

DOCTORAL PROGRAMME

CEO CHARACTERISTICS, BOARD DIVERSITY, AND FIRM INVESTMENT OUTCOMES

By

SRIKANTH BALASUBRAMANIAN



भारतीय प्रबंध संस्थान बेंगलूर  
INDIAN INSTITUTE OF MANAGEMENT  
BANGALORE

2021

DOCTORAL PROGRAMME

CEO CHARACTERISTICS, BOARD DIVERSITY, AND FIRM INVESTMENT OUTCOMES

By

SRIKANTH BALASUBRAMANIAN

A Dissertation submitted in Partial Fulfillment of the Requirements for the  
Doctoral Programme of the

**INDIAN INSTITUTE OF MANAGEMENT BANGALORE**

**2021**

**Prof. Haritha Saranga**  
Chairperson  
Doctoral Programme

**Prof. Srinivasan Rangan**  
Chairperson  
Dissertation Advisory Committee

Members of the Dissertation Advisory Committee

- |                                 |             |
|---------------------------------|-------------|
| 1. Professor Srinivasan Rangan  | Chairperson |
| 2. Professor V Ravi Anshuman    | Member      |
| 3. Professor Suresh Bhagavatula | Member      |

## ACKNOWLEDGMENT

I am extremely grateful to all my teachers, friends, family, and doctoral colleagues for their invaluable love and support throughout my academic journey so far. I have been able to complete this dissertation primarily due to the valuable guidance and support of my mentor and dissertation Chairperson, Professor Srinivasan Rangan. His insightful inputs, motivation, and encouragement helped me immensely during all phases of my Ph.D. journey. I fondly remember many occasions where he showed exemplary patience and not only guided me out of trouble but also provided refreshingly new research perspectives that helped me progress significantly. I feel incredibly blessed to have found a guru in Professor Srinivasan Rangan.

I am deeply indebted to my Dissertation Advisors, Professor Ravi Anshuman and Professor Suresh Bhagavatula, for their continuous inputs, motivation, feedback, and support. I sincerely thank all faculty members of XIMB and IIMB for sharing their knowledge, providing valuable inputs, and being available to advise at all times. I specially thank Professor D.V. Ramana, Professor Banikanta, and Professor Asit Mohanty for motivating me to pursue a Ph.D. I sincerely thank Professor R. Narayanaswamy for mentoring me during my course-work and RA days. I also thank Professor Sankarshan Basu for his exceptional mentoring, motivation, and support. I earnestly thank Professor Shashidhar Murthy, Rejie George Pallathita, and Professor Haritha Saranga for extending their support to me as Chairs of IIMB's Doctoral Program.

I earnestly thank Dr. Ganesh, Dr. Thangam, and Ms. Padma for their affection and earnest prayers for my success. I am forever indebted to my beloved parents, K. Lakshmi and N. Balasubramanian, for everything that I am today and thank my beautiful children Adarsh and Advika, for keeping me cheerful always. Lastly, I appreciate the love of my life, Lalitha Charanya Ganesh, for being my inspiration, motivation, purpose, and everything beautiful in life.

## ABSTRACT

Recently, a growing set of studies in corporate finance attempts to empirically quantify the effect of CEO characteristics on firm *investment spending* for samples of *large U.S. firms* (Bertrand and Schoar (2003); Malmendier and Tate (2005); Dittmar and Duchin (2015); Pan, Wang, and Weisbach (2016)). The focus of these studies has been on *CEO* characteristics such as age, gender, education, prior experience, tenure, and overconfidence. However, we know relatively little about how differences between CEO and board member characteristics (diversity) can affect investment outcomes. Further, whether the U.S. evidence extends to culturally and institutionally different economies such as India is an open question.

My dissertation extends the literature on CEO characteristics and corporate investment in several ways. First, by examining India, an emerging economy that has a business environment that is quite different from the U.S., I evaluate the generalizability of the U.S. findings. Second, I construct a measure of board diversity that is multi-dimensional and simultaneously considers several characteristics of board members that relate to age, gender, education, and prior experience. Third, to my knowledge, this is the first study to separate board diversity into two components - diversity among board members other than the CEO, and differences in characteristics of the CEO on the one hand, and board members on the other. Fourth, I believe that this is also the first study to examine whether CEO characteristics and board diversity affect the size of new capital investment projects, project announcement returns, and post-project profitability.

I examine three types of corporate investment – capital expenditures, research and development (R&D), and advertising. My findings on CEO characteristics are as follows. I document that (i) male CEOs tend to spend less on R&D, and advertising, compared to female CEOs; (ii) MBA CEOs spend less on advertising; CEOs with an elite education spend less on

capital expenditures and advertising, but more on R&D; and prior technical and finance education of CEOs is associated with lower R&D; (iii) CEOs with diverse career experience invest more in capital expenditure and advertisements; CEOs with prior finance experience tend to be conservative for all three types of investments, and those with previous technical experience tend to invest less in capital expenditures compared to other CEOs; (iv) consistent with the empire-building hypothesis, I find that CEOs invest more in all three types of investments, the longer they are associated with the company. Overall, CEO characteristics have a bearing on different types of firm investments.

In terms of board diversity, I find no relation between board diversity and capital expenditures and R&D for the overall sample. Because board diversity and investment levels are likely to be endogenous variables that are jointly determined, the observed relation between investment and board diversity could be biased. To address this bias, I examine an arguably exogenous shock to board diversity and evaluate if the relation between investment and board diversity changes around the shock. Specifically, I examine the Companies Act, 2013 which proposed changes to the proportion of independent directors and required the presence of female directors on boards.

When I divide the sample into firm-years before and after the Companies Act, 2013, my conclusions change. I find that while board diversity reduces both types of investments in the pre-Act period, it is associated with higher investment in the post-Act period. I conjecture that the change in board composition mandated by the Act caused this shift in diversity effects. I also find that board diversity is associated with lower advertising expenditures and lower dividends in the pre-Act period. Finally, my new measure of CEO-relative diversity has an impact on investments. It is associated with lower capital expenditures in the post-Act period. However, it has a positive

effect on advertising in the pre-act period. Overall, I conclude that while board diversity can lead to disagreement and reduce investment, it can also be associated with higher investment.

I also study the effects of CEO characteristics and board diversity on project size, project announcement returns, and post-project profitability. My regressions of project cost on CEO characteristics and diversity suggest that out of several CEO characteristics, two alone matter. CEOs with elite education tend to announce smaller projects, and CEOs with technical/technological experience announce larger projects. The latter finding is, however, not robust across specifications. I also find some evidence that project size is positively and significantly related to CEO-relative diversity. This finding supports the idea that having board members with different characteristics generates diverse ideas and stimulates capital investment.

When I examine project announcement returns, I document two CEO characteristics that influence investor reactions – CEO age and whether a CEO has prior finance-related education. Consistent with my expectation, I find that announcement returns are decreasing in the age of the CEOs. This evidence suggests that investors expect older CEOs to work less (lead the quiet life) or have investor horizons that are shorter than those of investors. I also find that investors positively value firms whose CEOs have prior finance education. In terms of board diversity, I find that project-announcement returns are decreasing in board diversity. Thus, investors appear to dislike diverse boards; perhaps they expect such boards to disagree when making decisions and therefore cause projects to stall.

I show that firms that announce project exhibit profitability declines in the five years following the project announcement year. CEO characteristics and board diversity explain a portion of these declines. I find that firms with male CEOs and CEOs with prior finance-career experience perform relatively poorly. In contrast, consistent with Chakravarty and Hegde (2019),

CEOs that had attended elite-schools and CEOs with finance education have higher levels of post-announcement ROA. I also find that when CEO characteristics differ from those of other board members, performance suffers.

My dissertation consists of five chapters. In Chapter One, I motivate the thesis and summarize its contributions and findings. I then review prior research on CEO characteristics and board diversity and firm investment decisions in the second chapter. I present an empirical investigation into the impact of CEO characteristics and board diversity on firm investment and dividend decisions in the next chapter. In Chapter Four, I extend the research set up in Chapter Three by analyzing how CEO characteristics and board diversity relate to three project outcomes – project size, project announcement returns, and post-project profitability. In the concluding Chapter Five, I summarize my findings and discuss the contributions and limitations of my research.