

STEWARDS, AGENTS, AND THE FOUNDER DISCOUNT: EXECUTIVE COMPENSATION IN NEW VENTURES

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Agency theory suggests that the interests of opportunistic, self-interested agents conflict with those of principals. Stewardship theory suggests instead that executives' interests are aligned with company interests and that executives are thus more intrinsically motivated than agency theory implies. This study develops hypotheses regarding the psychological and situational factors that affect the applicability of each theory to executive compensation. I tested hypotheses using a unique data set of 1,238 executives from 528 private companies. Results suggest significant differences between founder-stewards and nonfounder agents that diminish with company growth, and significant effects of equity ownership and outside rounds of financing.

Since ground-breaking work by Jensen and Meckling (1976), agency theory has been the dominant lens for examining executive compensation. According to agency theory, principals who employ agents to work on their behalf incur agency costs because the interests of principals and agents diverge. Incentive schemes and monitoring are proposed as ways to reduce agency costs (Jensen & Meckling, 1976). Stewardship theory, introduced recently in the management control literature (e.g., Davis, Schoorman, & Donaldson, 1997; Donaldson & Davis, 1991; Lee & O'Neill, 2003), construes principal-agent issues somewhat differently. According to stewardship theory, some executives are likely to pursue organizational interests even when they conflict with the executives' self-interest (Donaldson & Davis, 1991). Stewardship theory defines psychological and situational factors that can lead executives to act less like self-interested agents and more like organizational stewards with whom it might be counterproductive for principals to use

the mechanisms recommended by agency theory (Lee & O'Neill, 2003).

Both theories have implications for executive compensation, which has long been understood to be a determinant of whether an executive continues to work for a company (Barnard, 1938). According to stewardship theory, executives who create an organization and feel a strong sense of attachment to and psychological ownership of it are more likely to behave as stewards. Higher levels of "psychic income" (Gimeno, Folta, Cooper, & Woo, 1997) should dispose such "organizationally centered" executives (Davis et al., 1997: 25) to accept lower cash compensation to continue working in the organization. Agency theory is more likely to describe executives who did not create an organization and organizations that can tie compensation to concrete performance measures. Higher compensation will be required to retain such executives and, in such organizations, should be tied to those performance measures. To the extent that compensation issues help determine whether an executive continues to work for a company (Barnard, 1938), founder retention is important because founders can exert a significant impact on the operations and performance of the companies they start. "Founder management," observed Jayaraman, Khorana, Nelling, and Covin (2000: 1221), "is positively related to stock performance among smaller and younger firms," even among *Fortune* 500 companies (Villalonga & Amit, 2005). On the occasion of a company's initial public offering, moreover, valuation and return to first-day investors are significantly affected by whether the founder is still CEO (Certo, Covin, Daily, & Dalton, 2001; Certo, Daily, Cannella, & Dalton, 2003).

This study focuses on the interplay between

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agency and stewardship theories. It suggests that these two theories are complementary rather than conflicting and that each is more applicable to executives and situations to which the other theory is less applicable. The theories are examined in the context of new ventures, in which both organizational founders and nonfounders work, and in which the situational context is consistent with stewardship theory early but more consistent with agency theory later, as ventures mature. I tested hypotheses on a unique data set of 1,238 executives in 528 private new ventures in the information technology industry and considered the implications of the findings for the understanding of agency, stewardship, and compensation within executive teams.

STEWARDS AND AGENTS IN NEW VENTURES

Both agency theory and stewardship theory are concerned with how principals can increase the likelihood that agents will act to maximize shareholder wealth (Tosi, Brownlee, Silva, & Katz, 2003). But the behavioral premises that underlie the two theories are quite different. As a result, stewardship theory is more relevant in contexts in which agency theory is less relevant, and vice versa (Davis et al., 1997). More specifically, agency theory is concerned with problems caused by separating management from ownership (Berle & Means, 1932; Jensen & Meckling, 1976). *Principals*, or owners, contract with *agents*, or executives, to manage companies on the principals' behalf. Principals who employ agents incur agency costs because the interests of the parties diverge (Jensen & Meckling, 1976). Per agency theory, self-interested agents take actions inconsistent with the best interests of their organization's shareholders when doing so is possible and serves the agents' self-interest. The more divergent the interests of agents and principals, the greater the agency costs. Monitoring and incentive schemes are often used to change agent behavior and reduce agency costs.

The position of stewardship theory is, rather, that some agents pursue organizational interests even when these conflict with the agents' self-interest (Donaldson et al., 1991). *Stewards* are executives employed by principals whose interests tend to be aligned with those of the principals. Stewards are organizationally centered executives (Davis et al., 1997) who identify closely with their organizations and thus derive higher satisfaction from behaviors that promote the organizations' interests than from self-serving behaviors. In fact, when organizational interests are in conflict with their self-interest, stewards are inclined to put the interests of the

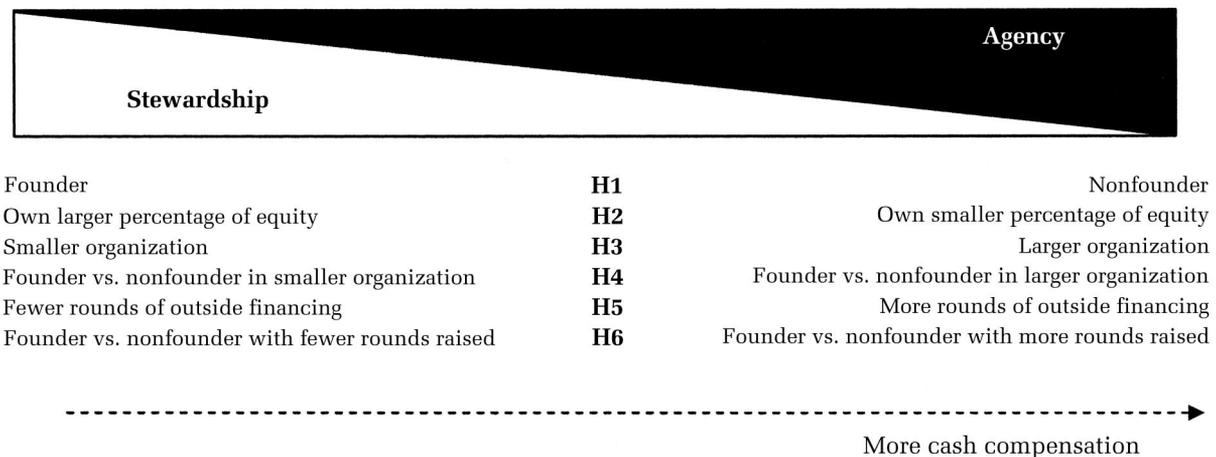
organization first (Tosi et al., 2003). Psychological and situational factors posited to affect the degree of stewardship behavior include, respectively, whether an executive created an organization and feels a sense of control over its direction, and whether the organization has instituted organizational controls to decrease performance ambiguity (Davis et al., 1997; Ouchi, 1980).

Fama and Jensen (1983) argued that young entrepreneurial firms are a classic instance of the union rather than separation of ownership and control. Because its assumptions are a poor fit with contexts without a clear conflict between managerial and shareholder interests (Deckop, Mangel, & Cirka, 1999; Lane, Cannella, & Lubatkin, 1998), agency theory is less applicable to such firms than to more mature firms. I thus look to stewardship theory to illuminate the former context.

New ventures provide a good arena in which to study the contexts in which each theory applies. With regard to the psychological factors described above, the executives working in new ventures include both founders who should behave more like stewards and nonfounders who should act more like agents. With regard to the situational factors described above, young new ventures should be less control-oriented than more mature organizations, making stewardship theory more applicable to young new ventures and agency theory more applicable to mature new ventures.

Common to both theories is the notion that executive compensation is a powerful lever for influencing agent behavior. Boards of directors control the compensation as well as the hiring and firing of top-level executives (Fama et al., 1983; Lorsch, 1989), and one of a board's most important roles is setting compensation in a way that aligns executive interests with those of shareholders (Jensen & Murphy, 1990b). Cash compensation is directly controlled by boards of directors (Fama et al., 1983) and is therefore the component most affected by variables of interest to studies that examine the interaction between boards and senior executives (Carpenter & Wade, 2002). A focus on executives' cash compensation is particularly appropriate in new ventures, where boards rarely issue new equity to executives (Sahlman, Stevenson, Roberts, & Bhide, 1999) but reassess compensation regularly. Thus, cash compensation provided the best test of this study's hypotheses and is the main focus of this paper. However, equity issues also play an important role here. According to both agency and stewardship theories, the amount of equity an executive holds should have a strong impact on that executive's compensation. Thus, my second hypothesis focuses on equity holdings. In addition,

FIGURE 1
Summary of Hypotheses



even though the percentage of equity owned by an executive is the best variable to use in studies focused on the compensation implications of equity ownership (Jensen & Meckling, 1990b), in robustness tests of my core models, I also use an estimate of the current value of those equity holdings.¹

Attention to the motivations of executives might enable boards to reduce the compensation needed to retain or motivate particular executives. Specifically, boards should compensate stewards and agents differently. Executives inclined to behave as stewards are likely to be willing to accept less compensation than executives at the same level who are motivated by agency considerations. Furthermore, the challenges of determining executive compensation are exacerbated when an organization lacks organizational controls and performance metrics to which it can tie compensation. At the intersection between the psychological and the situational,

stewards in stewardship situations (here, founders in ventures that have not yet put controls in place) should receive the least compensation, while agents in agency situations (nonfounders in companies with organizational controls) should receive the most compensation. Figure 1 summarizes hypotheses detailing how these factors affect executive compensation in new ventures.

Psychological Factors

The biggest difference between stewardship theory and agency theory lies in their divergent views of executive identification and motivation (Davis et al., 1997). According to stewardship theory, identification resulting from tight alignment between the values of executives and the values of their organizations (Deckop et al., 1999) leads executives to make decisions that are in their organizations' interests. Similarly, executives with high levels of intrinsic motivation will gain more intrinsic rewards from their work (Davis et al., 1997). From a compensation perspective, boards should be able to pay less cash compensation to executives who have higher levels of identification and intrinsic rewards.

The foremost way that people develop strong identification with an organization is by creating it, a classic example of organizational creation being entrepreneurs and the companies they found (Pierce, Kostova, & Dirks, 2001). Thus, compared to nonfounders, founders have stronger attachment (Dobrev & Barnett, 2005; Jayaraman et al., 2000; Zaleznik & Kets de Vries, 1975) and commitment (Carroll, 1984) to their ventures. Founders view their companies as extensions of themselves (Handler, 1990; Levinson, 1971), some to such an extent

¹ It should be noted that such estimates of the value of executive equity holdings are relatively uncertain even in studies of public company compensation (Hall & Murphy, 2002). In the private companies that are the focus of this study, additional complications include illiquid company equity (Hertzel & Smith, 1993), long vesting terms and lack of executive diversification (Hall et al., 2002), high uncertainty with regard to whether the equity value will ever be realized (i.e., that the company will have a successful "exit"), and inability to assign that equity value to the specific year of interest. Thus, even though in general compensation studies should examine "total compensation" (cash compensation plus the value of equity compensation received annually) for the executives of interest (e.g., Baker, 1987), for both theoretical and empirical reasons (e.g., Kahl, Liu, Longstaff, & Page, 2003) cash compensation is the core dependent variable used in this study.

that there is a “merging of individual ego and the corporation, thus melding individual self-esteem with corporate prestige” (Donaldson et al., 1991: 51). The view that executives who create and identify closely with an organization and are motivated by intrinsic rewards are more likely to behave as stewards than as self-interested agents (Arthurs & Busenitz, 2003; Mael & Ashforth, 1992) prompted Nelson to suggest that founders’ extraordinary commitment amounts to an “anti-agency cost” (2003: 710) to their organizations.

Such identification can be both a benefit and a detriment to founders. The benefits include higher levels of psychic income (Gimeno et al., 1997), greater personal satisfaction (Evans & Leighton, 1989), and more nonpecuniary benefits (Hamilton, 2000; Moskowitz & Vissing-Jorgensen, 2002) than nonfounders enjoy. As a result, founders might be expected to voluntarily accept less cash compensation, especially when doing so can help their ventures during their “cash poor” early stages of growth. However, high levels of organizational identification can also come with costs (Mael & Ashforth, 1992). Strong attachment to their firms, to the extent that it renders less credible threats to leave, leaves founders in much the same circumstance as faculty members whose organizational commitment causes them to accept below-market salaries in order to continue to work in their present organizations (Pfeffer & Langton, 1993). Thus, founders may also involuntarily have to accept lower compensation.

Because the nonfounders a venture’s board recruits to bring needed skills to the venture tend to be extrinsically motivated and to identify less closely with the organization, agency theory is more likely to apply to them (Donaldson et al., 1991). According to O’Reilly and Chatman, new executive hires “base their commitment on compliance, exchanging behavior for extrinsic rewards” (1986: 497). Employees who lack such organizational attachment should be more driven by market forces (Guth & MacMillan, 1986) and should demand higher levels of compensation than executives who are intrinsically motivated. In summary, founders can be viewed as stewards who, because they identify closely with and gain nonmaterial rewards from their ventures, are likely to accept less cash compensation than nonfounders, who are more properly viewed as the agents of agency theory. The result should be a “founder discount” regarding cash compensation.

Hypothesis 1. Cash compensation is lower for founders than for nonfounders.

Equity holdings play a central role in both stewardship theory and agency theory in ways that might be mutually reinforcing. Executives’ “psychological ownership” of an organization, whether founded by them or not, can be strongly influenced by their equity ownership (Arthurs et al., 2003). The more equity they own, the more executives’ identities are tied to their organizations and the more stewardlike their behavior (Pierce et al., 2001). To the extent that higher levels of psychological attachment reduce turnover (O’Reilly & Chatman, 1986), employee retention becomes less a concern for boards. Thus, stewardship theory suggests that boards should be able to pay less cash compensation to executives who own more equity. Agency theorists have posited that high equity holdings can reduce agency problems (Jensen et al., 1976) by acting as substitute governance mechanisms (Rediker & Seth, 1995) that induce executives to accept lower compensation. Furthermore, the process of detaching ownership from management control is closely related to the percentage of equity held by executives (Fogelberg, 1980): executives who own a majority of a firm’s equity are expected to act consistently with stewardship theory, but those with low levels of ownership are expected to act consistently with agency theory (Fox & Hamilton, 1994). It follows, then, that executives who hold less equity will have lower levels of psychological ownership and expect higher compensation.

Hypothesis 2. Executive equity holdings are inversely related to cash compensation.

Situational Factors and Psychological-Situational Interactions

Situational factors also influence the degree of agency versus stewardship (Davis et al., 1997; Fama & Jensen, 1983). The central situational factor affecting an organization’s management philosophy and culture is the degree to which formal control mechanisms have been adopted (Davis et al., 1997). Stewardship theory is more applicable to organizations in which the lack of controls fosters trust as the basis for collective work and promotes high levels of intrinsic motivation. However, the degree of organizational control—hence the degree of stewardship—is expected to change over the life of a venture, especially as the venture adds employees and raises new rounds of outside financing. The hypotheses below examine how these situational factors should affect cash compensation, and how they might interact with the psychological issues examined above.

As a new organization grows and the division of labor deepens, its structure becomes more formalized and professionalized (Blau, 1970; Blau & Scott, 1962; Hellman & Puri, 2002). Roles become more defined, coordination becomes more formal, and controls are instituted to facilitate organizational activities. Agency theory is more likely to apply in organizations that have adopted control mechanisms to reduce risk and increase predictability (Davis et al., 1997). Thus, given the lower levels of intrinsic motivation that result in these larger organizations, cash compensation should increase with size, even after the additional financial resources that larger organizations may have are controlled for.

Although these situational changes should affect all executives in new ventures, they may affect founders disproportionately. Founders play the central role in starting new ventures, controlling all key decisions regarding their direction. Self-determination and intrinsic motivation thus predominate in these early stages of organizational growth. Stewardship motivation is highly dependent on a steward's maintaining a feeling of self-determination (Manz, 1986), but changes in an overall organizational environment can lower intrinsic motivation (Amabile, 1993). More specifically, founders' intrinsic motivation is expected to diminish as psychological ownership wanes in the face of increased formalization and reduced familiarity with all parts of an expanding organization (Pierce & Barnell, 2001). With company growth, founders are often forced to share influence over their companies' direction, which can cause them to begin to exhibit lower levels of commitment (Dobrev et al., 2005: 435). A lower degree of psychological ownership increases the likelihood that executives will pursue individual self-interest over the interests of an overall organization (Guth & MacMillan, 1986), increases the degree to which they are likely to behave as agents generally, and reduces the likelihood that they will accept lower compensation (Davis et al., 1997). I thus expect there to be a smaller founder discount in larger companies.

Hypothesis 3. Cash compensation is higher in larger firms.

Hypothesis 4. The difference between founders' and nonfounders' cash compensation is narrower in larger firms.

Stewardship situations match "clan" contexts in which performance ambiguity is high (Ouchi, 1980). That young ventures, like clans, lack concrete performance metrics makes it difficult for boards to judge progress towards core organization-

al goals (Gersick, 1994). Given this, new ventures tend to be situationally less consistent with agency theory (Fama & Jensen, 1983) and more consistent with stewardship theory (Davis et al., 1997), promoting high levels of trust and goal congruence.

However, capital constraints drive new ventures to outside investors (Gompers & Lerner, 2001) who reduce their own investing uncertainty by staging their capital investments across multiple rounds of investment months or years apart (Gompers, 1995). Just as customers can push ventures to be more accountable and reliable (Hannan & Freeman, 1984), new investors impose contractual requirements that can alter the situational contexts of new ventures (Gompers, 1995) in an even more direct way. Each round of investment can bring new contractual requirements that decrease performance ambiguity, enabling performance evaluation to be based on "explicit, verifiable measures [that can] withstand the scrutiny of contractual relations" (Ouchi, 1980: 137). These increased controls cause an organization to become more depersonalized and less facilitative of stewardship behaviors, for when principals institute controls, stewards lose intangible rewards, "have less desire to behave as stewards," and demand higher compensation (Davis et al., 1997: 39–40). Having better controls should also reduce organizational risk for the principals, making them more willing to increase cash compensation. Thus, as each new round of financing is completed, a new venture's situation should become less consistent with stewardship theory and more consistent with agency theory, and the level of cash compensation should increase, even with controls for the additional capital raised in the new round of financing. Once again, however, given their higher levels of early attachment to and identification with their ventures, founders should be disproportionately affected by the raising of new rounds of financing.

Hypothesis 5. The number of rounds of financing raised by a firm is positively related to cash compensation.

Hypothesis 6. The difference between founders' and nonfounders' cash compensation is narrower in firms that have raised more rounds of financing.

METHODS

Data Set

Founders, a central focus of this study's hypotheses, are largely absent from past research on executive compensation. Because privately held com-

panies are extremely secretive about executive compensation (Jensen & Murphy, 1990a), past research has focused on public companies, the founders of which rarely still number among the members of their top management teams. Even Beatty and Zajac's (1994) seminal "young company" study of compensation in newly public companies did not include founders. Researchers who have tried to examine founder compensation (e.g., Deckop, 1988; Henderson & Fredrickson, 1996) in large companies have discovered that founders make up less than 10 percent of the executives in their data sets, precluding definitive founder-related conclusions.

To get around this problem, I collected data using a private-company compensation survey that I conduct annually with the assistance of three national professional services firms: Ernst & Young (an accounting firm), Hale and Dorr (a law firm), and J. Robert Scott (an executive search firm). Each year, these firms compile a list of American private technology companies that draws from the membership lists of regional and statewide technology councils, the VentureOne database of companies that have raised venture capital, the firms' own client lists, and recommendations by private company investors. The CEOs and CFOs of these companies are then mailed invitations to participate, with the expectation that a single senior executive will complete the entire survey for each company. The principal inducement is the promise of a free copy of a publication, the *Compensation Report*, which is not available to nonparticipants. Survey questions cover company founding, dates on which key product development milestones were passed, financing history, backgrounds of the members of the top management team, executive compensation, and the composition of the board of directors. The three service firms and I pilot-tested the instrument for the year 2000 survey with ten companies before mailing invitations to the full list of potential participants. Since 2000, the survey has been conducted online, so that responses can be validated as they are entered.

To reduce the chance that results would be sensitive to year of data collection, I included data from 2000, 2001, and 2002; in analyses, the survey year was controlled for. The 20 percent response rate achieved over the three years of the survey is relatively high, considering the sensitivity of the questions and the level of the executives targeted (Finkelstein, 1992; Waldman, Ramirez, House, & Puranam, 2001). To test the representativeness of the responses, I compared respondents to nonrespondents with regard to geographic distribution, industry segment, and stage of company develop-

ment (the data available for nonrespondents). No statistically significant differences were observed between respondents and nonrespondents on these dimensions. In the full data set, 31 percent of companies were based in California, and 18 percent were in Massachusetts. Median company age was 39 months, with 25th and 75th percentiles of 25 and 59 months, respectively. The median number of employees was 54, with 25th and 75th percentiles of 27 and 100 employees, respectively. Table 1 presents further summary data.

The full data set included 528 private technology companies. Of the 1,238 executives in the data set, 40 percent were CEOs, and 41 percent were founders. Fewer than 5 percent of the companies had participated in more than one annual survey, precluding an examination of compensation changes in the same companies over time. (The low rate of repeat survey participation is not surprising, given the high rate of failure among young companies in this industry, demands on the time of the CEOs and CFOs of these companies, and the exclusion of companies that had gone public or been acquired, among other factors.) To ensure that repeat respondents did not introduce autocorrelation problems, I recalculated all core models excluding the repeat respondents; no differences were found. The data averaged 2.3 executives per company. To adjust for companies that had more than one executive in the data set and therefore had within-cluster correlations, I used clustered regressions with robust standard errors (Froot, 1989; Williams, 2000).

Dependent Variable

The main dependent variable was each executive's cash compensation, which comprises both salary and bonus (e.g., Henderson & Fredrickson, 2001). I ran auxiliary models using a salary-only dependent variable, following Barkema and Penning (1998) and Bloom (1999), who measured salary "exclusive of any performance incentives" (Bloom, 1999: 30). The salary-only and salary-plus-bonus variables were highly correlated ($r = .88$), and the auxiliary results matched those from the main models, as is shown below.²

² In view of the analyses of public company compensation in Core, Holthausen, and Larcker (1999), it would have been desirable to perform further robustness tests using a third dependent variable that added the current value of an executive's equity holdings to the executive's cash compensation. However, the already existing problems associated with valuing stock-based compensation

Independent Variables

A dummy variable was used to indicate whether an executive was a founder of a company. The percentage of company equity held by the executive was used to assess the impact of equity holdings (Jensen & Murphy, 1990b), but an auxiliary analysis (described below) also assessed whether the nonequity results were robust to the use of an estimate of the value of the executive's equity holdings. For the hypotheses regarding company size and changes in the founder discount, I estimated company size using the number of employees and computed an interaction variable by multiplying the founder dummy by a company's number of employees. For the hypotheses regarding rounds of financing and changes in the founder discount, a variable indicated the number of rounds (i.e., separate private placements) completed, and an interaction variable, computed by multiplying the founder dummy by the number of rounds raised, was used.

An alternative explanation for some of hypothesized effects was that differences in executives' human capital influenced compensation. Evans and Leighton's (1989) finding that education has greater returns in self-employment than in wage work, for example, suggested an important role for human capital in entrepreneurial sector executives. Following past studies (e.g., Gimeno et al., 1997) that measured entrepreneurs' human capital using the constructs of formal education and prior work experience, the models controlled for each executive's academic degrees (bachelor's, MBA, non-MBA master's, J.D., and Ph.D.) and years of prior experience.

Other alternative explanations included executives' varying levels of power and influence over the compensation-setting process. I used tenure (in months) to control for the possibility that executives with longer tenures exerted more influence over their compensation than managers with shorter tenures. An executive hired because of a tie to a venture capitalist on a board of directors (Gorman & Sahlman, 1989) might also command more compensation, so a dummy variable controlled for such a tie. Executives who themselves served on

their companies' boards of directors might also be more powerful, given the prestige of board service (Finkelstein, 1992), the possibility that they performed more duties for their companies than non-board peers (Cyert, Kang, & Kumar, 2002), and their likelihood of influencing compensation through social ties with other board members (Main, O'Reilly, & Wade, 1995). The models consequently included a control for whether executives also served on their companies' boards of directors. A common finding in large company studies being that CEOs' cash compensation substantially exceeds that of those who work for them (e.g., Lambert, Larcker, & Weigelt, 1993; Lazear & Rosen, 1981), the models also controlled for whether each executive was a CEO or a direct subordinate of the CEO. The final executive-level control was for whether an executive's cash compensation included only salary, or salary and bonus, as bonuses are a more contingent form of pay than salary and indicate a firm's use of a certain type of "pay mix" (e.g., Core et al., 1999).

At the company level, receiving revenues from customers and raising successive rounds of financing augment the resources available to pay compensation, so the models included controls for company revenues and amount of capital raised in a firm's most recent round of financing. Company age was also included, given that an organization's ability to survive is tightly linked to its age (Hannan, 1998). From a stewardship perspective, managers being in control of board decisions (as is the case at company founding) is linked to a sense of control over a company, and its loss may heighten the apparent conflict between shareholders and managers. Therefore, the models included a dichotomous threshold variable (Gimeno et al., 1997) that indicated whether outsiders controlled more than 50 percent of a company's board. Dummy variables captured company business segment and, as proxies for the broader market conditions that existed at the time of each survey, dummy variables also indicated whether the company's data were collected in 2000, 2001, or 2002.

As mentioned above, although Hypothesis 2 concerns the impact that percentage of equity holdings should have on an executive's psychological ownership, it is possible that the *value* of the executive's equity holdings might also have an important impact on this study's other hypotheses. To construct an alternative equity-holding variable that estimated the current value of an executive's equity holdings, I multiplied the percentage of equity held by an executive by his or her company's private market valuation following its most recent round of financing. However, given the problems described above regarding the computation of reliable equity

in liquid public companies (Core et al., 1999; Hall & Murphy, 2002) are exacerbated in private companies, where executives hold nonliquid securities that have a high chance of never paying off (Hertzel & Smith, 1993; Kahl et al., 2003). This private company trait precluded the computation of reliable equity values that could be combined with cash compensation in a single dependent variable.

TABLE 1
Summary Data and Correlations^a

Variable	Mean	s.d.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
1. Cash compensation ^b	188.2	104.3																			
2. Founder?	41%	0.5	-.09																		
3. Hired via tie to venture capitalist	13%	0.3	.11	-.20																	
4. Percentage of equity held	27.9	21.1	-.23	.19	-.16																
5. Years of experience	15.2	8.3	.19	-.21	.18	-.17															
6. Tenure ^c	33.9	34.6	.00	.29	-.11	.23	-.13														
7. B.A./B.S.	76%	0.4	-.02	-.03	.03	-.01	.03	-.01													
8. M.A./M.S.	24%	0.4	.03	.10	-.04	.01	-.03	.04	-.05												
9. J.D.	2%	0.1	.01	.05	.01	.02	.02	-.03	.02	-.02											
10. MBA	32%	0.5	.04	-.12	.11	-.07	.06	-.09	.04	-.20	-.05										
11. Ph.D.	8%	0.3	-.01	.17	-.01	-.04	.03	.04	-.10	.14	-.05	-.15									
12. CEO	40%	0.5	.27	.28	.07	-.02	.17	.13	.01	.03	.11	.06	-.04								
13. Completed product development	0.8	0.4	-.06	.08	.08	-.02	.04	-.12	-.05	.09	-.02	-.07	.13	.02							
14. Company revenues ^d	0.8	3.9	-.01	-.04	-.02	.00	.01	-.01	-.06	-.06	-.08	.05	.00	-.01	-.06						
15. Number of rounds of financing	2.6	1.4	.16	-.14	.04	-.32	.06	.05	.00	-.03	.03	.03	-.04	-.03	-.15	.00					
16. Dollars raised in last round ^d	16.7	47.6	.04	-.08	.01	-.06	-.03	-.03	-.07	.00	-.01	.06	-.02	-.03	-.03	-.02	.04				
17. Member of board	49%	0.5	.19	.46	.03	.06	.08	.22	.01	.08	.07	-.01	.10	.73	.03	-.01	-.08	-.06			
18. Outsider control of board	85%	0.4	.11	-.08	.04	-.23	.04	.01	-.01	.02	-.03	.02	-.02	.00	.00	.05	.23	-.04	-.09		
19. Number of employees	77.8	82.0	.27	-.12	.08	-.19	.06	.00	-.12	-.03	.00	.00	-.08	-.03	-.16	-.03	.32	.10	-.10	.11	
20. Company age ^c	55.6	51.3	.04	-.13	-.01	.16	.05	.62	.03	-.01	-.03	-.01	-.05	.00	-.20	-.02	.14	-.01	.02	.02	.03

^a $n = 1,238$.

^b In thousands of dollars.

^c In months.

^d In millions of dollars.

values in these companies, the results from this auxiliary model should be interpreted cautiously. In addition, the 2000 data were missing valuation data for almost one-quarter of companies (a problem fixed in the 2001 and 2002 surveys), resulting in fewer observations in the auxiliary model.

RESULTS

Table 1 presents the means and standard deviations of the core variables in the models and the correlations among those variables. I checked the possibility of collinearity among the variables in two ways. First, variance inflation factor analysis (Belsley, Kuh, & Welsch, 1980; Mansfield & Helms, 1982; Neter, Wasserman, & Kutner, 1989) yielded no variables with scores higher than 10 (the highest score was 4.34), indicating no problems. Second, factor analysis suggested additional testing of two pairs of variables: the CEO and board member dummies, and the tenure and company age variables. In models in which one of each pair was dropped, the significance of the remaining variable increased rather than decreased, reinforcing the robustness of the results.

Given the centrality of founder status to the hypotheses, Table 2 presents separate means and standard deviations for founders and nonfounders. Founders were much more likely to be CEOs (57 percent of founders, 29 percent of nonfounders) and averaged fewer years of prior work experience. A lower percentage of founders had MBA degrees, a higher percentage, Ph.D. degrees.

Nested ordinary least squares regression models, fixed-effects models, and auxiliary analyses em-

ploying alternate forms of the dependent and independent variables were used in testing the hypotheses. Table 3 presents the core models. Model 1 shows the baseline results of regressing compensation on the control variables. Model 2 is the full model used to test the hypotheses. Model 3 uses company fixed effects to assess whether model 2 is missing key company-level differences that might affect its results. The dependent variable, being normally distributed, was not transformed, as was done in other compensation studies in which this was the case (e.g., Carpenter, 2000).

Many of the controls in the baseline model were significant. With respect to human-capital controls, years of prior work experience was highly significant at the .005 level, each year of additional experience resulting in almost \$2,000 in additional compensation. Other very significant controls at the individual executive level included being hired owing to a tie to a venture capitalist ($p < .01$) and bonus eligibility ($p < .005$). At the company level, very significant variables included dollars raised in the most recent round of financing ($p < .005$) and outsider control of the board of directors ($p < .01$), both with positive coefficients. The adjusted- R^2 of model 1 is .33, and the overall model is highly significant.

Using model 2 to examine the hypotheses, I found that founders received \$25,000 less than nonfounders ($p < .01$), supporting Hypothesis 1. A significant ($p < .05$), negative relationship was observed between executives' equity and compensation, supporting Hypothesis 2. Consistently with Hypothesis 3, cash compensation increased significantly (at $p < .005$) with increases in the number of employees. Furthermore, supporting Hypothesis 4, the positive and significant ($p < .05$) coefficient on the founder by employees interaction term suggested that the founder discount decreased with company size. Figure 2 is a graph of this interaction. With each round of financing (Hypothesis 5), compensation increased by \$5,000 ($p < .05$), even after I controlled for the amount of money raised in the most recent round ($p < .05$) and company revenues ($p < .10$). Hypothesis 6—that founders are disproportionately affected by the raising of new rounds of financing—was not supported. Model 2 explains significantly more variance than the baseline model (baseline, adjusted $R^2 = .33$; model 2, adjusted $R^2 = .44$).

Model 3 in Table 3 used company fixed effects to assess whether model 2 was affected by missing variables at the company level. Because they were constant within each company's top management team, the company-level independent variables from model 2 could not be tested in the fixed-effects model. In model 3, however, the executive-

TABLE 2
Comparison of Founders and Nonfounders^a

Variables ^b	Founders		Nonfounders	
	Mean	s.d.	Mean	s.d.
Cash compensation	177.3	82.7	195.7	116.4
Percentage of equity	32.9	21.5	24.5	20.2
Years of experience	13.3	8.0	16.6	8.2
Tenure	45.7	41.5	25.6	26.0
B.A./B.S.	75%	0.4	77%	0.4
M.A./M.S.	29%	0.5	20%	0.4
J.D.	3%	0.2	2%	0.1
MBA	26%	0.4	36%	0.5
Ph.D.	14%	0.3	4%	0.2
CEO	57%	0.5	29%	0.5
Member of board	77%	0.4	30%	0.5

^a Founders, $n = 508$; nonfounders, $n = 730$.

^b Cash compensation is in thousands of dollars; tenure is in months.

TABLE 3
Results of Regression Analyses, Core Models for Executive Salary plus Bonus^a

Variables	Model 1: Baseline		Model 2: Full		Model 3: Fixed Effects	
	<i>b</i>	s.e.	<i>b</i>	s.e.	<i>b</i>	s.e.
Control						
Human capital						
Years of experience	1.73	0.30***	1.09	0.26***	0.78	0.32*
Tenure in months	-0.15	0.10	-0.18	0.10 [†]	-0.19	0.13
B.A./B.S.	-3.92	5.45	-3.54	5.15	-2.22	6.72
M.A./M.S. degree	2.93	4.73	4.20	4.37	2.62	4.75
J.D.	-6.50	12.17	-3.18	11.13	-5.31	12.73
MBA	-0.98	4.30	-2.50	4.12	-1.50	4.38
Ph.D.	13.69	7.95	18.23	6.99**	18.42	7.40*
Hired via tie to venture capitalist ^b	16.43	6.11**	6.21	5.77	5.59	6.01
Member of board ^b	9.93	5.18 [†]	25.01	5.71***	29.07	6.45***
Eligible for bonus ^b	52.17	4.71***	44.67	4.25***	50.38	7.07***
CEO ^b	45.47	5.30***	44.59	5.30***	42.25	5.60***
Company status						
Revenues in current year ^c	0.30	0.58	0.69	0.40 [†]		
Dollars raised in last round ^c	1.04	0.26***	0.47	0.23*		
Outsider control of board ^b	18.48	6.99**	10.52	5.75 [†]		
Company age in months ^d	5.33	4.23	-10.01	4.11*		
Industry segments ^b						
Software ^e						
Communications	-13.04	6.33*	-16.53	5.88**		
Computer hardware/semiconductors/electronics	1.97	9.28	-4.98	8.98		
IT services/consulting/system integration	-7.34	9.59	-8.76	8.58		
Content/information provider	3.76	10.46	-1.91	8.85		
Other	20.27	13.01	13.06	11.09		
Year 2000 ^e						
Year 2001	-3.78	7.11	19.40	6.33***		
Year 2002	-16.22	7.11*	14.92	6.88*		
Hypotheses						
H1: Founder dummy			-25.26	9.69**	-23.96	9.37*
H2: Percentage of equity ^d			-5.71	2.84*	-5.21	2.08*
H3: Number of employees ^d			28.61	3.45***		
H4: Founder × employees			0.31	0.13*	0.30	0.12*
H5: Number of rounds of financing			6.34	2.80*		
H6: Founder × rounds of financing			-3.25	3.45	-0.84	2.78
Company dummies ^f						
Constant	69.62	16.56***	28.69	22.04		
<i>n</i>	1,235 (535 clusters)		1,218 (528 clusters)		1,218	
Prob. > <i>F</i>	0.00		0.00		0.00	
Adjusted <i>R</i> ²	.33		.44		.81	

^a In thousands of dollars.

^b Dummy variable.

^c In millions of dollars.

^d Logarithm.

^e Dropped.

^f There were 528.

[†] $p < .10$

* $p < .05$

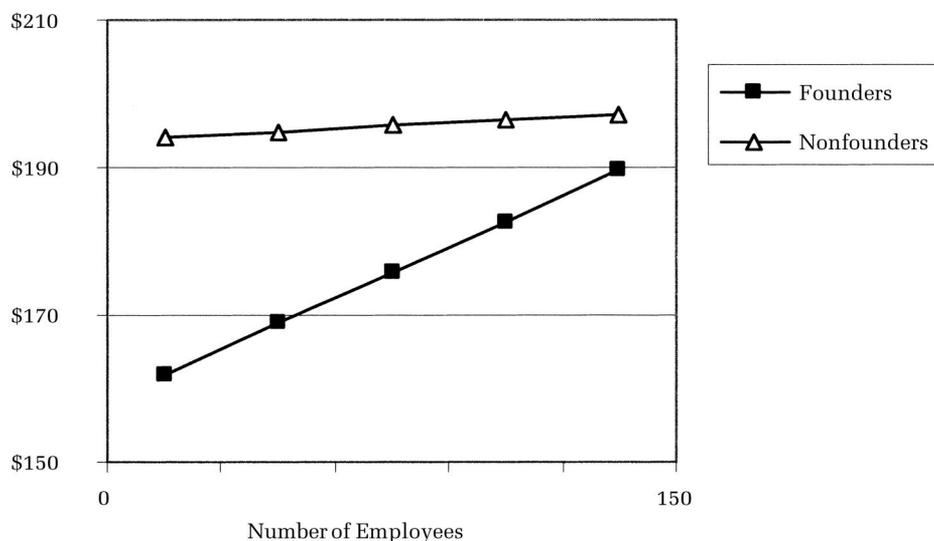
** $p < .01$

*** $p < .001$

level factors were again very significant ($p < .05$), with founders making \$24,000 less than nonfounders and a negative relationship emerging between

equity percentage and cash compensation. The significance of the two interaction terms matched the results in model 2.

FIGURE 2
Graph of Founder-by-Employees Interaction from Table 3, Model 2



In summary, Hypothesis 1 (founders receive less compensation than nonfounders) was strongly supported, even with differences in formal positions and executive backgrounds controlled. Hypothesis 2, which posits a negative relationship between equity percentage and compensation, was also strongly supported. Cash compensation increased with company size (Hypothesis 3), and the founder discount (Hypothesis 4) diminished with company size. I found that compensation increased with rounds of financing (supporting Hypothesis 5), even when controlling for the additional capital raised and for company revenues. However, Hypothesis 6, positing that this compensation increase is higher for founders than for nonfounders, was not supported.

Table 4 presents model 1, which uses an alternate form of equity holdings, an estimate of the current value of an executive's equity stake, as an independent variable. The nonequity hypotheses were all supported again in this model, with the founder discount being even greater (cash compensation was \$35,000 lower for founders than for nonfounders) and more significant ($p < .005$). Interestingly, though, the coefficient on the alternative equity value variable itself was positive in this model instead of negative. Another auxiliary analysis that examined whether the results changed with use of a salary-only dependent variable (model 2 of Table 4) yielded results nearly identical to those shown in the core model 2 in Table 3. These findings are consistent with those of past studies (e.g., Core et al., 1999) that had similar results for salary, salary plus bonus, and total compensation dependent variables.

DISCUSSION

This study examined the psychological and situational factors that affect the applicability of agency and stewardship theories to executives in new ventures. Psychologically, founders should act more like stewards and nonfounders more like agents, and executives who own a higher percentage of equity should earn less compensation, according to both stewardship and agency theories. Hypotheses applying these theoretical predictions to executive compensation within new venture teams were strongly supported. Situationally, the results also supported the hypotheses that compensation for all executives increases with company size and with the raising of new rounds of financing, but that company size disproportionately affects founder compensation, thus decreasing the founder discount in larger ventures.

Stewardship theory helps explain why founders might be more willing than nonfounders to accept lower compensation. Founders are more intrinsically motivated than nonfounders and derive more nonmonetary benefits from working in the companies they started. It might be said that "founders pay to be founders," much as wine hobbyists accept lower profits to maximize their nonfinancial benefits as owners of wineries (Morton & Podolny, 2002). "The founder CEO," remarked one venture capitalist, "benefits from 'soft' compensation such as greater psychic rewards that a nonfounding CEO will never be able to get" (J. Borchers, general partner at Crescendo Ventures, 2004 personal communication).

A potential downside is that strong feelings of

TABLE 4
Results of Additional Robustness Tests of Core Model from Table 3

Variables	Model 1		Model 2	
	<i>b</i>	<i>s.e.</i>	<i>b</i>	<i>s.e.</i>
Control variables				
Human capital				
Years of experience	1.15	0.27***	0.94	0.19***
Tenure in months	-0.21	0.10*	-0.20	0.06***
B.A./B.S.	-2.93	5.38	-0.83	3.38
M.A./M.S.	1.91	4.39	3.97	2.85
J.D.	-2.58	10.59	6.15	8.85
MBA degree	-1.77	4.39	0.09	2.82
Ph.D. degree	15.92	6.99*	15.75	5.21***
Hired via tie to venture capitalist ^b	3.95	6.03	6.46	3.60 [†]
Member of board ^b	16.08	5.70**	15.89	3.74***
Eligible for bonus ^b	47.52	4.21***	8.53	2.99**
CEO ^b	37.57	5.25***	31.36	3.50***
Company status				
Revenues in current year ^a	0.63	0.37 [†]	0.71	0.27*
Dollars raised in last round ^a	0.04	0.21	0.31	0.15*
Outsider control of board ^b	10.80	6.12 [†]	9.47	4.27*
Company age in months ^c	-14.24	5.07**	-4.85	2.98
Segment dummies				
Software ^d				
Communications	-14.74	5.76*	-7.75	4.00 [†]
Computer hardware/semiconductors/electronics	-3.59	9.43*	-6.20	5.96
IT services/consulting/system integration	0.74	8.84	-3.78	5.58
Content/information provider	-0.35	8.89	1.62	5.81
Other	7.78	14.13	9.71	6.91
Year 2000 ^d				
Year 2001	21.38	6.66***	17.25	4.41***
Year 2002	20.19	7.35**	18.04	5.17
Hypotheses				
H1: Founder dummy	-35.12	11.15***	-13.84	6.87*
H2: Executive's equity value (percentage held × company valuation)	9.10	1.57***		
H2: Percentage of equity held by executive ^c			-4.73	2.11*
H3: Number of employees ^c	29.01	3.22***	19.24	2.28***
H4: Founder × employees	0.31	0.14*	0.26	0.11*
H5: Number of rounds of financing	7.95	3.15*	3.65	1.36**
H6: Founder × rounds of financing	-3.79	3.86	-2.81	2.03
Constant	-6.20	21.06	49.21	15.00***
<i>n</i>	1,107 (506 clusters)		1,218 (528 clusters)	
Prob. > <i>F</i>	0.00		0.00	
<i>R</i> ²	.46		.40	

^a In millions of dollars.

^b Dummy variable.

^c Logarithm.

^d Dropped.

[†] $p < .10$

* $p < .05$

** $p < .01$

*** $p < .001$

stewardship might leave founders vulnerable to boards' *imposition* of lower compensation. Founders' strong attachment to the companies they start might compromise the credibility of threats to leave if their compensation demands are not met, resulting in a founder discount. One founder who complained that his board was not taking seriously his threat to leave if he did not get a raise observed that a nonfounder could more convincingly make this threat (J. Rosen, founder of Comet Systems, 2001 personal communication). More generally, even executives who are not founders might find that strong attachment to their companies leaves them in a less powerful negotiating position relative to executives who are not perceived to have such attachment. However, as level of attachment decreases with company growth, boards must adjust by reducing the founder discount, as they indeed seemed to do in the technology-based new ventures that were the subjects of this study.

One implication of these findings is that it is possible for private company CEOs to receive less compensation than do their direct subordinates, a circumstance not found in public companies in which CEOs are much more powerful, and thus earn far more, than their direct subordinates. In the new ventures studied here, some founder-CEOs earned less than the CTOs or CFOs who reported to them. In fact, in the study data set, of 290 CEOs who were founders, 77 (27%) were paid less than at least one of their direct subordinates, and another 69 (24%) were paid the same amount as direct subordinates. Future field research could explore the extent to which lower founder compensation is voluntarily accepted or is imposed on founders by boards.

This finding suggests that there are important ways in which the results presented here conflict with what might be expected from a power perspective. Founders, for example, might be expected to be more powerful than nonfounders because they have longer tenure (Fisher & Govindarajan, 1992) and higher prestige (Finkelstein, 1992; Zaleznik & Kets de Vries, 1975), are difficult to replace (Hickson, Hinings, Lee, Schneck, & Penning, 1971), strongly influence choices of outside board members (Main et al., 1995), and often possess an overpowering leadership style (Zaleznik & Kets de Vries, 1975). This power might reasonably be expected to translate into leverage over their companies' compensation processes and the ability to command higher compensation (Combs & Skill, 2003). But despite these power advantages, founders tend to receive substantially less compensation than nonfounders.

The marked difference between founder and nonfounder compensation also emphasizes a need

for future researchers to consider the possible impact that the presence of founders might have on the results of studies. Academic studies (e.g., Finkelstein, 1992) have used founder status as an indicator of greater executive power. In fact, such status might have an effect opposite the one intended, inasmuch as this study suggests that founders may be hampered in their ability to influence key decisions. Moreover, the presence of founders could skew the results of studies that ignore founder issues. Beatty and Zajac (1994), for example, found that executives' equity holdings were lower in higher-risk than in lower-risk companies. A possible alternative explanation is that this difference reflects different mixes of founders and nonfounders: higher-risk companies might have higher rates of founder turnover and thus more nonfounders on their top management teams. Differences in equity holdings might thus be a function of differences in the preponderance of founders, whose equity holdings tend to be higher than those of nonfounders.

The findings regarding equity holdings might also conflict with what might be expected from a power perspective. This study found a strong inverse relationship between compensation and the percentage of equity owned by an executive, in keeping with the hypothesized impact of equity holdings on psychological ownership. This finding is also consistent with recent empirical studies in large companies (e.g., Core et al., 1999; Cyert, Kang, & Kumar, 2002). However, it conflicts with arguments that higher equity percentages should afford executives high ownership power (Finkelstein, 1992) and enable them to increase their own compensation (Allen & Panian, 1982). "Executives who own significant portions of their firms," observed Finkelstein and Hambrick, "are likely to control not only operating decisions but board decisions as well. Such executives would thus be in a position to essentially set their own compensation" (1989: 124). At the same time, in this study, auxiliary analyses suggested a positive link between compensation and the value of executive equity holdings. Given the problems described earlier with calculating reliable estimates of the value of executive equity holdings in private companies, this result should be interpreted cautiously. However, future research could benefit from both improved approaches to valuing such equity and further exploration of this difference in equity results.

Situationally, Gersick (1994) examined the transformation of new ventures from companies that have to deal with ambiguous feedback from uncertain or "noisy" environments into companies in which performance ambiguity is much lower, and

Davis et al. (1997) highlighted how the controls instituted in that process can affect stewardship behaviors. The results of this study suggest that such situational changes also have important implications for compensation. As controls are instituted to reduce performance ambiguity, they also reduce the clanlike characteristics of new ventures in ways that require boards to increase executive compensation. In contrast to results reported above that conflicted with what might be expected from a power perspective, these findings are consistent with predictions derived from power-based resource dependency theory, inasmuch as company growth and the raising of new rounds of financing should increase executives' power by proving that they can cope with their companies' critical contingencies (e.g., Hickson et al., 1971; Pfeffer & Salancik, 1978). The link between the institution of controls and compensation can also shed light on the evolution of agency issues in these firms. Agency costs—save when a founder maintains ownership of all of a company's equity—increase as outsiders invest. Investors' ability to monitor founders increases as controls increase, reducing the potential impact of misaligned incentives but also requiring them to increase executive compensation. Although changes in company size and financing rounds affected all executives in my data, the size-related changes affected founders disproportionately. Future research could explore why founders were affected more by changes in size than by financing rounds.

It is important to emphasize that this study focused on private technology companies. Although such companies constitute a substantial portion of new ventures, and although single-industry studies of technology firms (e.g., Eisenhardt, 1989; Virany, Tushman, & Romanelli, 1992) do provide greater internal validity than multiple-industry studies, future research could shed light on whether the use of these companies might have introduced patterns that do not exist in other industries. In addition, the quantitative models used in the present study controlled for differences among executives in prior work experience, education, board membership, and ties to venture capitalists. Future research could explore whether entrepreneurial managers differ in other ways that might affect their compensation. Are first-time founders, for example, more attached than "serial" founders to the companies they start? Are cofounders less attached than solo founders to their companies? Situationally, do changes in corporate governance (e.g., ownership or board structure), environmental contingencies, or corporate strategies (e.g., increases in diversifi-

cation) shift the mix of agency versus stewardship in ways that affect pay differences?

In closing, researchers have developed a wealth of knowledge about compensation in public companies, much of it by examining executive compensation from an agency perspective. Recent work (e.g., Bloom & Milkovich, 1996; Daily, Dalton, & Cannella, 2003; Davis et al., 1997) that has begun to question this focus on agency theory has suggested that researchers' picture of executive compensation could be enriched by integrating stewardship theory and other perspectives, as has been done in this study. New ventures provide an excellent context in which to study the interplay between agency theory and stewardship theory. More generally, new ventures offer other important research benefits. In contrast to large companies, in which the dynamics have evolved over many years and activities in one part can significantly affect other parts, young companies provide simpler environments to study. The understanding of organizational issues that emerges from such study can yield insights into broader issues that have been hard to uncover in large, complex organizations. Ensley, Pearson, and Amason argued that "while the bulk of TMT research has been conducted on existing large firms . . . the richest and most interesting studies of TMTs are likely to involve new ventures" (2002: 381). Moreover, to comprehend the existing structures of larger organizations, scholars must first understand the processes that created and developed these structures when the organizations were still small (Aldrich, 1999). To conduct research in private companies requires gaining access to scarce data and understanding idiosyncratic characteristics such as the presence of company founders and the dramatic changes introduced by company growth. Surmounting these challenges to study the evolution of executive compensation throughout company growth and development should yield deep insights that broaden understanding of agency, stewardship, and organizational issues throughout all stages of company evolution.

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