Strategic Management Journal
Strat. Mgmt. J., **33**: 23–41 (2012)
Published online EarlyView in Wiley Online Library (wileyonlinelibrary.com) DOI: 10.1002/smj.944
Received 9 February 2010; *Final revision received 31 May 2011*

THE DIFFERING EFFECTS OF AGENT AND FOUNDER CEOs ON THE FIRM'S MARKET EXPANSION

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This paper builds and tests the thesis that CEO influence evolves differently for founders and agents. We theorize that at the beginning of their tenures, founder CEOs can pursue market expansion more aggressively than agent CEOs, because they take office with the combination of motivation, power, and requisite knowledge that agent CEOs build over time. Subsequently, however, founder CEOs have less access to the administrative infrastructure necessary to sustain a growing firm, making them less able than agent CEOs to continue market expansion mid-tenure and more severely constrained by market complexity. A longitudinal study of cable television operators confirms that the firm's market expansion follows an inverted U-shape for agents and a downward slope for founders, while market complexity reduces market expansion, especially for founders. Copyright © 2011 John Wiley & Sons, Ltd.

INTRODUCTION

Upper echelons research explains the influence of chief executive officers (CEOs) on strategic behavior and initiatives of the firms they lead. One stream of this literature focuses on how CEOs' paradigms and repertoires of skills evolve during their time in office, positing that CEOs 'do not think, behave, or perform uniformly over their tenures' (Henderson, Miller, and Hambrick, 2006: 448). The foundational work of this research stream describes 'the seasons of a CEO's tenure' (Hambrick and Fukutomi, 1991) based on a life cycle pattern (i.e., inverted U- shaped) that captures the accumulation of knowledge, power, and entrenched commitments over time, as well as the eventual dissipation of task interest and information diversity that lead to complacency (Hambrick and Fukutomi, 1991; Miller, 1991). A second research stream highlights the role of complex and ambiguous market conditions on strategic behavior and initiatives (e.g., Dierickx and Cool, 1989; Hambrick, Finkelstein, and Mooney, 2005; Mosakowski, 1997; Ocasio, 1997). Such complexity limits CEOs' discretion to pursue new initiatives (Hambrick and Finkelstein, 1987) and represents an important aspect of the decision environment in which the CEO is embedded (Hambrick *et al.*, 2005; Ocasio, 1997).

Both streams provide a rich understanding of CEO influence, but most prior research, including the seasons framework, addresses large, publicly traded corporations for which data are more readily available. With widely distributed ownership, these firms typically hire CEOs as agents of the board of directors. It is important to study large firms because they are responsible for a high percentage of employment and overall economic activity

Keywords: agent CEOs; founder CEOs; complexity; market expansion; CEO tenure
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(e.g., Hall, 1987). However, they represent only a small slice of the full population of firms (e.g., Carland *et al*., 1984), as many firms are managed by founding CEOs who retain significant ownership in the firm (Fahlenbrach, 2009). Theoretically, both agency theory and entrepreneurship research suggest that founders differ in fundamental ways from agents. Whereas agent CEOs face concerns about job security but not loss of investment capital, owner CEOs bear financial risk but not the threat of dismissal. This leads to fundamentally different incentives for pursuing major initiatives (Jensen and Meckling, 1976). Founders also differ substantially from agents for the knowledge, values, and attitudes they bring to bear in managing the firm (He, 2008; Jayaraman *et al*., 2000). Thus, because comparative theory and evidence on the behavior of founder- and agent-led firms over time remain underdeveloped, it is valuable for both research and practice to understand how patterns of attention and control differ between agent and founder CEOs.

We therefore research the question of how founder-led firms differ from agent-led firms as they expand and respond to market complexity. In particular, we argue that founders have a greater ability to pursue market expansion from the beginning of their tenure because they already possess the combination of task knowledge, power, and credibility that agents must build over time. However, because founders have more limited access to the administrative infrastructure and capabilities necessary to sustain a growing firm (Gedajlovic, Lubatkin, and Schulze, 2004), they are less able than agents to continue market expansion during the middle of their tenure. Thus, we endorse the life cycle (inverted U-shaped) logic underlying extant upper echelons research for agent CEOs but propose a distinct, downward-sloping pattern of influence for founder CEOs. In addition, because founders are constrained in their ability to address the competing demands of market complexity (e.g., Tushman and Romanelli, 1985), we expect the dampening effect of market complexity on market expansion to be greater for founder-led firms than agent-led firms. This argument further establishes the agent-founder distinction for a richer understanding of CEO influence on market expansion.

We test our theory in a longitudinal study of market expansion by 174 cable television operators in the United States between 1972 and 1996. There are several reasons the cable setting is conducive for testing the effects of founder and agent CEOs on market expansion. First, among cable operators during this period, firms led by agent and founder CEOs are roughly equivalent in prevalence, size, and performance, an advantage previously exploited in Eisenmann's (2002) study of CEO equity ownership and risk taking. Second, the primary strategic choice during this period is whether or not to leverage a firm's industry expertise by expanding to new markets, and our longitudinal design allows us to analyze how firms expand over a CEO's tenure while accounting for market complexity. Third, the setting offers favorable characteristics of natural monopolies (Williamson, 1976), eliminating competitive dynamics but not executive influence as an explanation for firm expansion, which helps to more directly attribute the pattern of results to the focal constructs. We combine archival data from multiple sources to create a dataset of CEOs and market expansion achieved during their tenure for all 174 firms with a significant presence in the cable industry between 1972 and 1996—producing a total of 2,021 usable firm-year observations.

Beyond a focus on market expansion, our study makes two contributions to research. First, by specifying how task knowledge, power, and motivation of founder and agent CEOs evolve and combine to shape firm expansion over their respective tenures, we contribute to research on CEO tenure (e.g., Hambrick and Fukutomi, 1991; Miller, 1991; Miller and Shamsie, 2001; Wu, Levitas, and Priem, 2005). Second, we enrich agency theory and entrepreneurship research by extending the founder-agent distinction to an analysis of CEO influence under market complexity.

THEORETICAL BAGKROUND AND HYPOTHESES

As noted, one stream of upper echelons research suggests that the influence of executives evolves in predictable ways that can be captured through the observation of relationships between CEO tenure and firm behavior and outcomes (e.g., Barker and Mueller, 2002; Hambrick, Geletkanycz, and Fredrickson, 1993; Henderson *et al*., 2006; Miller, 1991; Miller and Shamsie, 2001). To date, scholars who operate in this research stream have been strikingly consistent in their portrayal of CEO

DOI: 10.1002/smj

tenures as life cycles in which executive influence grows rapidly during the initial years in office, but then declines after the midway point in the tenure cycle (Henderson *et al*., 2006). To Hambrick and Fukutomi (1991), this pattern closely follows the changes in CEOs' commitment to a paradigm, task knowledge, power, task interest, and information diversity over their time in office. Combining these influences, researchers have consistently examined one major thesis, which is reviewed in detail by Finkelstein, Hambrick, and Cannella (2009): the influence of CEO tenure on firm behavior is likely to follow the pattern of an inverted U-shape. Put differently, the peak impact of executives on the firm occurs at a midway point in their time in office, with both short and long tenures attenuating this impact. A second stream of upper echelons research focuses on characteristics of the firm's environment as being crucial to understand the influence of CEOs on firm initiatives and outcomes (see Finkelstein *et al*., 2009 for a review). Thus, whereas researchers in the first stream typically assume that CEO influence is invariant across market conditions, the second stream attempts to specify the moderating role that such conditions play in shaping CEOs' influence on the firm.

Theory and evidence in both streams generally focus on professional CEOs, who can be described as agents hired on behalf of a firm's owners. Yet many firms are led by founders, who constitute a subset of the broader category of owner CEOs because they typically own a significant percentage of the firms they lead (e.g., Wasserman, 2003). Because agents and owners have fundamentally different incentives (Jensen and Meckling, 1976)—founder CEOs have financial risk but not employment risk, while agents have the opposite—they are likely to pursue growth-oriented initiatives differently, and possibly for different ends. Unlike agents, founders largely accumulate wealth from their ownership and thus share in the upside of new initiatives, but they also have substantial personal capital at risk from the downside. Beyond the principal-agent issue, the broader entrepreneurship literature also suggests that founders' motivation, decisions, and relationship with the firm differ from that of hired CEOs (e.g., Gedajlovic *et al*., 2004; He, 2008; Jayaraman *et al*., 2000; Nelson, 2003).

To start their firms, founder CEOs must already possess firm-specific skills, as well as power and credibility to attract capital and employees to the fledgling firm (e.g., Van de Ven, Hudson, and Schroeder, 1984). Rather than take time to learn an existing corporate culture, founder CEOs 'imprint' the desired culture for their firms (Daily and Dalton, 1992; Wasserman, 2003). A founder is the longest tenured member of the firm, and is strongly identified with and committed to its creation, possibly considering it a life achievement (Fahlenbrach, 2009; He, 2008). Moreover, Nelson (2003: 712) notes that 'firms with founder CEOs are expected to retain 'founder-centric' structures; the management of the board of directors and the ownership control of the firm are more likely to be tightly held or arranged so as to favor the chief executive's control.' Such tight coupling of ownership and control promotes the agility and parsimony of governance necessary to pursue new initiatives (Daily and Dalton, 1992; Gedajlovic *et al*., 2004), and reduces the likelihood of removal from office (Fahlenbrach, 2009). At the same time, the presence of a founding CEO can affect the firm's ability to grow the firm beyond a threshold (Gedajlovic *et al*., 2004), transition out of the emergence stage (Boeker and Karichalil, 2002; Nelson, 2003), or handle increasing market complexity (George, 2005). Despite the founder's obvious importance to the firm's emergence, the skills, abilities, and resources of founders often become insufficient and the long-run success of founder-led firms may depend on turning over responsibility to a hired agent (e.g., Boeker and Karichalil, 2002; Gedajlovic *et al*., 2004). Yet such transition can bring about its own costs in governance, operational continuity, and social capital (Daily and Dalton, 1992; He, 2008).

We therefore expect the patterns of market expansion over time to be different for founder- and agent-led firms. Long viewed as a centrally important goal of the firm (Penrose, 1959), market expansion represents a strategic decision to replicate the firm's existing business model in new markets (Hutzschenreuter and Guenther, 2009; Mishina, Pollock, and Porac, 2004). Market expansion initiatives usually require substantial investment in new infrastructure, place added demands on firm attention, and change the firm's scale and structure—all of which are under the purview of the CEO. Ultimately, the CEO must also decide whether to divert resources away from the pursuit of other initiatives (e.g., joint ventures, acquisitions, and organic growth), and instead commit

DOI: 10.1002/smj

the firm to the additional fixed costs required to expand into new markets (Winter and Szulanski, 2001).

From an upper echelons perspective, CEOs act on the basis of their personalized interpretations of the strategic situations they face (Hambrick and Mason, 1984), which are significantly shaped by their job tenure (Hambrick and Fukutomi, 1991). In this respect, the key factors identified in prior research that give rise to the influence of CEO tenure—that is, knowledge, power, and credibility—are connected directly to market expansion. Market expansion requires that the CEO possess appropriate knowledge about what is being replicated, and how and where the replication should occur (Winter and Szulanski, 2001: 733). Longer tenure entails accumulation of executive knowledge from action, practice, and reflection of the associated task and roles (Sturman, 2003). Tenure also provides a CEO with the opportunity to develop greater knowledge regarding the firm's history, culture, and underlying political structure (Barkema and Pennings, 1998; Bergh, 2001; Kor and Mahoney, 2005).

Additionally, to mobilize the organization behind a market expansion strategy, the CEO must possess sufficient power and credibility with both the employees responsible for implementing the expansion and the external stakeholders. Prior research suggests CEOs accrue such power and credibility over their tenure (Hambrick and Fukutomi, 1991). For example, it has been argued that CEOs with longer tenure are better able to establish unity of purpose and synchronize actions to enable the firm's pursuit of growth-oriented initiatives (Ling *et al*., 2008; Simsek *et al*., 2005). Externally, increasing tenure has been argued to signify the extent to which the CEO has built credibility and has been accepted and integrated into the networks of salient stakeholders (Cao, Maruping, and Takeuchi, 2006).

Building on the combined influence of these dynamics associated with tenure, we next proceed to develop distinct hypotheses about the evolution of market expansion for agent- and founder-led firms. Then, we turn to upper echelons research on complexity as a key contingency for understanding market expansion (Carpenter and Fredrickson, 2001), and argue that the influence of market complexity on expansion also varies across agent and founder CEOs.

Market expansion over agents' tenure

The initial mandate for agent CEOs is largely set by the board of directors that selected the CEO for this role (Hambrick and Fukutomi, 1991; Henderson *et al*., 2006). As a result, a CEO's power and discretion to undertake new initiatives is generally limited in the early stages of tenure when agents are primarily focused on reinforcing their selection for the job and gaining acceptance within the organization. Upon being appointed to the position, the CEO is hesitant to expand because of abundant concerns about leading the existing operations of the firm. In addition, organizational inertia is likely to limit the scale and speed with which new agent CEOs can mold the firm to their paradigms (Henderson *et al*., 2006). Overall, the beginning of tenure for agent CEOs can be described as a 'learning stage' (Miller and Shamsie, 2001) in which they learn about preexisting internal dynamics, during which the pursuit of strategic initiatives is typically limited in favor of gaining knowledge and building power.

As tenure increases and worries about job security begin to wane, agent CEOs tend to accumulate significant human capital, legitimacy, and social capital (Hambrick and Finkelstein, 1987), which enables greater initiative and investment activity by the firm. During the middle phases of tenure, agent CEOs' task interest is high as power is amassing (Hambrick and Fukutomi, 1991), which enables firm expansion as a form of experience-driven 'reasoned risk-taking' (Carpenter, Pollock, and Leary, 2003; Simsek, 2007). Major initiatives now attain organizational support more easily because of the added credibility provided by the CEOs' increasing social capital and established track record. By this point, agent CEOs should have gained sufficient knowledge about leading the inherited firm that attention can be shifted toward the task of leaving a mark through an enduring legacy (Hambrick and Fukutomi, 1991). Market expansion represents one opportunity for building this legacy.

Toward the end of an agent CEO's tenure, the preparations for turning over the firm to a successor may lead to reluctance to pursue further expansion. Having been successful over a number of years, long tenured agent CEOs have typically amassed sufficient power to be insulated from worries about job security, which translates into a decreased level of task interest (Hambrick and

DOI: 10.1002/smj

Fukutomi, 1991). Miller (1991) found that in the closing stage of their career CEOs can also become 'stale in the saddle,' complacent about past success and unwilling to put effort into challenging initiatives such as market expansion, that may not come to fruition until another CEO has taken over the firm. Research suggests this reduction in task interest is particularly acute for CEOs who own in-the-money options that accentuate the downside risks of new initiatives such as acquisitions (Matta and Beamish, 2008). In the later stages of tenure, therefore, CEO initiative declines due to waning task interest and a very narrow and highly filtered flow of information (Hambrick and Fukutomi, 1991).

Taken together, these points suggest that agent CEOs begin their tenure with a limited ability to pursue expansion initiatives, and then progress through a period of more aggressive initiative when the CEO has greater power and then culminates in lower initiative. As such, for agent CEOs we expect a curvilinear association between CEO tenure and the firm's market expansion. Specifically:

Hypothesis 1: For firms led by agent CEOs, tenure has a curvilinear (inverted U-shaped) relationship with the firm's market expansion.

Market expansion in founder-led firms

In founder-led firms, the CEO's tenure starts with the creation of the firm, a time that involves unique strategic imperatives that can have a lasting effect on the firm's growth trajectory (e.g., Daily and Dalton, 1992). These imperatives are likely intertwined with the founder's motivation for starting and growing the firm such that the tenure is a proxy for both individual changes accompanying the founder's time in office and the maturing of the firm.

Specifically, whereas agent CEOs must respond to the mandate set by the board of directors at the beginning of their tenure, founder CEOs set the mandate for their firms (Wasserman, 2003). Moreover, because the organization is newly formed and under the control of the founder CEO, there are no preexisting internal dynamics to learn or organizational inertia to overcome, so founder CEOs are generally unconstrained by previous ways of doing things, relying upon their own idiosyncratic construal of the competitive landscape (Nelson, 2003). From an internal perspective, founder CEOs have more latitude of action and are less constrained to act quickly, as opposed to agent CEOs who may need to obtain approval from others (Gedajlovic *et al*., 2004). Externally, founders attain sociopolitical legitimacy (Aldrich and Fiol, 1994) by raising capital from investors or through bank loans. For these reasons, we argue that in contrast to the ramp-up period for agent CEOs, the beginning of founder CEOs' tenure provides an opportunity to pursue grand projects, demonstrate their efficacy, and establish their reputation.

Founder-led firms also differ from agent-led firms during the middle seasons of the CEO's tenure, after the firm has grown and matured (e.g., Boeker and Karichalil, 2002). Whereas agent CEOs are now in a good position to pursue their strategic initiatives, founder CEOs are in a less expansionary position. The initial exuberance of the founder to start the firm is dissipating, the administrative demands of the firm are growing, and past growth of the firm may have produced a larger and more intricate bureaucracy that is increasingly difficult to manage (Gedajlovic *et al*., 2004). Mid-tenure agent CEOs begin to be able to access the broader organizational capabilities and routines established before their tenure (Hutzschenreuter and Guenther, 2009; Mishina *et al*., 2004), while founders must rely on what they themselves have developed in the organization. Founders who have expanded significantly are likely to reach the limits of their own managerial capacity (Gedajlovic *et al*., 2004; Mishina *et al*., 2004) and face the need to start delegating power to others to continue expanding. Once the firm is viably established, founder CEOs frequently 'decide against venture capital funding or public stock ownership so as to retain more ownership and management authority' (Nelson, 2003: 711). The alternative to delegation of authority and dilution of ownership is to reduce the firm's expansionary initiatives. We therefore conclude that in contrast to agent CEOs, who at mid-tenure are consolidating power and increasing their initiatives, founder CEOs will more likely consolidate the firm's gains and pursue market expansion less aggressively.

Late in their careers, founder CEOs, like agent CEOs, may suffer from waning interest in task performance (Miller, 1991). However, founders also possess an economic interest in avoiding a true decline stage (Miller and Shamsie, 2001), as

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the financial benefit to long tenured founder CEOs depends on a viable exit strategy—that is, either to sell the firm or to pass it on to an heir. Thus, we expect a downward sloping pattern for founder CEOs, who begin their tenure with greater power and a self-generated mandate toward expansion, but become less aggressive about expansion as the demands of leading a now larger firm consume their managerial capacity. Specifically:

> *Hypothesis 2: For firms led by founder CEOs, tenure has a downward-sloping relationship with the firm's market expansion.*

Moderating effects of market complexity

We have argued thus far that tenure influences market expansion for agent CEOs in the inverted U-shape found in prior research, but the expansion of founder-led firms will, instead, have a downward slope. However, the situational context also shapes executive influences because it demands attention (Ocasio, 1997) while simultaneously imposing constraints on CEO discretion, or the 'strategic degrees of freedom' of the firm (Hambrick and Finkelstein, 1987: 381). Of particular interest to upper echelons researchers is market complexity (Carpenter and Fredrickson, 2001; Hambrick *et al*., 2005).

Market complexity broadly refers to the dissimilarity of market elements and the extent of their interconnectedness (Dess and Beard, 1984; Miller and Friesen, 1983). In service industries such as cable operators, increasing market complexity entails having a greater engagement with a more diverse set of customers and coordinating a larger staff of technicians and call center support. Relative to most manufacturing industries, service industries rely on more frequent and closer interactions with individual customers to enhance performance outcomes such as customer satisfaction and retention (Datta, Guthrie, and Wright, 2005). Thus, extant conceptualizations of market complexity emphasize the heterogeneity and density of markets served by the firm (Fershtman and Kalai, 1993).

Even though the source of complexity differs across specific contexts, studies appear to concur about its key consequences for the firm. First, complexity makes it more difficult for firms to comprehensively and accurately assess their strategic situation, which imposes considerable information-processing demands on the firm (Hambrick *et al*., 2005). Second, complexity necessitates a larger administrative and structural infrastructure to deal with diverse elements of the market (Keats and Hitt, 1988). Third, the generation, implementation, and coordination of competitive activities is arduous in complex environments as executives face more information and variables than they can attend to or adequately handle (Hambrick *et al*., 2005).

We reason that agent- and founder-led firms have differing abilities and strategic orientation to deal with market complexity, further shaping their tenures' distinct influence on the expansion of the firm. As Penrose (1995) argues, firms are constrained in the ability to continue purposeful growth (e.g., expansion) because the firm's increasing size and complexity come to exceed its managerial capacity. Prior research suggests these limitations are especially salient for founders, who often have difficulty managing ventures beyond their start-up stage (Boeker and Karichalil, 2002). This suggests that, among founder CEOs who replicate the business in the early seasons of tenure, increasing returns to experience are partially offset by the corresponding need to digest the expansion of the past. Additionally, the founder's capacity to manage the firm is inherently constrained by available time (e.g., Norton, 1988; Slater, 1980), and once the complexity of the market exceeds the founder CEO's managerial capacity, additional managers must be hired to share responsibilities. This process is costly both in the loss of control and the diversion of time and attention required to hire, train, and monitor the additional managers (Shane, 1996).

By contrast, agent CEOs are better positioned to access collective organizational memory about market expansion activities that occurred prior to their tenure. Since agent CEOs typically lead previously established organizations, they have the opportunity to gather such insights from the firm's well-codified systems and procedures, as well as from a more established administrative infrastructure (e.g., more established strategic controls and interface processes between senior executives and middle managers). This, in turn, should help agent CEOs to more easily gather information in a complex setting where differing knowledge and perspectives are necessary to develop and evaluate solutions to complex and multifaceted problems (Hambrick *et al*., 2005). Agent-led firms may also

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have a larger top management team, as well as a more active board of directors for gathering and processing diverse information. Typically lacking access to these and well-developed managerial cadres, founder CEOs might not have the time, resources, or cognitive capacity to engage in such analytical and comprehensive analyses to deal with increasing complexity, thus constraining their pursuit of new strategic choices (George, 2005).

Therefore, while market complexity is likely to dampen expansion for all firms, we expect that this dampening impact will be more pronounced for founder CEOs than agents, who can better overcome the attention consuming demands of increasing market complexity by leveraging the firm's accumulated capabilities and routines in decision making. Specifically:

Hypothesis 3a: Market complexity reduces the firm's market expansion.
Hypothesis 3b: The dampening effect of market complexity on the firm's market expansion will be greater for founder-led firms than for agent-led firms.

METHODS

Research setting

We examine our hypotheses in a longitudinal study of cable television operators in the United States between 1972 and 1996. This context is particularly suited for testing our hypotheses for two reasons. First, the primary alternatives available to cable operators in this time period were limited to organic growth, market expansion initiatives, and vertical integration into cable programming, which only a handful of firms pursued (Souder and Shaver, 2010). We are able to control for organic growth opportunities and vertical integration, enabling a clear focus on market expansion. Second, there are similar numbers of agent CEOs and founder CEOs in the industry, enabling a robust comparison of their tenures' influence on the expansion of their firms.

The temporal boundaries of the study are based on regulatory and technological conditions. From a regulatory perspective, the study begins in 1972, which is the year the Federal Communications Commission (FCC) lifted a partial freeze on cable system construction (FCC, 1972), and ends in 1996, when Congress passed a telecommunications act intended to promote greater competition in the market for video programming between cable operators, direct broadcast satellites, and telephone companies (Chan-Olmsted, 1998). These endpoints are also associated with two major technological changes that affected the cable industry. Prior to 1972, cable programming was almost exclusively the retransmission of over-the-air broadcast signals to locations that could not otherwise receive them (Mullen, 2003). The creation of Home Box Office (HBO) in 1972 initiated a new era in which additional programming was developed and distributed exclusively through cable systems (Baldwin and McVoy, 1988). Combined with the lifting of the cable construction freeze, the prospect of providing unique and additional programming content made it commercially viable to develop cable systems in areas that already received clear broadcast signals and thus created the opportunity for replication in the industry. By 1996, with the exception of homes in very isolated areas, cable service was available to nearly all of the United States. Given that market saturation severely curtails expansion opportunities, market expansion was a viable strategic opportunity in the cable industry from 1972–1996, but was less viable thereafter.

The infrastructure of cable television comprises two parts: a headend facility that receives video signals through the air via microwave or satellite and amplifies these signals for widespread distribution, and a distribution network that connects the headend facility to individual customers via physical cables strung along telephone poles or underground (Parsons and Frieden, 1998). In the industry, both parts are known collectively as 'plant.' The geographic reach of any particular cable system depends in part on population density. Contiguous areas of high population density are connected to a single headend facility, but neighboring towns that are separated by an intervening region of low population density are more efficiently served by having two headend facilities—one in each town. The reason for this is that, unlike natural gas or electricity, audio and video signals can be transmitted through the air by using microwave or satellite technology, eliminating the need for a physical connection across geographic expanses underground (Parsons and Frieden, 1998). At the same time, within a location, the industry operates as a natural monopoly

DOI: 10.1002/smj

(Prager, 1990; Williamson, 1976), and the simultaneous presence of two cable operators in the same location is almost never observed (Emmons and Prager, 1997). Often, cable systems in neighboring towns were owned by different firms, as geographic clustering provided little advantage to cable operators until the 1990s (Waterman and Weiss, 1997), after the conclusion of the period of study. Meanwhile, most cable operators owned a relatively small number of systems in each of several different states.

Cable television differs from other natural monopolies in two critical ways. First, cable is a discretionary luxury product rather than a basic necessity such as electricity or public water service, which are required by the government to serve all customers within the region for which they receive monopoly protection. Second, whereas many utilities raise capital for infrastructure investments through municipal bonds, the cable industry does not have access to this funding mechanism, and instead relies exclusively on private investors who demand to see positive returns from initial investments before committing additional capital. This has resulted in an incremental roll-out of cable service across the United States, as CEOs who wanted to expand determined in which geographic markets to replicate.

Data

Archival data sources provide detailed information annually for the 50 to 100 largest cable operators (Souder and Shaver, 2010). In total, we constructed a database comprising 2,653 observations from 217 unique firms. Missing data on key variables of interest and the lagged requirements of certain variables reduces the analyzable sample to 2,021 observations from 173 firms. Of these, 47 percent are agent-led and 53 percent are founder-led, making for a sample that is roughly balanced. For these firms, we include data for all years available, and not only for years in which they appear in the archival rankings. More than 80 percent—and in some years as many as 95 percent—of total cable subscribers are served by the firms in the database. While there are nominally a large number of additional cable operators, these are standalone systems or small operators that never own more than a handful of small cable systems. No major cable operators are missing from the database.

Several archival data sources are used. Warren Publishing (Washington, DC) provides two series of data on the cable industry that cover the entire 1972–1996 period. Twice per year, Warren's weekly industry journal, *Television Digest*, provides data on the largest 50 or 100 (depending on the year) cable operators by subscriber base at the time, including homes passed, homes in franchised areas, and plant miles. In addition, Warren publishes an annual *Television and Cable Factbook*, which includes detailed information about the systems owned and franchises held by *all* cable operators (i.e., not only the largest ones). From 1981 to 1996, these data are supplemented by the annual *Cable TV Financial Databook* series published by Paul Kagan Associates (Carmel, California). Supplemental detail regarding CEO employment history prior to 1972 was gathered from oral history transcripts maintained by the Barco Library of The Cable Center, a nonprofit educational organization supported by the cable industry and headquartered in Denver, Colorado.

Measures

Dependent variable

We measure *market expansion* as the number of systems added to a cable operator's holdings in a given year. This represents a decision to extend the firm's existing business model to new markets by making a large infrastructure investment in additional headend facilities. Replicating a business model in new markets requires the CEO to have not only the motivation to expand and the power to act on this motivation but also the ability to leverage existing knowledge to achieve success in new markets more quickly and efficiently (Rivkin, 2001; Sorenson and Sørensen, 2001). Such returns to experience provide an advantage relative to potential competitors that lack this expertise (Porter, 1980). As shown in Table 1, the average firm adds approximately 4.6 systems per year. Descriptive statistics for all variables are presented in Table 1, and zero-order correlations between the variables are shown in Table 2.

Independent variables

Consistent with previous studies, *CEO tenure* is measured as the number of years since a founder

DOI: 10.1002/smj

Table 1. Descriptive statistics by agents and founders

Variable name	Measurement	Agent-led firms (N = 977)		Founder-led firms (N = 1044)	
		Mean	SD	Mean	SD
Market expansion	Number of cable systems	5.11	22.97	4.06	14.86
CEO tenure	Years	5.62	5.74	11.51	9.11
Market complexity (t-1)	Homes in franchised areas (000s)/systems	39.21	51.20	28.41	44.89
Penetration rate (t-1)	Subscribers/homes passed by cable (%)	60.15	13.33	60.81	12.22
Saturation rate (t-1)	Homes passed/homes in franchised area (%)	84.52	17.03	84.59	19.26
System size (t-1)	Plant miles/systems	342.15	444.40	276.53	405.04
Subscriber wealth (t-1)	# of pay subscriptions per 100 subscribers	52.35	41.02	51.03	43.67
Cross-ownership	Firm ownership by a different MSO (%)	8.27	23.43	2.61	11.54
Related diversification	Number of related lines of business	1.28	0.85	0.46	0.68
Programming	Dummy = 1 if firm owns cable stations	0.16	0.37	0.04	0.20
CEO prior experience	Dummy = 1 if previously a cable CEO	0.10	0.30	0.18	0.38
CEO initial age	Years	49.19	9.71	47.27	9.30
Age over 60	Dummy = 1 if CEO is older than 60	0.10	0.30	0.27	0.44
Family successor	Dummy = 1 if CEO replaced by family	0.01	0.08	0.09	0.28
CEO duality	Dummy = 1 if agent CEO chairs Board	0.14	0.35	0.00	0.00
Founder	Dummy = 1 if CEO is founder	0.00	0.00	1.00	0.00
Market expansion (t-1)	Lagged dependent variable	4.50	17.23	4.65	15.74

started a cable operation or an agent was hired into the chief executive position by a specific organization. In our sample, tenure ranges from 0 to a maximum of 44, with a mean value of 8.66. Because we predict quadratic effects, our models also include the variable *CEO tenure squared*. Archival records are the source for all tenure data, primarily the *Television and Cable Factbook* and the *Cable TV Financial Databook*, each of which provides an annual listing of the chief executive for each cable operator.

As mentioned above, the CEO tenure of a founder-led firm will equal the firm's age, a construct for which prior research has shown consequential effects (e.g., Freeman, Carroll, and Hannan, 1983). We are therefore cautious to note that while the predicted pattern of market expansion for founders is based on an analysis of founders' task knowledge, motivation, and power over their time in office, we cannot rule out the possibility that the causal mechanism for any of the observed effects is related instead to firm aging patterns. To control for identifiable firm-level attributes that may influence market expansion, our model includes several operating variables described below. For agent-led firms, firm age and CEO tenure are not defined identically, and we confirmed through a *post hoc* analysis no substantive change in results if we control for firm age in the agent subgroup.

In service industries, extant conceptualizations of *market complexity* emphasize the heterogeneity and density of markets served by the firm, as local markets with a concentrated and diverse set of customers demand higher levels of firm attention, in part due to greater coordination of technicians and call center support. We use the average number of potential customers (i.e., total homes in the firm's franchised areas) per system to proxy for firm-specific market complexity in a contextually relevant way. This measure of population density captures variation in the complexity of markets served across firms and over time because denser systems are typically in more populated areas, which, in turn, are frequently more diverse and provide more alternatives and complexity for infrastructure development.

Founder is an indicator variable that equals 1 if the CEO has been with the firm since its inception and still retains at least 40 percent ownership in the firm. Qualitatively, in this sample most agent CEOs are division heads within larger media, telephony, or equipment manufacturing firms. By contrast, founder CEOs are typically either entrepreneurs who started pure-play cable companies, or the heads of regional family-owned media companies that diversified into cable to maintain a strong position in local markets. Regulations limit the number of media outlets a single

DOI: 10.1002/smj

Table 2. Zero-order correlations

N = 2021	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
1 Market expansion	1.00																	
2 CEO tenure	−0.01	1.00																
3 CEO tenure squared	−0.02	0.93	1.00															
4 Market complexity (t-1)	−0.07	−0.04	−0.04	1.00														
5 Penetration rate (t-1)	−0.01	0.20	0.18	−0.29	1.00													
6 Saturation rate (t-1)	0.05	0.02	0.01	−0.16	0.35	1.00												
7 System size (t-1)	−0.07	0.02	0.03	0.76	−0.09	0.10	1.00											
8 Subscriber wealth (t-1)	0.05	0.00	0.00	0.35	−0.14	0.18	0.28	1.00										
9 Cross-ownership	−0.04	−0.09	−0.08	0.12	−0.08	0.07	0.15	0.16	1.00									
10 Related diversification	0.00	−0.17	−0.16	0.13	−0.01	0.04	0.08	0.14	0.04	1.00								
11 Programming	0.12	0.02	0.03	0.19	−0.11	0.02	0.12	0.26	0.10	0.45	1.00							
12 CEO prior experience	0.05	−0.10	−0.11	0.11	−0.12	0.06	0.10	0.19	0.16	−0.14	0.04	1.00						
13 CEO initial age	−0.03	0.01	0.04	0.04	0.26	0.06	0.09	−0.05	−0.09	0.18	−0.09	−0.03	1.00					
14 Age over 60	−0.06	0.42	0.41	0.06	0.17	0.09	0.12	0.02	−0.08	0.00	0.02	0.01	0.33	1.00				
15 Family successor	−0.03	0.19	0.20	−0.04	0.01	−0.03	−0.01	−0.13	−0.07	−0.05	−0.07	−0.09	0.25	0.34	1.00			
16 CEO duality	−0.03	−0.08	−0.07	0.07	−0.10	−0.03	0.04	0.01	0.01	0.15	0.19	0.05	0.04	0.03	0.00	1.00		
17 Founder	−0.03	0.36	0.28	−0.11	0.03	0.00	−0.08	−0.02	−0.15	−0.47	−0.20	0.11	−0.10	0.22	0.19	−0.28	1.00	
18 Market expansion (t-1)	0.35	−0.02	−0.03	−0.12	−0.02	0.04	−0.12	0.06	−0.04	−0.03	0.09	0.07	−0.05	−0.06	−0.03	−0.04	0.00	1.00

Correlations with absolute value of 0.04 or greater are statistically significant at the 95% confidence level.

corporation may own, and these limits were especially restrictive during the period of study (e.g., Singleton and Rockwell, 2003). As a result, U.S. media ownership was distributed very broadly and included many family-run companies that specialized in a small number of local markets. Many of these families went on to found cable operating companies, initially in the same media markets they already served.

Control variables

Our model includes four types of control variables, capturing firm operating characteristics, corporate level strategies, CEO individual attributes, and structural considerations. Cable operators vary widely in the strategic and financial imperatives that may influence the likelihood of expansion, and we control for these operating characteristics by including their values in the prior year. Specifically, we measure a firm's *penetration rate* as the percentage of basic subscribers out of the total possible (i.e., the number of homes with current access to cable TV). Low penetration rates indicate that the firm has the opportunity to profit from marketing cable service more effectively to existing markets, and this may represent a better investment of resources than expanding to new markets. We also control for each firm's *saturation rate*, which relates directly to the firms inherent potential for organic growth of existing cable systems. Saturation rate is the number of homes passed by cable divided by total homes in the franchise area. This variable also reflects an opportunity for organic growth, in this case by extending the physical infrastructure to reach additional homes in existing markets. Low saturation rates may, therefore, reduce the firm's motivation to expand to new markets.

Another operating control is *system size*, measured as the miles of cable plant divided by the total number of systems, which proxies for the total infrastructure investment made previously by the firm. The effect of system size on the firm's market expansion is ambiguous; for some firms, extensive infrastructure investment may preclude further expansion, but other firms may rely on large systems as a foundation from which to build. It is possible that the resolution of this ambiguity depends on whether a firm is led by a founder or an agent, and we specify the model to allow for interpretation of the operating and corporate strategy controls by CEO classification. We also control for *subscriber wealth* using a proxy based on the ratio of pay subscriptions to the number of basic subscribers. Pay subscriptions are measured separately for each premium channel (HBO, Showtime, etc.), and in wealthy areas where the average customer purchases more than one premium channel, the ratio can exceed 1. This provides an important indicator of additional resources generated by a firm with high pay subscription rates. Such resources can be used to finance further expansion, although areas of high subscriber wealth are especially attractive markets to achieve high penetration and saturation rates.

Moving to corporate level strategies, we control for *cross-ownership,* which is the percentage of the firm owned by other cable operators, a condition that might reduce the focal firm's likelihood to expand. In addition, we control for the *related diversification* of the firm by counting the number of other major industries in which the corporate parents of each cable operator are involved (equipment, broadcast, programming, telephone, or publishing). We believe such diversification generally makes expansion less likely because of the internal competition for resources. However, because cable programming investments represent vertical integration with the potential to increase the value of a firm's cable systems, which may, in turn, promote further expansion, we include an indicator variable that equals 1 if the firm also engages in cable *programming*. We distinguish between agents and founders for each of these variables.

Our next set of controls incorporates individual CEO attributes. These variables are meant to shed partial insight on some of the underlying mechanisms that combine to generate explanatory value for the tenure variable—task knowledge, motivation, and power. For instance, one reason for relatively low levels of expansion early in the tenure of agent CEOs is that they need time to gain the relevant industry-specific task knowledge. In contrast, the task knowledge acquired by a CEO who has previously served as CEO for another firm in the industry should enable higher levels of market expansion at the beginning of tenure, for founders and agents alike. We therefore include an indicator variable for *CEO prior experience* that equals 1 if the individual had previously led a cable operator before taking the current position.

With regard to controls for motivation, the model includes *CEO initial age,* based on the age

DOI: 10.1002/smj

at which the individual first became CEO of any firm in the cable industry, on the theory that an individual executive might be more or less inclined to pursue expansion based on his or her age when first in the role. In addition, we include an indicator variable that equals 1 when a CEO's *age exceeds 60*, because some of the reasoning for the reduced market expansion at late stages of tenure is related more to the CEO's anticipation of retirement than to the elapsed time in office. Along these lines, we include an indicator variable that equals 1 when there is a *family successor*, reasoning that in these situations, market expansion may be less affected by late stages of tenure because of the successor's desire to continue building the firm.

Differences in power are primarily captured in the distinction between agents and founders. As described above, most agents are division heads who must have corporate approval for expansion, whereas the founders are substantial owners who have control over strategic initiatives. Nonetheless, some agent CEOs in the sample also hold the title of board chair, and it stands to reason they might wield greater power than counterparts who are not chairs (e.g., Boyd, 1995). We therefore include an indicator variable that equals 1 when an agent has *CEO duality*.

Structurally, we include the lagged dependent variable, *prior year market expansion*, to control for within-firm routines that lead some firms to expand more consistently than others.

Model specification

Analyzing this dataset is complicated by two separate issues. First, our dependent variable is left censored at zero because market expansion is defined as the increase in cable systems. In fact, there is no expansion in about two-thirds of the firm years in the sample. Ordinary least squares regression with a censored dependent variable is inconsistent and yields biased coefficient estimates. We address this issue by using a Tobit specification (Tobin, 1958) that corrects for censoring. Second, because we are theorizing about changes over time, we collect and analyze panel data. For each CEO in the sample, we have from one to 23 observations on the dependent variables, with an average of 11.7 observations per executive. Annual observations are nested within the overall time in office for each CEO. To obtain valid tests of hypotheses, it is thus necessary to account for the lack of independence between repeated observations of the same firms (Greene, 2003). We accomplish this by specifying a Tobit model that incorporates random effects.

We use a random effects model rather than fixed effects for three reasons. First, Tobit models for panel analysis are only defined for random effects, and the large number of left-censored observations in our data suggests potential for biased results without the Tobit specification. Second, our theory emphasizes a dichotomous distinction between founder-led and agent-led firms, and the dummy variable used to capture this distinction would be fully colinear with the set of CEO fixed effects. Third, and most importantly, the conceptual basis for our hypotheses implies a random effects model, because we are interested in the influence of executive time in office on market expansion *across* firms. Modeling fixed effects would instead estimate market expansion within each firm based on other internal changes. Given that our focal variable—the founder vs. agent status of the CEO—changes infrequently (if at all), a fixed effects specification fails to capture the construct of interest.

RESULTS

Table 3 presents the results of our analysis. We include three models to demonstrate the increased explanatory power of differentiating between agent and founder CEOs. Model 1 shows only the control variables. Model 2 introduces CEO tenure and market complexity as explanatory variables, but without making a distinction between agent-led and founder-led firms. This approach shows no evidence of a statistically significant relationship between tenure and market expansion. By differentiating between agent and founder CEOs in Model 3, we improve the explanatory power compared to both of the other models, as determined by likelihood ratio tests compared to both Model 1 ($\chi^2 = 33.90,\ p < 0.01,\ 13$ d.f.) and Model 2 ($\chi^2 = 26.48,\ p < 0.01,\ 10$ d.f.).

Because the hypothesized curvilinear effect calls for the inclusion of quadratic terms, the specification produces high variance inflation factors. We ascertained the extent to which colinearity might be compromising the reported results by conducting a second analysis in which we center the tenure variable before squaring it. This is a linear transformation that has the effect of keeping all of the

DOI: 10.1002/smj

Table 3. Tobit regression results for market expansion

N = 2021	Model 1				Model 2				Model 3			
	Coef.	SE	z	P>z	Coef.	SE	z	P>z	Coef.	SE	z	P>z
CEO tenure					0.49	0.37	1.33	0.184	1.91	0.66	2.89	0.004**
CEO tenure squared					−0.02	0.01	−1.45	0.148	−0.06	0.03	−2.02	0.043*
Market complexity (t-1)					−0.10	0.04	−2.28	0.023*	0.03	0.06	0.52	0.603
Penetration rate (t-1)	−0.04	0.10	−0.40	0.689	−0.09	0.10	−0.88	0.378	−0.11	0.14	−0.75	0.453
Saturation rate (t-1)	0.09	0.07	1.32	0.186	0.04	0.07	0.59	0.554	0.10	0.10	0.96	0.339
System size (t-1)	−0.01	0.00	−3.30	0.001**	0.00	0.00	−1.05	0.296	−0.03	0.01	−2.85	0.004**
Subscriber wealth (t-1)	−0.02	0.03	−0.87	0.383	−0.01	0.03	−0.31	0.757	0.00	0.04	−0.06	0.954
Cross-ownership	−0.27	0.07	−3.62	0.000**	−0.27	0.07	−3.66	0.000**	−0.33	0.09	−3.58	0.000**
Related diversification	−1.26	1.83	−0.69	0.492	−1.53	1.81	−0.85	0.396	−3.45	2.41	−1.43	0.152
Programming	12.89	4.80	2.69	0.007**	14.56	4.77	3.05	0.002**	22.26	5.78	3.85	0.000**
CEO prior experience	6.57	3.52	1.87	0.062†	6.82	3.49	1.95	0.051†	7.00	3.56	1.96	0.049*
CEO initial age	−0.05	0.16	−0.30	0.761	−0.01	0.16	−0.06	0.954	−0.01	0.16	−0.08	0.938
Age over 60	−5.53	3.03	−1.83	0.068†	−5.28	3.24	−1.63	0.103	−6.20	3.29	−1.89	0.059†
Family successor	6.20	5.90	1.05	0.294	5.88	5.83	1.01	0.314	8.25	5.98	1.38	0.168
CEO duality	−2.76	4.36	−0.63	0.527	−3.21	4.33	−0.74	0.459	−4.84	4.40	−1.10	0.271
Founder	0.15	2.97	0.05	0.960	−0.97	3.01	−0.32	0.747	5.06	8.01	0.63	0.528
Founder × CEO tenure									−2.49	0.82	−3.04	0.002**
Founder × CEO tenure squared									0.06	0.03	2.11	0.035*
Founder × market complexity (t-1)									−0.17	0.08	−2.12	0.034*
Founder × penetration rate (t-1)									0.08	0.17	0.48	0.631
Founder × saturation rate (t-1)									−0.06	0.12	−0.46	0.644
Founder × system size (t-1)									0.03	0.01	2.73	0.006**
Founder × subscriber wealth (t-1)									0.02	0.06	0.42	0.674
Founder × cross-ownership									0.20	0.16	1.25	0.212
Founder × related diversification									3.64	3.49	1.04	0.297
Founder × programming									−25.14	10.65	−2.36	0.018*
Market expansion (t-1)	0.39	0.05	7.18	0.000**	0.39	0.05	7.12	0.000**	0.37	0.05	6.76	0.000**
Constant term	−19.90	9.56	−2.08	0.037*	−15.54	9.85	−1.58	0.115	−21.49	10.70	−2.01	0.045*
Wald chi-squared	*(14 df)*		98.37	0.000**	*(17 df)*		106.54	0.000**	*(27 df)*		132.02	0.000**

* Significant at the 95% confidence level (two-tailed test);
** Significant at the 99% confidence level (two-tailed test);
† Significant at the 90% confidence level (two-tailed test).

variance inflation factors below the benchmark of 10, without changing any of the significance levels pertaining to the hypothesis tests. Having demonstrated that the variance inflation caused by the squared terms was not materially impacting our results, we present the uncentered analysis because it is more intuitive to interpret.

As shown in Model 2, there is evidence of a curvilinear, inverted U-shaped relationship between CEO tenure and market expansion for agent-led firms, as predicted in Hypothesis 1. Both the main effect ($b = 1.91$, $z = 2.89$, $p < 0.01$) and the quadratic term ($b = -0.06$, $z = -2.02$, $p < 0.05$) are statistically significant in the expected direction. The combined effect of the linear and quadratic terms suggests that market expansion for an agent-led firm peaks at the 17th year of tenure, and then tends to decline. Given that relatively few agent CEOs remain in office this long, we performed a *post hoc* analysis, which confirmed that the observed downturn is not produced by a small number of outliers.

The effect of tenure on founders is significantly different in both the linear ($b = -2.49$, $z = -3.04$, $p < 0.01$) and quadratic ($b = 0.06$, $z = 2.11$, $p < 0.05$) coefficients. For founders, we calculate the effect of tenure by adding the tenure coefficient to the coefficient on the interaction of tenure and founder. We observe the downward-sloping effect we predicted in Hypothesis 2. Moreover, the resulting positive quadratic coefficient suggests that the downward-sloping relationship we predicted may, in fact, be the beginning of an actual U-shaped curvilinear relationship. However, when we plot the predicted effects of tenure on market expansion for founder CEOs and agents in Figure 1, we see that the curve does not turn upward within the 23-year duration of tenure analyzed in this study. Mathematically, the quadratic effect for founder-led firms offsets the general quadratic effect theorized for agent-led firms. Practically, the rarity of tenures exceeding 23 years suggests that a slight increase in expansion beyond this point is of little meaningful importance. Taken together, we interpret the results to be strongly supportive of our prediction that market expansion decreases over the course of a founder CEO's tenure.

Results presented in Table 3 also provide evidence partially consistent with Hypothesis 3a, which predicts that market complexity reduces expansion for firms generally. This effect is observed only in Model 2 ($b = -0.10$, $z = -2.28$, $p < 0.05$), which does not differentiate between founders and agents. In Model 3, which does make this distinction, we do not observe this general effect ($b = 0.03$, $z = 0.52$, ns) but instead find a statistically significant parameter estimate for the interaction between founder and market complexity ($b = -0.17$, $z = -2.12$, $p < 0.05$), as predicted in Hypothesis 3b. This suggests that the attention demands of market complexity reduce the likelihood of expansion primarily for founder CEOs and not for agents, as shown in Figure 2.

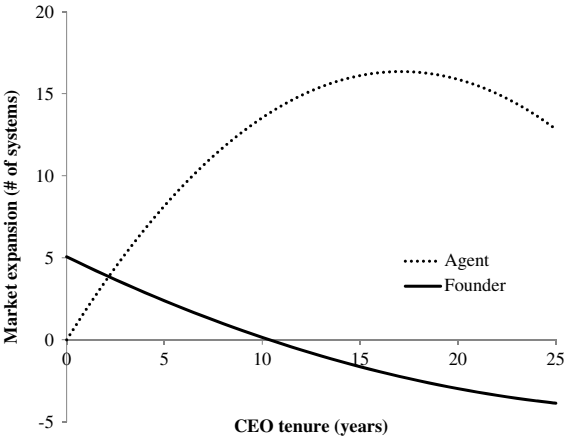

Figure 1. Market expansion over tenure of agent and founder CEOs

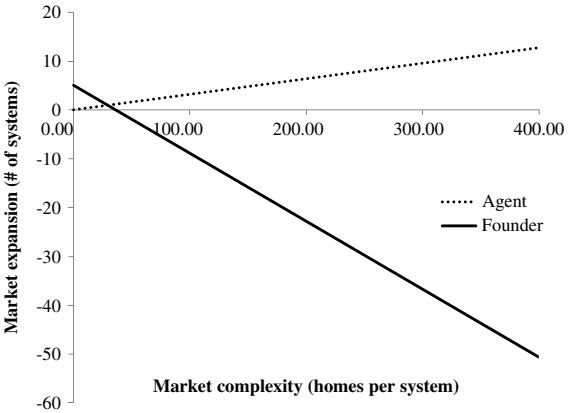

Figure 2. Effect of market complexity on market expansion for agent and founder CEOs

DISCUSSION

CEO decisions regarding firm strategy are widely studied, especially, but not exclusively, in the

DOI: 10.1002/smj

upper echelons literature. In this paper, we enrich the understanding of two influences on decision making—the evolving tendencies of CEOs over their time in office and the market complexity imposed by the firm's operating environment—by considering the distinction between founder and agent CEOs that is informed by agency theory and the entrepreneurial literature (e.g., Jayaraman *et al*., 2000). We proceed to consider these enrichments separately, and then combine them to draw broader implications.

The framework describing the seasons of a CEO's tenure (Hambrick and Fukutomi, 1991) has gained widespread scholarly acceptance and considerable empirical support in explaining growth initiatives in firms (e.g., Henderson *et al*., 2006; Miller and Shamsie, 2001; Wu *et al*., 2005). Our paper follows the premise that a firm's pursuit of market expansion changes over time in response to predictable patterns of attention and influence associated with its CEO's tenure, while adding the insight that these patterns differ considerably for founder and agent CEOs. Specifically, we theorize about differences between founder and agent CEOs in the early stages of tenure. One interpretation of the different curves between the two CEO types is that founder CEOs do not need to take the time required for agents to build their knowledge and credibility to expand, and thus we observe the back half of the inverted U-shape from the beginning of founder CEOs' tenure. Another interpretation is that some founders have limited expansion plans that can be satisfied early in their tenure. Such heterogeneous predilections are more likely to be observed among founders, who typically control their firms, than among agents whose control is subject to potential constraints (e.g., by a board of directors).[1]

We also see reasons to believe the closing stages of tenure are different for agents and founders. For instance, whereas the downward slope for long tenured agents is generally assumed to reflect their ability to comfortably rest on their laurels, founder CEOs at the same stage must prepare the firm for sale on the open market, and stand to earn economic rewards for any gains created by such activity. We believe this helps explain why the declining curve for founders starts flattening out toward the end of their tenure. To us, this enrichment on founders' tenure is theoretically consequential, because it enriches the dominant prism (the inverted U-shaped logic) through which most upper echelons researchers have over the last three decades viewed the influence of CEO tenure on the firm. The distinct expansion patterns of agents and founders become even more pronounced upon examination of the typical range of the data. In our sample, as in Henderson *et al*. (2006), the mean tenure for agent CEOs is comfortably less than 10 years. Given that relatively few agent CEOs remain in office long enough to reach the phase of declining effectiveness, we see clear juxtaposition between rising expansion over the tenure of most agent CEOs and falling expansion over the tenure of most founders. For researchers, an important implication of our study is the need to account for CEO ownership when conducting studies of CEO tenure and interpreting the results from prior research that does not include this factor.[2]

The evolution of a CEO's tendencies over tenure is only one influence on strategic decision making. Another important consideration is the decision environment, and our study offers the ability to model the situational factor of market complexity in conjunction with CEO tenure to model market expansion. We focus our theory development on market complexity because it has both a clear effect on the motivation and willingness to grow and poses a greater obstacle for founder-led firms than agent-led firms. In addition, we control for several other firm-level attributes describing the average systems each cable operator owns, further modeling the relevant information under consideration when CEOs decide how aggressively to replicate. The results in Model 2 confirm an overall assessment that market complexity inhibits expansion, but the founder-agent distinction introduced in Model 3 makes it clear that the limitations of market complexity are primarily relevant to firms led by founders rather than by agents. Combining the analysis of market complexity with the analysis of tenure, we conclude that agent CEOs need to invest considerable time early in their tenures to develop power, credibility, and expertise within the firm—but once this is established, they have access to additional managerial and fiscal resources and a broader infrastructure that allow them to overcome market complexity and increase growth initiatives in the middle stages of tenure, when

[1] We thank an anonymous reviewer for suggesting this point.

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DOI: 10.1002/smj

founder-led firms are increasingly consumed with the challenges of managing the larger organization that results from the growth of the past. Thus, it appears that while market complexity may generally dampen any CEO's pursuit of expansion, this effect is larger for founder CEOs. Together, these findings provide a more nuanced insight into executive influence in complex environments, an issue that has received much interest among upper echelons researchers (Carpenter and Fredrickson, 2001; Hambrick and Finkelstein, 1987; Hambrick *et al*., 2005) but has virtually been ignored in the literature on agency theory and entrepreneurship informing founders.

While the theoretical implications of this research are mostly concerned with clarifying the ways in which CEOs influence firm expansion, the managerial implications inform the important governance task of CEO transition. To the extent market expansion is a desirable strategic initiative, our results suggest that founder-led firms may attain higher performance by transitioning to an agent CEO as their initial burst of expansion dissipates. Indeed, an important stream of the entrepreneurial management literature emphasizes how creating a firm requires a very different skill set than overseeing an established organization (e.g., Boeker and Karichalil, 2002; Jayaraman *et al*., 2000; Nelson, 2003). Our results corroborate this research from a different perspective, focusing less on how static personal traits affect the CEO's satisfaction with job requirements, and more on how the evolution of the CEO's attitudes over time will interact with situational characteristics to exert a systematic influence on the pursuit of strategic initiatives. Yet founders or boards of directors contemplating the switch to an agent CEO must also plan for a settling in period while the hired agent gathers information and builds the internal credibility needed to motivate the organization to pursue major initiatives (e.g., Miller and Shamsie, 2001). Waiting too long to replace the founder CEO will produce a lengthy slow period, as the waning initiative of the founder CEO is followed by the necessary pause at the beginning of an agent's tenure, which may result in missed opportunities and thus a degradation of competitive position. As a corollary, this finding suggests that founder-led firms may have an advantage in nascent and rapidly evolving industries, because their initial motivation to pursue initiatives aggressively coincides with an environment that is munificent toward this behavior. Agent-led firms, on the other hand, may be advantageous in more complex environments that call for the integration of diverse knowledge sets to act effectively.

The cable industry is conducive for empirical testing of our model and associated hypotheses because it provides a roughly equal number of agent- and founder-led firms. Moreover, the average founder-led firm in the sample is approximately equivalent to the average agent-led firm in size and other key descriptive statistics. As a result, we are able both to confirm well-established expectations about the seasons of tenure in agent-led firms and to demonstrate our insight that founder-led firms follow a different seasonal pattern. In addition, the setting places emphasis on market expansion as the primary opportunity for CEOs to exert discretionary influence, as competition between firms occurs almost exclusively in the selection and development of specific consumer markets. Such expansion does not automatically translate into higher firm performance, but it does indicate an active attempt to achieve higher outcomes. Other types of competition are minimal in the industry. Within local markets, cable operators compete to obtain franchises, but virtually never overbuild the infrastructure necessary to compete head-to-head for customers based on price. During the study period, cable operators also did not compete with each other to develop proprietary technology, preferring instead to disseminate information about new technologies in industrywide forums (e.g., trade shows and publications).

Although the cable industry offers the advantage of isolating the effects of tenure, it comes with the corresponding limitation that our findings may not generalize to other industries. We have tried to mitigate this concern by modeling several industry-specific control variables that might influence expansion behavior. Nonetheless, it would be useful to reproduce our results in other settings to validate the theorized relationships presented here. The arguments underlying our study of market complexity, in particular, are grounded in the logic of firms providing services, and future research should investigate parallel considerations in manufacturing environments. In addition, the approximately even split between founder- and agent-led firms is appealing for conducting statistical tests across the two groups, but we acknowledge that this breakdown is a relatively unique feature of the

DOI: 10.1002/smj

cable industry. We believe this is a historical accident—and not a structural aspect of the context that makes both ownership forms viable simultaneously—but alert readers to consider the impact of the context on their interpretation of what we have found.

With the benefit of hindsight, market expansion proved to be a highly profitable strategy, although for much of the period, such growth was more likely to be criticized by contemporary investment analysts. In a different context, however, the early pursuit of expansion by founders might be better described as overconfidence. Furthermore, it is plausible that in some contexts CEOs who rapidly and successfully replicate early in their tenure may behave differently at the end of their tenure than CEOs who were less expansionary from the start. As such, additional research is needed to establish the applicability of this research beyond this particular industry environment.

Finally, we are mindful that like most other studies examining the impact of CEO tenure on firm-level outcomes, facets of our research design place limitations on the extent to which we can place full confidence on the interpretation of our results. Because our research design does not involve the manipulation of variables, but instead relies on tenure as a proxy for salient attributes, we cannot unequivocally establish cause-effect relationships or rule out the alternative explanation that the effects observed in founder-led firms are a result of the firm's age rather than the founder's tenure. Consistent with previous research (Simsek, 2007), tenure is not a causal factor in and of itself; rather, it has explanatory power because it captures the combined effects of consequential variables such as a CEO's task knowledge, motivation, and power (Hambrick and Fukutomi, 1991). Although the tenure construct has the advantages of comprehensibility and testability (Hambrick and Mason, 1984; Pfeffer, 1983), we concur with several scholars suggesting direct measures may have more clarity and validity (e.g., Lawrence, 1997; Priem, Lyon, and Dess, 1999).

Likewise, future research may be able to develop a theoretically richer understanding of the multiple intervening mechanisms that give rise to the curves predicted for the effects of CEO tenure. By using tenure as a proxy for the combination of task interest, information accumulation, and credibility within the firm, we are unable to tease out these specific effects and must instead study the overall patterns of each curve. Sorting out such underlying causes for both founders and agents should enable firms, boards, and senior executives to understand the multifaceted and complex factors that are influenced by CEO tenure, which then determine the firm's market expansion as markets evolve.

CONCLUSION

This research builds on two foundations: the life cycle pattern of CEO activity described by Hambrick and Fukutomi (1991) and work that highlights the importance of a CEO's decision environment (Ocasio, 1997). In both of these important literature streams, we highlight a tendency to focus on CEOs of large public firms. Yet agency theory and entrepreneurship research both suggest that the founder CEOs differ fundamentally from agent CEOs. Our longitudinal dataset of both public and private cable television operators allows us to observe how agency alters the market expansion patterns of CEOs. We demonstrate that the 'inverted U-shaped' life cycle applies only to agent CEOs and that the limits imposed by market complexity are most salient to founder CEOs. Thus, we define an important boundary condition for prior findings on CEO tenure and extend the range of outcomes that are influenced by the founder-agent distinction.

ACKNOWLEDGEMENTS

We appreciate helpful comments on earlier drafts of this paper from the editor, reviewers, Qing Cao, Tim Hart, and Ciaran Heavey.

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