I can identify more cleanly the positive impact of venturing opportunities inside large and mature firms.

To conduct the merger analyses, I relied on the CRSP data to identify mergers among mutual fund firms between 1979 and 2005. I identified 228 mergers of mutual fund firms, which took place throughout this period and affected 127 firms as bidders. To estimate the effect of mergers on the pursuit of intrapreneurship and entrepreneurship, I implemented the difference-in-differences (DID) approach. The DID methodology offers a highly conservative approach to estimating the effect of mergers on intrapreneurship. Most event studies require specifying a proper estimation window around the merger events. I used a six-month event window that includes three months before the merger and three months after the merger. A simplified analysis would involve examining intrapreneurship rates before and after the merger to isolate the effect of mergers on intrapreneurship, but one concern is that the observed correlation between merger events and intrapreneurship rates may be driven by an unobserved time trend. For example, to estimate the effect of mergers that occurred in 1989 on intrapreneurship rates, we would subtract intrapreneurship rates after 1989 from intrapreneurship rates before 1989 for firms affected by mergers. But other forces in 1989, such as economic growth, may have affected the merged firms, leading to higher rates of intrapreneurship. In this case, it would be difficult to identify whether intrapreneurship increased due to a time trend or due to mergers. Although this concern is somewhat mitigated because mergers are staggered over time, this does not eliminate the possibility that intrapreneurship rates may still change over time due to non-merger-induced events. The DID method alleviates this concern by allowing one to choose a control sample of firms that did not experience mergers but would potentially be subject to the same time trends. Using the control sample as a benchmark helps account for any non-merger-related trends from the data. This estimator is unbiased under the condition that the merger is not systematically related to other factors that affect intrapreneurship. The treated firms are those affected by mergers, and control firms are those unaffected by mergers. To ensure that treated firms before mergers are not significantly different from

control firms, the control group consists of comparable firms that are closest in size to the bidder firm before the merger. Operationally, I captured the effect of intrapreneurship due to a merger by estimating the following model:

$$C_i = \alpha + \beta_1 \, Merger_i + \beta_2 \, Treatment_i + \beta_3 \, Merger_i \times Treatment_i + \beta_4 \, Controls + \varepsilon_i$$

where C is the characteristic that may be subject to a merger; $Merger$ is an indicator variable, equal to 1 for observations three months after the merger, and 0 for three months before the event; $Treatment$ is an indicator variable equal to 1 if fund company i was affected by the merger, and to 0 to indicate firms in the control group; $Controls$ is a vector of fund-specific covariates affecting intrapreneurship. In this specification, the coefficient of primary interest is β_3, which captures the differential effect of the two types of firms around mergers and is based on the coefficient of the interaction term between two variables, $Merger$ and $Treatment$.

The estimation strategy includes two stages. In the first stage, I estimated an OLS model using the DID approach to verify the premise of my experiment, that firms affected by mergers do experience a significant increase in size, relative to firms unaffected by mergers. A positive and significant coefficient of the interaction term between $Merger$ and $Treatment$ would indicate that mergers lead to a substantial increase in firm size. In the second stage, I estimated the competing-risk Cox models in the same DID framework to examine whether employees in firms affected by mergers are less likely to transition to entrepreneurship and more likely to pursue intrapreneurship, relative to employees in firms unaffected by mergers.

Model 1 in table 3 shows results estimated using OLS regression. The results show a positive coefficient of the interaction term between $Merger$ and $Treatment$, which indicates that firms affected by mergers experience an increase in size relative to comparable firms unaffected by mergers. In models 2–3, I further examine how a sudden increase in firm size influences an employee's pursuit of different venturing states. My analysis follows a similar set of tests as before. Findings provide strong support for the predicted relationships. Model 1 shows a negative coefficient of the interaction term between $Merger$ and $Treatment$, indicating that the hazard that employees in firms affected by mergers will transition to entrepreneurship is lower relative to employees in comparable firms unaffected by mergers. Further, model 2 shows a positive coefficient of the interaction term between $Merger$ and $Treatment$, which suggests that employees in firms affected by mergers are more likely to pursue intrapreneurship relative to employees in comparable firms unaffected by mergers. Finally, in model 3, I show a negative coefficient of the interaction term, suggesting that employees in firms affected by mergers are less likely to make a lateral move relative to employees in comparable firms unaffected by mergers.

Together, the findings on mergers lead to an important conclusion. Because mergers indicate an instant increase in internal venturing opportunities net of bureaucratization, the results lend substantial confidence to the claim that the generation of opportunities for internal ventures affects the hazard that an employee will launch a new venture inside or outside an established firm.

Table 3. Competing-risk Cox Model Regressions of Transition to Entrepreneurship, Intrapreneurship, and Lateral Moves Using Data on Mergers*

Variable	Firm Size Model 1	Entrepreneurship Model 2	Intrapreneurship Model 3	Lateral Moves Model 4
Firm age	0.008•••	−0.026•••	0.001	−0.023•••
	(0.001)	(0.010)	(0.003)	(0.004)
Merger (dummy)	−0.085•••	2.182••	−0.399••	0.409
	(0.014)	(1.049)	(0.193)	(0.257)
Treatment (dummy)	−0.150•••	2.235••	−0.167	0.876•••
	(0.032)	(1.010)	(0.201)	(0.238)
Merger × Treatment	0.108•••	−2.548••	0.971•••	−0.856•••
	(0.017)	(1.122)	(0.258)	(0.316)
Employee's performance	0.112	8.384•••	−3.313••	2.111
	(0.183)	(2.376)	(1.661)	(2.167)
Employee's age	−0.008	−0.169	−0.081	−0.169••
	(0.017)	(0.121)	(0.088)	(0.080)
Employee's age squared	−0.000	0.002	0.001	0.001
	(0.000)	(0.001)	(0.001)	(0.001)
Gender (1 if male)	−0.016	1.179	−0.241	0.264
	(0.057)	(1.019)	(0.183)	(0.261)
Employee's education (degree)	0.018	0.491	0.320••	0.108
	(0.049)	(0.666)	(0.163)	(0.207)
Task discretion	−0.312•••	−0.965	0.442••	−0.424
	(0.065)	(0.841)	(0.213)	(0.327)
Task breadth	−4.763•••	−5.700•	1.423•••	−5.418•••
	(0.191)	(3.155)	(0.347)	(2.004)
Firm performance	−0.030	−5.473	7.219•••	−16.288•••
	(0.278)	(4.100)	(2.185)	(3.351)
Firm cash flow	−0.000••	−0.000	−0.081	0.002••
	(0.000)	(0.001)	(0.102)	(0.001)
Firm diversification	0.040•••	−0.033•	−0.014•••	−0.017••
	(0.002)	(0.019)	(0.004)	(0.008)
Employee opportunity cost	−0.667•••	−7.932••	−4.750•••	−3.216•
	(0.205)	(3.951)	(1.437)	(1.795)
Employee's firm tenure	0.005•••	0.001	0.003	0.009••
	(0.001)	(0.008)	(0.003)	(0.004)
Employee's job tenure	−0.000	−0.011•	−0.010•••	−0.009•••
	(0.000)	(0.006)	(0.002)	(0.003)
Observations	34000	N/A	N/A	N/A
Spells	N/A	34000	34000	34000
Pseudo R-squared	0.64	N/A	N/A	N/A
Log likelihood	N/A	−243.2	−2729.8	−1647
Wald chi-square	N/A	117	179	302

•$p < .10$; ••$p < .05$; •••$p < .01$.
* Robust standard errors are in parentheses.

Intrapreneurship versus entrepreneurship. The findings presented thus far provide clear evidence that organizational size and age are negatively associated with the rates of entrepreneurship but are positively associated with the rates of intrapreneurship. The observed empirical pattern may be interpreted as indicating that the positive influence of established organizations on intrapreneurship reduces the rates of entrepreneurial exit emanating from large and mature firms. This interpretation is plausible because, in this setting, an

individual may become either an entrepreneur or an intrapreneur. The notion that employees face the choice between entrepreneurship and intrapreneurship further implies that the two career routes may be negatively associated: in the absence of opportunities for intrapreneurship (or entrepreneurship), individuals will pursue entrepreneurship (or intrapreneurship), rather than choosing other career paths, such as lateral moves or no venturing activities at all. I conducted additional analyses to examine the relationship between intrapreneurship and entrepreneurship directly. If, in the absence of opportunities for entrepreneurship, individuals become intrapreneurs and vice versa, then we should expect to find a negative association between the two career structures.

I tested this claim by assessing whether individual rates of intrapreneurship decline when opportunities for entrepreneurship increase. My empirical evaluation of this relationship used a sudden increase in entrepreneurial opportunities as a shock that predicts individual rates of intrapreneurship. Prior research indicates that 1999 was a watershed year during which the asset management industry experienced an explosion in entrepreneurial opportunities for starting hedge funds (Kostovetsky, 2010; Massa, Reuter, and Zitzewitz, 2010; Smith, 2011). Moreover, there is evidence that entrepreneurial opportunities for hedge fund foundings emerged mostly in the Northeast (Massa, Reuter, and Zitzewitz, 2010).[4] Similar to mutual funds, hedge funds represent professional asset management firms. In fact, convergent findings suggest that the rise of such opportunities attracted talented mutual fund managers who entered the hedge fund industry in large numbers (Kacperczyk, 2012a).

To examine the effect of entrepreneurial opportunities on the pursuit of intrapreneurship, I estimated the Cox model within the difference-in-differences (DID) framework. The treated firms are those located in the Northeast and thus affected by the rise of entrepreneurial opportunities. The control sample comprises firms located outside the Northeast, unaffected by the rise of entrepreneurial opportunities after 1999. Because both treated and control firms were subject to identical time trends, the DID method helps eliminate any time trends from the data. To measure the increase in entrepreneurial opportunities, I constructed an indicator variable (*Year 1999*) equal to 1 for all years greater than or equal to 1999, and 0 otherwise.[5] I further constructed an indicator variable (*Northeast*) equal to 1 for all firms located in the Northeast region, and 0 otherwise. The CRSP data provide geographic states to identify the location of mutual funds. Data on the geographic location of funds are available for 43 percent of observations in the complete sample. Finally, I constructed an interaction term between *Northeast* and *Year 1999*. If the rise in entrepreneurial opportunities depresses the rates of intrapreneurship, by exposing employees to an alternative career opportunity outside the firm, we should expect to find a negative and significant coefficient of the interaction term between *Northeast* and *Year 1999*.

The results reported in table 4 show that the interaction term between *Year 1999* and *Northeast* is negative, indicating that intrapreneurship rates have

---

[4] The Northeast region comprises the following states: New York, Connecticut, Rhode Island, Vermont, Maine, Pennsylvania, New Hampshire, Massachusetts, and New Jersey.
[5] I also conducted a sensitivity analysis around this date focusing on the year before and the year after 1999. I obtained similar results.

Table 4. Cox Model Regressions of Transition to Intrapreneurship Comparing Intrapreneurship versus Entrepreneurship*

Variable	Intrapreneurship Model 1
Year 1999	−0.682•••
	(0.182)
Northeast	0.071
	(0.068)
Northeast × Year 1999	−0.568••
	(0.259)
Firm size (log total assets)	0.235•••
	(0.021)
Firm age	0.003•
	(0.002)
Employee's performance	−1.856
	(1.633)
Employee's age	−0.162•••
	(0.025)
Employee's age squared	0.001•••
	(0.000)
Employee's gender	−0.014
	(0.098)
Employee's education (degree)	0.219••
	(0.090)
Task discretion	0.667•••
	(0.109)
Task breadth	2.067•••
	(0.144)
Firm performance	2.480•
	(1.309)
Firm cash flow	−0.072•••
	(0.025)
Firm diversification	−0.016•••
	(0.002)
Employee's opportunity cost	−0.358
	(1.534)
Employee's firm tenure	0.008•••
	(0.002)
Employee's job tenure	−0.011•••
	(0.001)
Spells	223041
Log likelihood	−17469
Wald chi-square	528

•$p < .10$; ••$p < .05$; •••$p < .01$.
* Robust standard errors are in parentheses.

significantly declined in firms located in the Northeast starting from 1999, as compared with firms located outside the Northeast region. This finding increases confidence in the claim that the rates of entrepreneurial exit in large and mature firms are comparatively low when internal venturing opportunities are available, as employees choose to become intrapreneurs rather than entrepreneurs.

Additional Analyses

Although the results reported so far are consistent with the claim that large and mature organizations generate attractive venturing opportunities inside, I conducted additional analyses to explore the robustness of my findings.

Top-down versus bottom-up. First, I considered whether intrapreneurship in established firms merely reflects a firm's strategic planning, as opposed to arising, at least in part, from an employee's self-directed pursuit of opportunities. Existing research highlights two distinct processes that facilitate intrapreneurship in established organizations: top-down processes driven by senior management and bottom-up processes initiated by employees. For top-down processes, numerous studies attribute the formation of internal ventures to a firm's deliberate planning in entering new product markets (Jelinek, 1979; Quinn, 1980; Jelinek and Schoonhoven, 1990). From this perspective, senior management provides downward impetus for organizational actors to innovate by making deliberate strategic choices about corporate entrepreneurship. By contrast, for bottom-up processes, numerous studies emphasize employees' autonomous strategic initiatives and experimentation (e.g., Burgelman, 1983a; 1991). From this perspective, intrapreneurship results from an employee's self-directed pursuit of opportunities with relatively limited involvement of top executives (Bower, 1970; Quinn, 1980; Burgelman, 1991). Because an employee's ability to exploit entrepreneurial opportunities is typically aligned with corporate management's strategic planning (Pinchot, 1985; Burgelman and Sayles, 1986), the two processes are difficult to distinguish empirically. I performed a series of quantitative and qualitative analyses to determine if intrapreneurship in established organizations did in fact reflect a bottom-up process. Overall, these tests suggest that a firm's strategic planning alone is unlikely to explain intrapreneurship in large and mature firms.

The first indication that an employee's self-directed pursuit of opportunities drives intrapreneurship is the negative influence of firm size and age on the probability of an interorganizational move. Moves across organizations are particularly likely to reflect an employee's autonomous initiative because they involve an employee's decision to leave current employment to pursue an idea in another firm. If intrapreneurship reflects bottom-up processes, a decrease in corporate support for employee-generated initiatives in the current firm should increase the hazard that an employee will pitch his or her ideas to another firm, presumably better equipped to absorb novel initiatives. Because the availability of resources decreases with firm size and age, entrepreneurial workers in smaller and younger firms should exhibit a higher tendency than their counterparts in large and mature firms to make lateral moves in pursuit of new ventures. Findings reported in tables above provide support to this prediction, showing that employees in more established firms are less likely to make lateral moves.

In addition, I tested whether employees in smaller, more resource-constrained organizations indeed tend to move to larger firms, more conducive to internal venturing. If employees seek organizations favorable to internal venturing, a decrease in firm size should increase an employee's propensity to move to an organization that is larger relative to the current firm. To examine this empirically, I decomposed lateral moves into two distinct categories:

moves into organizations larger than the current firm and moves into organizations smaller than the current firm. I estimated two Cox models and compared coefficients across the two equations. The results (unreported) showed that an increase in size is negatively correlated with an employee's propensity to make lateral moves, whether to a bigger ($\beta = -0.781$, $p < .001$) or to a smaller firm ($\beta = -0.122$, $p < .001$). Moreover, size has a greater effect on the rate of moves to larger organizations than it does on the rate of moves to smaller organizations. The difference is statistically significant: a Wald test of the equality of the size coefficients yields a χ^2 of 94.05 with 2 degrees of freedom, which can be rejected easily at the 1-percent level. This suggests that, as firm size decreases, employees are more likely to move to larger organizations than to smaller organizations, presumably because firms that are larger than current employment are better positioned to assimilate novel initiatives. Together, these analyses are consistent with the notion that intrapreneurship arises from bottom-up processes wherein employees engage in the self-directed pursuit of new opportunities.

Although the results indicate that entrepreneurial employees tend to move from smaller to larger organizations, one concern could be that this finding provides only indirect evidence for bottom-up processes in intrapreneurship. In fact, the results may reflect upward mobility patterns alone. Consistent with this claim, past research has documented a negative relationship between firm size and upward mobility (e.g., Carroll and Mayer, 1986). To increase confidence in my findings, I examined additional evidence that cannot be explained by mobility patterns. Notably, another indication that employees themselves drive intrapreneurship is a higher tendency to pursue intrapreneurship among those employees in large and mature firms whose tasks facilitate an autonomous initiative. To derive this finding, I examined whether discretion and functional breadth systematically modify the relationship between firm size and age and intrapreneurship. Convergent findings indicate that these task attributes enhance an employee's ability and motivation to pursue new ideas and independent projects (Kanter, 1983, 1988; Lumpkin and Dess, 1996; Lazear, 2004, 2005). The results indicate a clear pattern consistent with the bottom-up perspective on intrapreneurship. Table 5 presents the results from estimating a competing-risk Cox model to examine whether task discretion and task breadth systematically modify the effect of firm size and age on an employee's propensity to transition to intrapreneurship versus entrepreneurship. The results reported in model 2 show that the positive effect of established organizations on intrapreneurship is amplified when managers in those firms perform tasks characterized by greater discretion and greater functional breadth. This claim is supported by positive coefficients on all interaction terms, except for the interaction between firm age and task breadth. Together, these results reinforce the notion that employees in established organizations exhibit a higher propensity to take advantage of internal venturing opportunities when they are charged with tasks conducive to taking an autonomous initiative.

As the final test, I gathered qualitative evidence from semi-structured interviews, which suggests that managers play an important role in starting new ventures. Several managers emphasized their role in identifying lucrative opportunities for new entry. For instance, one fund manager supervising a Boston-based fund described his role in opening a new fund as follows: ''I came up with an idea to open a small-cap technology fund when I realized that smaller

Table 5. Competing-risk Cox Model Regressions of Transition to Entrepreneurship, Intrapreneurship and Lateral Moves: Interaction Effects*

Variable	Entrepreneurship Model 1	Intrapreneurship Model 2	Lateral Moves Model 3
Firm size (log total assets)	–0.169•	0.060••	–0.061
	(0.101)	(0.029)	(0.043)
Firm age	–0.011	0.004	–0.001
	(0.014)	(0.003)	(0.005)
Task discretion × Firm size	–0.078	0.180•••	0.022
	(0.124)	(0.034)	(0.053)
Task discretion × Firm age	–0.002	0.014•••	–0.019••
	(0.019)	(0.004)	(0.008)
Task breadth × Firm size	0.039	0.445•••	–0.017
	(0.099)	(0.033)	(0.047)
Task breadth × Firm age	0.005	–0.006	–0.003
	(0.016)	(0.004)	(0.007)
Employee's performance	19.491•••	–0.339	15.331•••
	(3.997)	(0.883)	(1.836)
Employee's age	–0.275•••	–0.122•••	–0.141•••
	(0.052)	(0.023)	(0.045)
Employee's age squared	0.003•••	0.001•••	0.001
	(0.001)	(0.000)	(0.001)
Gender (1 if male)	0.606•	–0.199•••	–0.093
	(0.367)	(0.070)	(0.113)
Employee's education (degree)	0.383•	0.230•••	0.242••
	(0.214)	(0.064)	(0.095)
Task discretion	–0.445	1.846•••	–0.714••
	(0.863)	(0.264)	(0.363)
Task breadth	–1.978•••	1.289•••	–0.542••
	(0.656)	(0.218)	(0.271)
Firm performance	–3.012••	1.250•	–0.352
	(1.209)	(0.756)	(1.232)
Firm cash flow	–0.003	–0.018	0.003•••
	(0.023)	(0.014)	(0.001)
Firm diversification	–0.020	–0.006•••	–0.026•••
	(0.014)	(0.002)	(0.006)
Employee's opportunity cost	–18.831•••	–2.556•••	–14.869•••
	(3.956)	(0.846)	(1.820)
Employee's firm tenure	0.005	0.005•••	0.003•••
	(0.003)	(0.001)	(0.001)
Employee's job tenure	–0.010•••	–0.006•••	–0.008•••
	(0.002)	(0.001)	(0.001)
Spells	517002	517002	517002
Log likelihood	–1604	–43973	–11425
Wald chi-square	264	830	709

•$p < .10$; ••$p < .05$; •••$p < .01$.
* Robust standard errors are in parentheses.

high tech companies are an attractive buy for us. My fund turned out to be a big success given the market conditions.'' Another manager of a New York-based fund elaborated further on his role in fostering new-fund ideas: ''I always look out for ideas for new funds and then bring them up in a meeting. My last idea was that we launch a new fund that invests in Korean companies.'' Other

managers I spoke with were similarly attuned to the role that autonomy played in enhancing opportunities for internal venturing. One fund manager noted simply, ''You can't really create a new product if you are constrained by your job. You want to have enough freedom and safety to try out new ideas and new strategies that are going to sell. But this works out only when they [the firm] let you do your own thing without intervening much.'' Still, another manager spoke explicitly about the lack of organizational support for his ideas for new funds. ''I am really disappointed,'' this manager said, ''when they [the firm] tell me that I can't go ahead with my own ideas and they don't support what I want to do. I then think to myself that one day I will quit and do it on my own.'' Thus, consistent with the quantitative evidence, the managers in my sample reiterated the importance of their own role in fostering internal ventures in established organizations. Overall, the evidence indicates that bottom-up processes are at least partly responsible for driving intrapreneurship in established firms.

   Self-selection and intrapreneurship. Another inferential challenge pertains to the fact that employees may self-select into larger organizations based on unobserved dispositions and that those dispositions also account for an employee's propensity to engage in intrapreneurship. Self-selection raises the possibility that the observed correlation between organizational attributes, such as size and age, and an individual's transition to intrapreneurship is spurious. Though unobserved selection processes may lead to inferential challenges, these concerns should be mitigated to the extent that previous studies provide robust evidence for the causal influence of organizational size and age on entrepreneurship (Sørensen, 2007; Elfenbein, Hamilton, and Zenger, 2010). But I further alleviated this concern by using a common method that involves estimating the manager-fixed-effect specification. To the extent that differences in rates of intrapreneurship across smaller and larger organizations are not driven by time-invariant individual dispositions, introducing manager fixed effects in the model should not eliminate the main findings
   Table 6 shows the results estimated using a conditional logit model of the transition to intrapreneurship for individuals who eventually entered intrapreneurship. The model includes manager-fixed-effects and time-fixed-effects specification. The analyses show that the coefficient of organizational size retains its economic and statistical significance even after including manager-fixed-effects, indicating that the observed correlation cannot be attributed to time-invariant individual traits and dispositions. Hence the pursuit of intrapreneurship is more likely to occur when the current employer is larger than are other organizations in which that individual was employed in the past. The above result lends substantial confidence to the claim that the positive effect of organizational size and age on intrapreneurship does not arise solely due to selection processes, in which individuals with time-invariant traits correlated with intrapreneurship self-select into large and mature organizations.
   Of course, the fixed-effect estimator only addresses the time-invariant individual dispositions that may potentially account for an individual's selection into a large, old organization and intrapreneurship. But to the extent that unobserved dispositions and preferences vary over time, this concern would be mitigated more effectively by the earlier analyses focused on mergers. Because

Table 6. Logistic Model Regressions of Transition to Intrapreneurship: Selection*

Variable	Intrapreneurship Model 1
Firm size (log total assets)	0.243•••
	(0.025)
Firm age	0.004•
	(0.002)
Employee's performance	−2.178•••
	(0.991)
Employee's age	−3.232••
	(1.269)
Employee's age squared	0.000••
	(0.000)
Task discretion	0.211•
	(0.126)
Task breadth	2.379•••
	(0.148)
Firm performance	1.872••
	(0.839)
Firm cash flow	−0.001
	(0.003)
Firm diversification	−0.014•••
	(0.003)
Employee opportunity cost	−0.224
	(0.937)
Employee's firm tenure	0.003•••
	(0.001)
Employee's job tenure	−0.003•••
	(0.001)
Observations	226735
Log likelihood	−14753
LR chi-square	879

•$p < .10$; ••$p < .05$; •••$p < .01$.
* Robust standard errors are in parentheses.

mergers represent changes in organizational size that arise exogenously to an individual's preferences to form an internal venture, they provide a useful context in which to make causal inferences. Findings presented in these analyses show that an exogenous increase in an organization's size increases an individual's propensity to engage in internal venture formation. This further reinforces the conclusion that the organizational context exerts a causal influence on an employee's propensity to enter intrapreneurship and that this effect does not arise due to selection along unobserved and time-varying traits of an individual.

Alternative Model Specification

As a final robustness check, I reestimated the results using alternative model specifications. First, I implemented the multinomial probit regression. This analysis directly addresses the concern that the competing-risk Cox model relies on the assumption of independent competing risks. Notably, the Cox analysis requires that the risk of failure from the remaining causes is the same even

when one cause of failure is removed or censored. When such an assumption is not justified, statistical estimates may be inconsistent and biased (Box-Steffensmeier and Jones, 2004). The multinomial probit model effectively addresses this concern by relaxing the independence assumption and allowing the odds of choosing one alternative over another to depend on the remaining alternatives. The results (available from the author) are substantively similar to earlier results, with statistically significant coefficients of firm size ($\beta = -0.082$, $p < .001$ for entrepreneurship; $\beta = 0.084$, $p < .001$ for intrapreneurship; $\beta = -0.021$, $p < .001$ for lateral moves) and firm age ($\beta = -0.005$, $p < .001$ for entrepreneurship; $\beta = 0.001$, $p < .001$ for intrapreneurship; $\beta = -0.006$, $p < .001$ for lateral moves). In addition, I reestimated the results using the multinomial logit specification that represents a discrete-time equivalent of the competing-risk model (Box-Steffensmeier and Jones, 2004). The results (available from the author) are the same as those estimated in previous analyses. Overall, all results are consistent across different model specifications, providing clear support for the main findings.

DISCUSSION

A well-established tenet of mainstream entrepreneurship research is that large and mature firms reduce entrepreneurship rates because they stifle employees' entrepreneurial drive. Yet the traditional focus on the effect of large and mature organizations on entrepreneurship obscures the fact that firm age and size may reflect a number of underlying organizational forces. The findings of this study indicate that, even though large and mature firms depress individual rates of entrepreneurial exit, they nonetheless increase individual rates of intrapreneurship. The results from a natural experiment further reinforce this conclusion: employees in firms that experience a sudden increase in size following a merger exhibit a higher propensity to enter intrapreneurship than do employees in comparable firms unaffected by mergers. Because a merger event leads to an increase in resources while bureaucratization remains constant, these analyses substantially strengthen the claim that, as they grow and mature, firms become better at assimilating internally generated ventures. The findings thus provide compelling evidence that large, mature firms generate attractive opportunities for internal ventures, enabling high levels of intrapreneurship among employees.

Further, the findings can be interpreted as indicating that intrapreneurship offers a viable alternative to entrepreneurship and that the two are negatively associated. In support of this claim, I found that an employee's propensity to pursue intrapreneurship declined as opportunities for entrepreneurship in the hedge fund industry increased for firms located in the Northeast region after 1999. This result provides an important piece of evidence that helps clarify the causal paths behind the negative effect of established firms on the rates of entrepreneurial exit. Because intrapreneurship and entrepreneurship are negatively related, it is reasonable to conclude that the low rates of entrepreneurial exit observed in large and mature organizations are attributable, in part, to higher rates of intrapreneurship in those firms. More generally, these findings strengthen the conclusion that employees in established firms are less likely than their counterparts in small and young organizations to become entrepreneurs because they choose to become intrapreneurs instead.

Moreover, because the present study has the unique advantage of measuring bureaucratization more directly than has been done in previous studies, I was able to provide novel insights into the impact of bureaucratic processes on new venture formation. The results confirm the well-documented claim that bureaucratic work environments hinder an employee's drive to launch new ventures inside the firm (e.g., Schumpeter, 1950; Whyte, 1956; Merton, 1968). In support of this view, I found that higher degrees of bureaucratization, as indicated by lower discretion and narrower functional breadth, decrease the hazard that an employee will launch an internal venture. But the results do not support the claim that bureaucratization reduces entrepreneurial rates; by contrast, I found that lower task discretion has no effect on entrepreneurial rates, while narrower functional breadth increases the hazard that an employee will launch an external venture. The notion that organizational rigidities foster rather than hinder the emergence of entrepreneurial ventures outside the firm is consistent with an accumulated body of research that links the rates of employees' entrepreneurial exits with a firm's inability to evaluate and support new ideas generated inside the firm (Garvin, 1983; Henderson, 1993). More broadly, this result implies that bureaucratization is unlikely to act as the key mechanism behind the lower rates of entrepreneurial exit in established organizations. Together, the study clarifies the causal pathways that link organizational size and age with entrepreneurship, as depicted in figure 1.

Also, the study documents a series of findings indicating that intrapreneurship in an established firm reflects an employee's ability to take autonomous action. First, consistent with this bottom-up view of intrapreneurship, I found that employees tend to leave a small, young, resource-limited firm to pursue intrapreneurship in another firm that is better equipped to assimilate internal ventures. Moreover, the results indicate that workers in charge of tasks that involve substantial discretion and functional breadth exhibit a higher tendency to pursue intrapreneurship than do workers in charge of tasks characterized by lower discretion and higher specialization. Finally, qualitative data collected through semi-structured interviews revealed a clear pattern linking the formation of new funds to managers' opportunity-seeking behavior. Of course, some of these findings are open to alternative interpretations. For example, it is possible that employees supervising high-discretion or low-specialization tasks are simply more likely to be allocated to new ventures by upper management. Hence, my empirical strategy has been to provide a series of results that are consistent with the notion that intrapreneurship arises from an employee's self-directed initiative. In combination, these results provide compelling evidence that an employee's autonomous initiative plays an important role in launching internal ventures.

Moreover, the findings of the study are unlikely to reflect self-selection processes along unobserved individual traits and dispositions. Rather, the study provides clear support for the causal influence of large and mature organizations on individual rates of intrapreneurship. The findings reveal a similar pattern even after including the manager-fixed-effect estimator in the models. I obtained similar results when considering a merger as an indictor of exogenous change in firm size. Together, these results reinforce the conclusion that established organizations generate attractive internal venturing opportunities and that this effect is causal.

Although the framework presented here has implications for all types of new ventures, there are important scope conditions associated with the theory. In particular, the framework developed in the study is most powerful for understanding the emergence of sustaining ventures that improve the performance of current products along dimensions that the market already values and that can therefore be easily incorporated into the structures of industry incumbents (e.g., Christensen, 1997; Christensen and Raynor, 2003). By contrast, the extensively studied ventures that result from disruptive opportunities account for a relatively small proportion of all entrepreneurial transitions (e.g., Christensen, 1997). Consequently, the present study makes an important contribution to the literature that focuses on the formation of sustaining ventures that are more prevalent yet less well explored. Moreover, the theory presented here is particularly well suited to explaining variation in entrepreneurial rates in knowledge-intensive settings, in which new venture formation occurs most clearly at the individual level. Hence, by focusing on professional services as the laboratory for analyzing the determinants of entrepreneurship versus intrapreneurship, this study contributes to a growing body of research on the role of individuals in new venture formation, as well as processes associated with the development of new ventures in professional service firms (e.g., Starbuck, 1992; Rao and Drazin, 2002; Groysberg and Lee, 2009; Groysberg, 2010).

Several issues remain to be addressed in future research. Whereas the study provides strong evidence that larger and more mature organizations increase an individual's propensity to start an internal venture, the precise mechanisms through which established firms are able to generate opportunities for intrapreneurship merit further inquiry. Future research could therefore deepen our understanding of the channels through which established firms direct resources to facilitate the pursuit of internal ventures. Similarly, though the present study took the first step to account for bureaucratization directly, future research could explore in greater detail different forces of bureaucratization and their potentially differential effects on new venture formation. Although I documented that low task discretion and narrow task breadth stifle the willingness to launch an internal venture, future studies could examine the effects of other bureaucratization processes on an employee's willingness to become an intrapreneur or entrepreneur. For example, future studies could benefit from further assessing the impact of hierarchy, control, and centralization on new venture formation. Finally, conclusive evidence for the precise mechanisms requires further assessment of the processes occurring inside a large, mature organization, possibly by taking advantage of qualitative data.

Another promising research avenue is to investigate the net effect of large organizations on new venture formation. Underlying the literature on entrepreneurship is the notion that new venture formation benefits economic growth (Schumpeter, 1934, 1950). But while the literature has largely privileged the formation of entrepreneurial ventures outside organizations, ventures developed internally may be equally beneficial for economic growth (e.g., Wrigley, 1970; Burgelman, 1983a, 1983b). If both types of ventures are important drivers of growth, the relevant question to consider should focus on the positive net effect on new venture formation. Future studies may therefore investigate the influence of organizations on one's propensity to found a new venture either internally or externally. Future research could then compare the performance of internal versus external ventures to better assess their relative weights and

impact on economic growth. Such research may have important policy implications. Conventional wisdom suggests that policies to promote new venture formation should focus on independent ventures formed outside any established firm. Consequently, those policies are less attentive to the fact that creative individuals may also pursue new and economically beneficial ventures inside large, mature organizations. Hence, encouraging venturing activity and therefore economic growth may require reassessing existing policies to focus not only on small, entrepreneurial firms but on intrapreneurship within large, complex organizations as well.

Overall, this study builds on the existing literature, offering richer, more in-depth insights into the negative effect that large, mature organizations have on entrepreneurship, as expressed by the numbers of employees leaving such firms to start new ventures. Findings suggest that such a negative effect does not necessarily reflect a lack of entrepreneurial will. Rather, employees in large and mature organizations are simply exposed to viable opportunities inside the firm that offer an attractive alternative to entrepreneurship. Together, these findings suggest that specifying the causal processes by which organizational context affects entrepreneurial entry must begin with more analytical precision. Moving the debate beyond its current focus on firm size and age and recasting the core arguments in terms of precise mechanisms is the first step toward a clearer understanding of how organizations affect new venture formation, whether in the form of entrepreneurship or intrapreneurship.

Acknowledgments

REFERENCES

Aldrich, H. E., and M. Ruef
    2006 Organizations Evolving, 2d ed. Thousand Oaks, CA: Sage.
Anton, J. J., and D. A. Yao
    1995 ''Start-ups, spin-offs, and internal projects.'' Journal of Law, Economics, and Organization, 11: 362–378.
Audia, P. G., and C. I. Rider
    2006 ''Entrepreneurs as organizational products revisited.'' In R. Baum, M. Frese, and R. Baron (eds.), The Psychology of Entrepreneurship: 113–130. Mahwah, NJ: Lawrence Erlbaum Associates.
Bar, M., C. Ciccotello, and S. Ruenzi
    2010 ''Risk management and team-managed mutual funds.'' Journal of Risk Management in Financial Institutions, 4 (1): 57–73.
Baron, J. N., A. Davis-Blake, and W. Bielby
    1986 ''The structure of opportunity: How promotion ladders vary within and among organizations.'' Administrative Science Quarterly, 31: 248–273.
Bendix, R.
    1956 Work and Authority in Industry. New York: Wiley.
Blau, P. M., and R. A. Schoenherr
    1971 The Structure of Organizations. New York: Basic Books.

Blossfeld, H.-P., and G. Rohwer
  1995 Techniques of Event History Modeling: New Approaches to Causal Analysis. Mahwah, NJ: Lawrence Erlbaum Associates.
Boeker, W.
  1989 ''Strategic change: The effects of founding and history.'' Academy of Management Journal, 32: 489–515.
Box-Steffensmeier, J. M., and B. S. Jones
  2004 Event History Modeling: A Guide for Social Scientists. New York: Cambridge University Press.
Bower, J. L.
  1970 Managing the Resource Allocation Process. Boston: Harvard Business School Press.
Brittain, J. W., and J. H. Freeman
  1986 ''Entrepreneurship in the semiconductor industry.'' Unpublished manuscript, University of California, Berkeley.
Burgelman, R. A.
  1983a ''A process model of internal corporate venturing in the diversified major firm.'' Administrative Science Quarterly, 28: 223–244.
Burgelman, R. A.
  1983b ''Corporate entrepreneurship and strategic management: Insights from a process study.'' Management Science, 29: 1349–1364.
Burgelman, R. A.
  1984 ''Designs for corporate entrepreneurship in established firms.'' California Management Review, 26 (3): 154–166.
Burgelman, R. A.
  1991 ''Intraorganizational ecology of strategy making and organizational adaptation: Theory and field research.'' Organization Science, 2: 239–262.
Burgelman, R. A., and L. R. Sayles
  1986 Inside Corporate Innovation: Strategy, Structure, and Management Skills. New York: Free Press.
Burns, T., and G. M. Stalker
  1961 The Management of Innovation. London: Tavistock.
Carroll, G. R., and K. U. Mayer
  1986 ''Job-shift patterns in the Federal Republic of Germany: The effects of social class, industrial sector, and organizational size.'' American Sociological Review, 51: 323–341.
Chevalier J., and G. Ellison
  1999 ''Career concerns of mutual fund managers.'' Quarterly Journal of Economics, 114: 389–432.
Christensen, C. M.
  1997 The Innovator's Dilemma: When New Technologies Cause Great Firms to Fail. Boston: Harvard Business School Press.
Christensen, C. M., and M. Raynor
  2003 The Innovator's Solution. Boston: Harvard Business School Publishing.
Cohen, W., and D. Levinthal
  1990 ''Absorptive capacity: A new perspective on learning and innovation.'' Administrative Science Quarterly, 35: 28–152.
Cohen, W. M., and S. Klepper
  1996 ''Firm size and the nature of innovation within industries: The case of process and product R&D.'' Review of Economics and Statistics, 78: 232–243.
Cox, D. R.
  1972 ''Regression models and life tables.'' Journal of the Royal Statistical Society, Series B, 34: 187–220.

Cox, D. R., and D. Oakes
    1984 Analysis of Survival Data. London: Chapman and Hall.
Cyert, R. M., and J. G. March
    1963 A Behavioral Theory of the Firm, 2d ed. Englewood Cliffs, NJ: Prentice Hall.
Damanpour, F.
    1992 ''Organizational size and innovation.'' Organization Studies, 13: 375–402.
Darragh O. M., V. G. Dodig, and O. R. P. Hanley
    1997 ''Will success spoil investment management?'' McKinsey Quarterly, No. 2 (2): 57–68.
Dewar, R. D., and J. E. Dutton
    1986 ''The adoption of radical and incremental innovations: An empirical analysis.'' Management Science, 32: 1422–1433.
Dixon, W. J.
    1960 ''Simplified estimation from censored normal samples.'' Annals of Mathematical Statistics, 31: 385–391.
Dobrev, S. D., and W. P. Barnett
    2005 ''Organizational roles and the transition to entrepreneurship.'' Academy of Management Journal, 48: 433–449.
Elfenbein, D. W., B. H. Hamilton, and R. Z. Zenger
    2010 ''The small firm effect and the entrepreneurial spawning of scientists and engineers.'' Management Science, 56: 659–681.
Evans, R. B.
    2010 ''Mutual fund incubation.'' Journal of Finance, 65: 1581–1611.
Frost, P. J., and C. P. Egri
    1991 ''The political process of innovation.'' In L. L. Cummings and B. M. Staw (eds.), Research in Organizational Behavior, 13: 229–295. Greenwich, CT: JAI Press.
Galbraith, J. R.
    1973 Designing Complex Organizations. Reading, MA: Addison-Wesley.
Garvin, D. A.
    1983 ''Spin-offs and the new firm formation process.'' California Management Review, 25 (2): 3–20.
Gerber, M.
    2005 Start a Successful Mutual Fund: The Step-by-step Reference Guide to Make It Happen. Moraga, CA: JV Books.
Gompers, P., J. Lerner, and D. S. Scharfstein
    2005 ''Entrepreneurial spawning: Public corporations and the genesis of new ventures, 1986 to 1999.'' Journal of Finance, 60: 577–614.
Greenwood, R., and R. Suddaby
    2006 ''Introduction.'' In R. Greenwood, R. Suddaby, and M. McDougald (eds.), Research in the Sociology of Organizations, vol. 24: Professional Service Organizations: 1–16. Greenwich, CT: JAI Press.
Groysberg, B.
    2010 Chasing Stars: The Myth of Talent and the Portability of Performance. Princeton, NJ: Princeton University Press.
Groysberg, B., and R. Abrahams
    2006 ''Lift outs: How to acquire a high-functioning team.'' Harvard Business Review, 84 (12): 133–140.
Groysberg, B., and L. E. Lee
    2009 ''Hiring stars and their colleagues: Exploration and exploitation in professional service firms.'' Organization Science, 20: 740–758.
Groysberg, B., A. Nanda, and J. M. Prats
    2009 ''Does individual performance affect entrepreneurial mobility? Empirical evidence from the financial analysis market.'' Journal of Financial Transformation, 25: 95–106.

Haveman, H. A., and L. E. Cohen
1994 ''The ecological dynamics of careers: The impact of organizational founding, dissolution, and merger on job mobility.'' American Journal of Sociology, 100: 104–152.

Hellman, T.
2007 ''When do employees become entrepreneurs?'' Management Science, 53: 919–933.

Henderson, R.
1993 ''Underinvestment and incompetence as responses to radical innovation: Evidence from the photolithographic alignment equipment industry.'' RAND Journal of Economics, 24: 248–270.

Henderson, R. M., and K. B. Clark
1990 ''Architectural innovation: The reconfiguration of existing product technology and the failure of established firms.'' Administrative Science Quarterly, 35: 9–31.

Investment Company Fact Book
2010 A Review of Trends and Activities in the Investment Company Industry. Online: http://www.ici.org/pdf/2010_factbook.pdf.

Jelinek, M.
1979 Institutionalizing Innovation. New York: Praeger.

Jelinek, M., and C. B. Schoonhoven
1990 The Innovation Marathon: Lessons from High Technology Firms. Oxford: Blackwell.

Kacperczyk, A.
2012a ''Social influence and entrepreneurship: The effect of university peers on entrepreneurial entry.'' Organization Science (forthcoming).

Kacperczyk, A.
2012b ''Female entrepreneurship and alternative career advancement in the firm.'' MIT Sloan School of Management working paper.

Kalleberg, A. L., and M. E. Van Buren
1996 ''Is bigger better? Explaining the relationship between organizations' size and job rewards.'' American Sociological Review, 61: 47–66.

Kanter, R. M.
1983 The Change Masters: Innovations for Productivity in the American Corporation. New York: Simon and Schuster.

Kanter, R. M.
1988 ''When a thousand flowers bloom: Structural, collective, and social conditions for innovation in organizations.'' In B. M. Staw and L. L. Cummings (eds.), Research in Organizational Behavior, 10: 169–211. Greenwich, CT: JAI Press.

Kirzner, I. M.
1973 Competition and Entrepreneurship. Chicago: University of Chicago Press.

Kohn, M. L., and C. Schooler
1982 ''Job conditions and personality: A longitudinal assessment of their reciprocal effects.'' American Journal of Sociology, 87: 1257–1286.

Kostovetsky, L
2010 ''Brain drain: Are mutual funds losing their best minds?'' University of Rochester School of Business working paper.

Lazear, E. P.
2004 ''Balanced skills and entrepreneurship.'' American Economic Review, 94: 208–211.

Lazear, E. P.
2005 ''Entrepreneurship.'' Journal of Labor Economics, 23: 649–680.

Lin, D. Y., and L. J. Wei
1989 ''The robust inference for the Cox proportional hazards model.'' Journal of the American Statistical Association, 84: 1047–1078.

Lumpkin, G. T., and G. G. Dess
    1996 ''Clarifying the entrepreneurial orientation construct and linking it to perfor-
    mance.'' Academy of Management Review, 12: 135–172.
March, J. G.
    1988 ''Wild ideas: The catechism of heresy.'' Stanford Magazine, Spring.
March, J. G.
    1991 ''Exploration and exploitation in organizational learning.'' Organization Science,
    2: 71–87.
Massa, M., J. Reuter, and E. Zitzewitz
    2010 ''When should firms share credit with employees? Evidence from anonymously
    managed mutual funds.'' Journal of Financial Economics, 95: 400–424.
McFadden, D. L.
    1973 ''Conditional logit analysis of qualitative choice behavior.'' In P. Zarembka (ed.),
    Frontiers of Econometrics: 105–142. New York: Academic Press.
Merton, R. K.
    1968 ''Bureaucratic structure and personality.'' In R. K. Merton, Social Theory and
    Social Structure, 2d ed.: 249–260. New York: Free Press.
Nelson, R. R., and S. G. Winter
    1982 An Evolutionary Theory of Economic Change. Cambridge, MA: Belknap Press.
Palmiter, A. R., and A. Taha
    2009 ''Star creation: Incubation of mutual funds.'' Vanderbilt Law Review, 62: 1485–
    1534.
Penrose, E. T.
    1959 The Theory of the Growth of the Firm. New York: John Wiley.
Pierce, J. L., and A. L. Delbecq
    1977 ''Organizational structure, individual attitudes and innovation.'' Academy of
    Management Review, 2: 27–37.
Pinchot, G.
    1985 Intrapreneuring: Why You Don't Have to Leave the Corporation to Become an
    Entrepreneur. New York: Harper and Row.
Pinchot, G.
    1987 ''Innovation through intrapreneuring.'' Research Management, 13: 14–19.
Quinn, B.
    1980 Strategies for Change: Logical Incrementalism. Homewood, IL: Irwin.
Rao, H., and R. Drazin
    2002 ''Overcoming resource constraints on product innovation by recruiting talent
    from rivals: A study of the mutual fund industry, 1986-94.'' Academy of Management
    Journal, 45: 491–507.
Saxenian, A.
    1994 Regional Advantage: Culture and Competition in Silicon Valley and Route 128.
    Boston: Harvard University Press.
Schumpeter, J. A.
    1934 The Theory of Economic Development. Cambridge, MA: Harvard University
    Press.
Schumpeter, J. A.
    1942 Capitalist, Socialism, and Democracy. New York: Harper & Brothers.
Schumpeter, J. A.
    1950 Capitalism, Socialism and Democracy. London: Allen & Unwin.
Shane, S., and S. Venkataraman
    2000 ''The promise of entrepreneurship as a field of research.'' Academy of Manage-
    ment Review, 25: 217–226.
Smith, E. B.
    2011 ''Intermediaries, mediators, and market change.'' University of Michigan work-
    ing paper.

Sørensen, J. B.
  2007 ''Bureaucracy and entrepreneurship: Workplace effects on entrepreneurial
  entry.'' Administrative Science Quarterly, 52: 387–412.
Sørensen, J. B., and M. A. Fassiotto
  2011 ''Organizations as fonts of entrepreneurship.'' Organization Science, 22: 1322–1331.
Sørensen, J. B., and T. Stuart
  2000 ''Aging, obsolescence, and organizational innovation.'' Administrative Science
  Quarterly, 45: 81–112.
Starbuck, W. H.
  1992 ''Learning by knowledge-intensive firms.'' Journal of Management Studies, 29:
  713–740.
Stevenson, H. H., and J. C. Jarillo
  1990 ''A paradigm of entrepreneurship: Entrepreneurial management.'' Strategic
  Management Journal, 11: 17–27.
Stinchcombe, A. L.
  1965 ''Social structure and organizations.'' In J. G. March (ed.), Handbook of Organi-
  zations: 142–193. Chicago: Rand McNally.
Thompson, V. A.
  1965 ''Bureaucracy and innovation.'' Administrative Science Quarterly, 10: 1–20.
Thornton, P. H.
  1999 ''The sociology of entrepreneurship.'' Annual Review of Sociology, 25: 19–46.
Tuma, N. B.
  1976 ''Rewards, resources and the rate of mobility: A nonstationary multivariate sto-
  chastic model.'' American Sociological Review, 41: 338–360.
Tuma, N. B., and M. Hannan
  1984 Social Dynamics: Models and Methods. New York: Academic Press.
Tushman, M. L., and P. Anderson
  1986 ''Technological discontinuities and organizational environments.'' Administrative
  Science Quarterly, 31: 439–465.
von Hippel, E.
  1977 ''The dominant role of the user in semiconductor and electronic subassembly
  process innovation.'' IEEE Transactions on Engineering Management, EM-24: 60–71.
Weber, M.
  1968 Economy and Society. Trans. and ed. by G. Roth and C. Wittich. New York:
  Bedminster Press.
Whyte, W.
  1956 The Organization Man. New York: Doubleday.
Wrigley, L.
  1970 ''Divisional autonomy and diversification.'' Unpublished doctoral dissertation,
  Harvard University.
Zahra, S. A.
  1991 ''Predictors and financial outcomes of corporate entrepreneurship: An explora-
  tory study.'' Journal of Business Venturing, 6: 259–285.
Zahra, S. A., D. F. Jennings, and D. F. Kuratko
  1999 ''The antecedents and consequences of firm-level entrepreneurship: The state
  of the field.'' Entrepreneurship Theory and Practice, 24: 45–65.

APPENDIX

Table A.1. Cox Model Regressions of Transition to Intrapreneurship: Robustness Measures*

Variable	Intrapreneurship Model 1	Intrapreneurship Model 2
Firm size (log number of employees)	0.510•••	–
	(0.043)	–
Firm size (log number of funds)	–	0.605•••
	–	(0.032)
Firm age	0.003••	0.002•
	(0.001)	(0.001)
Employee's performance	–0.167	–0.090
	(0.883)	(0.905)
Employee's age	–0.120•••	–0.126•••
	(0.022)	(0.023)
Employee's age squared	0.001•••	0.001•••
	(0.000)	(0.000)
Gender (1 if male)	–0.229•••	–0.271•••
	(0.065)	(0.063)
Employee's education (degree)	0.203•••	0.183•••
	(0.063)	(0.061)
Task discretion	0.947•••	1.580•••
	(0.087)	(0.076)
Task breadth	2.092•••	1.305•••
	(0.124)	(0.110)
Firm performance	1.537••	1.697••
	(0.742)	(0.778)
Firm cash flow	–0.036••	–0.016
	(0.016)	(0.013)
Firm diversification	–0.017•••	–0.023•••
	(0.002)	(0.002)
Employee opportunity cost	–2.343•••	–2.302•••
	(0.832)	(0.854)
Employee's firm tenure	0.007•••	0.006•••
	(0.001)	(0.001)
Employee's job tenure	–0.007•••	–0.007•••
	(0.001)	(0.001)
Spells	517002	517002
Log likelihood	–44123	–43686
Wald chi-square	807	1269

•$p < .10$; ••$p < .05$; •••$p < .01$.
* Robust standard errors are in parentheses.

Author's Biography

Aleksandra J. Kacperczyk is the Alvin J. Siteman (1948) Assistant Professor of Technological Innovation, Entrepreneurship, and Strategic Management at MIT Sloan School of Management, 100 Main St., E62-484, Cambridge, MA 02142 (e-mail: olenka@ mit.edu). Her research interests include transition to entrepreneurship, corporate entrepreneurship, and entrepreneurial and innovation processes in large organizations, with particular emphasis on an employee's choice between entrepreneurship and intrapreneurship. She received her Ph.D. from the Ross School of Business at the University of Michigan.