



Too much of a good thing: Board monitoring and R&D investments



Orhun Guldiken^{a,*}, Izzet Sidki Darendeli^{b,1}

^a *Strome College of Business, Old Dominion University, 2160 Constant Hall, Norfolk, VA 23529, USA*

^b *College of Business & Economics, California State University, East Bay, 25800 Carlos Bee Blvd, Hayward, CA 94545, USA*

ARTICLE INFO

Article history:

Received 18 November 2013

Received in revised form 25 December 2015

Accepted 26 December 2015

Available online 16 January 2016

Keywords:

Board of directors

Board monitoring

R&D investments

Agency theory

Resource dependence theory

Board capital theory

ABSTRACT

Previous studies report inconsistent findings regarding how board monitoring influences firms' research and development (R&D) intensity. This study uses agency theory and resource dependence theory to argue that there is an inverted U-shaped relationship between these two constructs. By using board capital theory, the present study also postulates that this curvilinear relationship varies depending on the firm- and industry-specific human capital of outside directors. 467 firm-year observations collected from a randomly selected sample of large public firms from high-tech industries between 2005 and 2010 largely provide empirical support for these arguments. The findings contribute to the corporate governance literature by refining the understanding of the costs and benefits associated with board monitoring. The curvilinear relationship reported herein may also help reconcile prior inconsistent findings. The results also contribute to board capital theory by emphasizing the role of outside directors' firm-specific human capital in the context of R&D investments.

© 2016 Elsevier Inc. All rights reserved.

1. Introduction

Firms – especially those in R&D-intensive industries – can maintain or enhance competitive advantage through investments in research and development (R&D) (e.g. Kor, 2006; Le, Walters, & Kroll, 2006). Accordingly, a large body of literature has examined the determinants of firms' R&D intensity, defined as the degree to which firms devote financial resources to R&D activities given their stock of resources (Bushee, 1998; Lee & O'Neill, 2003). A strand of research within this broad body of literature has focused on the role of the board of directors in influencing firms' R&D investment decisions (e.g. Kor, 2006; Yoo & Sung, 2015). Particular attention has been paid to the role of board monitoring – the extent to which directors (board members) control managerial decisions on behalf of shareholders in order to curb top managers' opportunistic behaviors (Fama & Jensen, 1983) – on firms' R&D intensity.

However, prior studies are inconclusive on whether board monitoring positively (e.g., Kor, 2006) or negatively (e.g. Deutsch, 2005; Yoo & Sung, 2015) impacts firms' R&D intensity. This study proposes that one reason for the mixed findings is the failure of earlier studies to only consider linear relationships, without considering whether board monitoring could be beneficial to encourage R&D investments only up to a certain threshold. Specifically, considering that investments in R&D benefit shareholders (e.g., Hall, Jaffe, & Trajtenberg, 2005),

directors can help align the interests of top managers and shareholders in the context of R&D investments by monitoring and providing advice on R&D investments made by top managers (Kor, 2006; Le et al., 2006). However, after a certain threshold, board monitoring may increase top managers' tendency for risk aversion and decrease their likelihood to invest in risky and long-term initiatives such as R&D investments. Specifically, since reductions in R&D artificially boost earnings (Bushee, 1998) and stabilize stock returns (Chakravarty & Grewal, 2011), top managers can slash R&D investments as a response to increased levels of board monitoring to decrease their employment risk (Cheng, 2004; Faleye, Hoitash, & Hoitash, 2011; Garg, 2013). Accordingly, by relying on agency theory (Fama & Jensen, 1983; Jensen & Meckling, 1976) and resource dependence theory (Pfeffer & Salancik, 1978), this study argues that R&D intensity first increases then decreases, as board monitoring increases.

In order to provide a boundary condition to this argument, the present study uses insights from board capital theory to examine the moderating role of outside directors' firm- and industry-specific human capital. Firm-specific human capital of outside directors refers to these individuals' knowledge and familiarity about the focal firm on whose board they serve, whereas industry-specific human capital refers to these individuals' knowledge, abilities, and experiences that they accrue on other firms in the same industry as the focal firm (Hillman & Dalziel, 2003; Kor & Sundaramurthy, 2009). Examining the moderating role of outside directors' firm- and industry-specific human capital is important because directors often fail to adequately monitor and advise top managers when they lack human capital (Kor & Sundaramurthy, 2009; Larcker & Tayan, 2011). For instance, without adequate levels of

* Corresponding author. Tel.: +1 757 754 7886.

E-mail addresses: oguldike@odu.edu (O. Guldiken), izzet.darendeli@csueastbay.edu (I.S. Darendeli).

¹ Tel.: +1 215 906 2181.

human capital, directors are unlikely to detect top management opportunism (Kor & Sundaramurthy, 2009) and provide sound advice and counsel to top managers in the context of R&D investments (Dalziel, Gentry, & Bowerman, 2011). Ergo, examining the moderating role of outside directors' human capital in the board monitoring and R&D intensity relationship can provide an important boundary condition to the literature.

The present study seeks to make a few contributions to the literature. First, although a majority of the literature on corporate governance focuses on the benefits of board monitoring, a growing body of research (Adams & Ferreira, 2007; Clark, 2005; Faleye et al., 2011; Garg, 2013; Hoskisson, Castleton, & Withers, 2009; McDonald & Westphal, 2010) focuses on the disadvantages of board monitoring after a certain threshold. By examining whether too much board monitoring can be associated with lower levels of R&D intensity, this study adds and contributes to this strand of research by questioning a key assumption of agency theory; i.e., board monitoring – a key internal monitoring mechanism – attenuates agency problems in modern corporations (Fama & Jensen, 1983).

Second, there is a recent theoretical debate in the corporate governance literature as to whether the monitoring and the resource provision roles of directors complement or supplement each other. Whereas recent evidence suggests that directors can engage in *either* monitoring *or* resource provision role (Adams & Ferreira, 2007; Baldenius, Melumad, & Meng, 2014), others argue that the two roles can be complementary (Hillman & Dalziel, 2003). This study contributes to this debate by pointing out the possibility that up to a certain level of board monitoring, directors can excel at both roles whereas after a certain threshold, they can perceive a conflict between these two roles and choose one over the other.

Third, previous literature is inconclusive on the directionality and strength of the relationship between board monitoring and R&D intensity (Baysinger, Kosnik, & Turk, 1991; Deutsch, 2005; Hill & Snell, 1988; Hoskisson, Hitt, Johnson, & Grossman, 2002; Kor, 2006; Le et al., 2006; Yoo & Sung, 2015). One reason for the mixed findings in a research stream is the singular focus of previous studies to only test linear relationships. Therefore, the examination of a curvilinear relationship in this study may help reconcile inconsistent findings reported in prior research. The current study also makes a modest contribution to the corporate governance literature whose researchers have mostly relied on agency and resource dependence theories (e.g. Huse, Hoskisson, Zattoni, & Viganò, 2011; Wu, 2008). By using board capital theory, which is becoming more widely used in recent years (e.g., Sundaramurthy, Pukthuanthong, & Kor, 2014), the present study attempts to shed light on better understanding *when* directors can alleviate top management opportunism in the context of R&D investments.

2. Theoretical framework

2.1. R&D intensity as an agency problem

As R&D investments are associated with many positive organizational outcomes such as higher firm value (e.g., Hall et al., 2005) and superior innovation capabilities (Hitt, Hoskisson, & Kim, 1997; Jiang, Waller, & Cai, 2013; Wu, 2013), shareholders of firms in R&D-intensive industries typically favor investments in R&D (e.g., Sandner & Block, 2011). However, in spite of the advantages associated with R&D investments for shareholders, top managers typically resist investing in R&D initiatives for a variety of reasons. First, accounting rules in the U.S. require firms to immediately and fully expense (not depreciate) R&D investments in each period (Lee & O'Neill, 2003), thereby leading top managers to view these initiatives as cost rather than as investments. Second, there is little assurance of R&D investments' eventual payoff, since these investments are uncertain and have a high probability of failure (e.g., Baysinger et al., 1991). Third, the dividends of successful R&D investments are only paid off in the long run, whereas in the

short run, such investments can negatively affect financial performance (David, Hitt, & Gimeno, 2001; Sanders & Carpenter, 2003). Fourth, reductions in R&D artificially boost earnings (Bushee, 1998) and stabilize stock returns (Chakravarty & Grewal, 2011). Hence, top managers are likely to experience potential consequences of uncertain R&D investments directly on their employment and consequently view R&D expenditures as sunk-cost investments (Kor, 2006; Wu, 2008). In fact, there is evidence that top managers can cut R&D investments to boost short-term performance metrics (Cheng, 2004). Given that shareholders' and top managers' interests differ in the context of R&D investments, decisions surrounding R&D initiatives are subject to an agency problem (David et al., 2001).

2.2. The role of board monitoring on R&D intensity

According to agency theory (Fama & Jensen, 1983; Jensen & Meckling, 1976), the board of directors can alleviate the agency problem of underinvestment in R&D initiatives (Kor, 2006; Le et al., 2006; Wu, 2008). In particular, directors perform a monitoring role, which refers to the extent to which they control managerial decisions on behalf of shareholders in order to curb top managers' opportunistic behaviors (Fama & Jensen, 1983). Boards that are vigilant in their monitoring role can remind top managers that investing in R&D initiatives is useful for the long-term health of the firm, even if doing so might hurt short-term firm performance. As investments in R&D benefit shareholders (e.g., Hall et al., 2005), boards can therefore help align the interests of top managers and shareholders in the context of R&D investments by participating in, and monitoring top managers' R&D spending decisions (Le et al., 2006). For instance, Kor (2006) finds a positive association between board monitoring, proxied by the separation of the CEO and board chairman positions, and R&D intensity.

However, recent studies highlight the disadvantages associated with too much board monitoring. For example, when the board monitors top managers too intensely, they refrain from sharing information with outside directors and consequently the board cannot provide adequate strategic advice to top managers (Adams & Ferreira, 2007). This argument implies that too much board monitoring can pose a threat to the resource provision role of the board (Clark, 2005; Pfeffer & Salancik, 1978). Similarly, board monitoring after a certain threshold reduces a CEO's willingness to provide strategic help to the CEOs of other companies (McDonald & Westphal, 2010). Likewise, Hoskisson et al. (2009) argue that firms whose boards intensely monitor top managers need to pay greater compensation to top managers. These authors attribute this finding to the fact that too much board monitoring increases employment risk of top managers, who then require higher levels of compensation to offset their increased employment risk (Hoskisson et al., 2009). Clark (2005) aptly likens too much board monitoring to the 'policeman-watching-managers' role of the board.

In the light of this recent line of inquiry, this study argues that after a certain point, board monitoring may increase top managers' risk aversion and decrease their likelihood to invest in risky and long-term initiatives such as R&D investments. Specifically, the present study develops three arguments as to why board monitoring, after a certain level, may result in lower R&D intensity. First, as explained above, board monitoring after a certain threshold may lead to excessive risk aversion on the part of top managers, leading them to prune long-term and risky investments such as R&D initiatives to hedge their employment risk (Cheng, 2004; Garg, 2013). In line with this argument, Manso (2011) notes that firms need to establish job security for top managers so that they invest in R&D initiatives that help innovation. Similarly, Faleye et al. (2011) find that R&D expenses are lower in firms whose board intensely monitors top managers.

Second, the literature on board of directors presents evidence that unless top managers perceive the board as supportive, they are unlikely to invest in risky long-term projects such as R&D initiatives (Finkelstein, Hambrick, & Cannella, 2009). However, too much board monitoring can

Download English Version:

<https://daneshyari.com/en/article/10492604>

Download Persian Version:

<https://daneshyari.com/article/10492604>

[Daneshyari.com](https://daneshyari.com)