

I C M A  
C E N T R E



# **Essays on Corporate Social Responsibility and Culture**

Thesis submitted for the degree of Doctor of Philosophy

ICMA Centre

Henley Business School

University of Reading

Yi Hu

August 2024

## Declaration of Original Authorship

I confirm that this is my own work and the use of all material from other sources has been properly and fully acknowledged.

---

# Abstract

This thesis adds to the expanding body of research on corporate social responsibility (CSR) and corporate culture. In Chapters 2, 3 and 4, we conduct empirical investigations to explore the impact of these intangible assets on corporate performance on the one side, and companies' incentives towards key cultural changes on the other side.

More specifically, the first study in Chapter 2 examines how CSR mitigates the impact of political uncertainty on stock prices. The findings reveal that firms with superior CSR performance, particularly in terms of stakeholder engagement, display a better performance during periods of higher political uncertainty associated to local elections. This effect is more significant in closely contested elections with a higher degree of unpredictability. The results remained robust after addressing potential issues of endogeneity and are not affected by the outcome of the elections or by political donations made by the firms.

To explore incentives, the second study in Chapter 3 examines how and whether firms adjust their culture after a merger. We find that acquirers with a higher cultural gap with their targets tend to undergo more pronounced cultural changes post-merger and narrow this gap. The results are particularly pronounced after stock swap deals, which evidence the cultural influence of 'inherited' target-firm's shareholders, and when the target firm is characterised by stronger employee power, which underscores the cultural influence of retained target firm's employees into the newly-combined firm. In addition, we observe that cultural differences in domestic mergers can lead to synergy gains and enhance the long-term operational performance of the combined firm.

The third study in Chapter 4 narrows the focus on one employee aspect of CSR: work-from-home (WFH). We examine which firm-level characteristics facilitate the

increasingly popular shift in work patterns after the COVID-19 pandemic, beyond industry-specific effects. While leadership characteristics and governance do not seem to matter much with all controls in place, a corporate culture focussed on innovation and a headquarter located in a state with richer social capital and sense of trust make WFH more likely and generous. Furthermore, we find that firms with higher equity evaluations are more inclined towards flexibility when they rely more on human capital and innovation and when they are more financially constrained. After the COVID-19 pandemic, growth-driven and innovative firms choose flexibility also as a cost-saving tool.

---

## Acknowledgements

Now that I have finally reached the end of my PhD studies at the ICMA Centre, University of Reading, I have many people to thank. Without your help, I could not have come this far, and I cherish your companionship throughout this journey.

First and foremost, my sincere and profound gratitude goes to my supervisors, Chao Yin, Miriam Marra, and Carol Padgett. Chao left the ICMA Centre and changed jobs twice during my PhD studies, but he never considered not supervising me, even expressing concern that his brief absences might impact my studies. That was impossible. Chao guided me through the intricacies of research from the time when I knew nothing about it. My research skills all originate from him. He is an excellent researcher, a diligent supervisor, and also my dear friend.

I appreciate Miriam so much for "adopting" me in my fourth year. In my mind, she is a model academic with powerful personal charm, always shining. She has consistently been dedicated to achieving outstanding research output, and this spirit has infected me, inspiring me to do the same. I am grateful for her numerous questions on my research, which not only help me understand research topics better but also make me a more meticulous person.

The happiest moments each month for me are always after finishing meetings with my supervisors, as we engage in delightful conversations, affirming my research and sparking excitement about the tasks ahead. I highly recommend my supervisory team to everyone! I also appreciate Carol for selecting me in my PhD application and helping me secure the PhD scholarship. Without her, my life might have taken a different direction.

I am grateful to the ICMA Centre for providing us with a nurturing environment for success, such as appointing us as Teaching Assistants from our first year, offering annual research funding, and fostering a friendly and respectful atmosphere. I also appreciate the senior PhDs who helped me when I just joined the PhD environment: Ana, Corina, Dina, Moustafa, Ran, Xiaohan, and Yongda.

## Acknowledgements

---

I want to thank the members of our daily active WeChat group: Fengting, Jing, and Zhenghong. We discuss research; one person's question becomes our shared challenge, and we work together to solve it. We also discuss life; the big and the small. From a funny story about our day to life's biggest dilemmas, such as when to hustle and when to chill. I often find myself laughing out loud at the phone screen due to the humour we share and our unrestrained jokes.

I also want to express my gratitude to my PhD peers who started at the same time as me at the ICMA Centre: Alex, Millie, Ricky, Stephen, and Zhiguo. On the way to the UK to begin my PhD studies, I set a goal for myself – to become the most outstanding person among my peers. However, as time passed, I changed my perspective. It's not because this goal is too difficult, although it is challenging; my wish is that everyone lives a life as they hope. I have never felt hostile competition among us but rather a spirit of caring and encouragement. It's truly magical when I recall the journey of growing together from fresh PhDs.

Finally, the deepest gratitude goes to my family. My parents are the most loyal fans of learning, which, of course, I inherited. They cleared any barriers outside my studies and allowed me to focus on learning. They are also the most loyal fans of mine, interested in everything I mention in our chats. No matter what happens, I always knew that they love me very much, and so do I. I also want to thank my boyfriend, Nick, for his tolerance of my mood swings. I apologize for the blame that often rains down from the sky with frequent occurrences. These are indeed not his faults, as he believes, but stem from my fluctuating research progress. He always supports me and engages in discussions about my research thoughts when I force him to.

That is as far as I can think of the people I most want to thank. Of course, I still have many others to express my gratitude to. Sometimes, even small gestures, like a smiling face from a stranger on the way to campus in the morning, can bring joy to my entire day. Oh, I forgot to mention, I also appreciate myself for often treating myself as my best friend and never giving up on myself. Well done, Yi!

Yi Hu

January 2024, Reading

---

# Table of Contents

|  |     |
|--|-----|
| Declaration of Original Authorship .....   | ii  |
| Abstract .....   | iii |
| Acknowledgements.....  | v   |
| Table of Contents.....   | vii |
| List of Tables .....   | xi  |
| List of Figures .....  | xiv |
| <br>   |     |
| Chapter 1 Introduction and Literature Review .....   | 1   |
| 1.1 Introduction.....  | 1   |
| 1.2 General Literature Review .....  | 2   |
| <i>1.2.1 The definition and measurement of corporate culture</i> .....                       | 2   |
| <i>1.2.2 The definition and measurement of CSR</i> .....                                     | 4   |
| <i>1.2.3 The interplay between CSR and corporate culture</i> .....                           | 5   |
| <i>1.2.4 Employee relations: A vital CSR component</i> .....                                 | 6   |
| 1.3 Thesis Outline .....   | 7   |
| 1.4 Intended Thesis Contributions .....  | 9   |
| Figures for Chapter 1 .....  | 11  |
| <br>   |     |
| Chapter 2 Political Uncertainty, Corporate Social Responsibility, and Firm Performance ..... | 12  |
| 2.1 Introduction.....  | 12  |

## Table of Contents

---

|   |    |
|---|----|
| 2.2 Related Literature and Hypothesis Development .....           | 17 |
| 2.2.1 <i>Political uncertainty and stock returns</i> .....        | 17 |
| 2.2.2 <i>CSR and corporate resilience</i> .....                   | 18 |
| 2.2.3 <i>Political capital, risk and stock return</i> .....       | 19 |
| 2.2.4 <i>Political preference on CSR</i> .....                    | 20 |
| 2.3 Data and Summary Statistics .....                             | 20 |
| 2.3.1 <i>CSR and return variables</i> .....                       | 20 |
| 2.3.2 <i>Baseline regression model</i> .....                      | 22 |
| 2.3.3 <i>Sample construction and descriptive statistics</i> ..... | 23 |
| 2.4 Pre-Election Returns .....                                    | 24 |
| 2.4.1 <i>Baseline results</i> .....                               | 24 |
| 2.4.2 <i>Identifying the effects of CSR</i> .....                 | 26 |
| 2.4.3 <i>Robustness tests</i> .....                               | 28 |
| 2.5 Additional Tests and Further Discussion.....                  | 30 |
| 2.5.1 <i>Pre-election volatility</i> .....                        | 30 |
| 2.5.2 <i>Stakeholder relations</i> .....                          | 31 |
| 2.5.3 <i>Internal vs external stakeholders</i> .....              | 31 |
| 2.5.4 <i>Systematic risk exposure</i> .....                       | 32 |
| 2.5.5 <i>The effect of political party and donations</i> .....    | 33 |
| 2.6 Conclusions.....  | 35 |
| Figures and Tables for Chapter 2.....                             | 37 |
| <br>  |    |
| Chapter 3 Cultural Convergence after Mergers .....                | 49 |
| 3.1 Introduction.....   | 49 |
| 3.2. Related Literature and Hypothesis Development .....          | 53 |
| 3.3 Sample and Summary Statistics.....                            | 56 |
| 3.3.1 <i>Main cultural variables</i> .....                        | 56 |

---

|  |    |
|--|----|
| 3.3.2 <i>Data and sample</i> .....   | 58 |
| 3.3.3 <i>Baseline regression model</i> .....   | 59 |
| 3.3.4 <i>Descriptive statistics</i> .....  | 60 |
| 3.4 Cultural Convergence in Post-merger.....   | 61 |
| 3.4.1 <i>Baseline results</i> .....  | 61 |
| 3.4.2 <i>Cultural dimensions</i> .....   | 62 |
| 3.4.3 <i>Stock swap deals</i> .....  | 63 |
| 3.4.4 <i>Employee's influence</i> .....  | 64 |
| 3.5. Additional Tests and Further Discussion.....  | 65 |
| 3.6 Conclusions.....   | 67 |
| Tables for Chapter 3 .....   | 69 |
|  |    |
| Chapter 4 Work-from-Home Policies and Firm's Characteristics: A Cross-Sectional<br>Analysis .....                | 77 |
| 4.1 Introduction.....  | 77 |
| 4.2 What affect Firms' Work from Home Policies?.....   | 81 |
| 4.2.1 <i>Firm's financial resources</i> .....  | 82 |
| 4.2.2 <i>Market evaluation of firm's equity capital</i> .....  | 83 |
| 4.2.3 <i>State and corporate culture</i> .....   | 84 |
| 4.3 Data.....  | 86 |
| 4.3.1 <i>Data on work-from-home policies: The Flex Index</i> .....   | 86 |
| 4.3.2 <i>Data on firm's characteristics</i> .....  | 90 |
| 4.3.3 <i>Summary statistics</i> .....  | 91 |
| 4.4 Empirical Results.....   | 92 |
| 4.4.1 <i>Baseline regression analysis: Testing hypotheses 4.1 and 4.2 using firm's<br/>    financials.</i> ..... | 92 |
| 4.4.2 <i>State and firm culture: Testing hypotheses 4.3 and 4.4</i> .....  | 95 |

## Table of Contents

---

|  |     |
|--|-----|
| 4.4.3 Robustness check: Alternative measure of work from home in panel data analysis.....                  | 97  |
| 4.4.4 Additional test for potential endogeneity due to sample selection bias .....                         | 97  |
| 4.4.5 Robustness check: Control for CEOs' individual characteristics and firms' corporate governance ..... | 98  |
| 4.5 The Book-to-Market Ratio Effect on Work-from-Home Policies.....  | 99  |
| 4.6 Conclusions.....   | 102 |
| Figures and Tables for Chapter 4.....  | 104 |
| <br>   |     |
| Chapter 5 Conclusions .....  | 116 |
| 5.1 Summary of the Findings and Contributions of the Thesis .....  | 116 |
| 5.2 Research Impact.....   | 118 |
| 5.3 Suggestions for Future Research .....  | 119 |
| Tables for Chapter 5 .....   | 120 |
| <br>   |     |
| Appendix.....  | 121 |
| References.....  | 143 |

---

## List of Tables

|   |    |
|---|----|
| Table 2.1 Descriptive Statistics.....   | 39 |
| Panel A: CSR, Return and Financial Data .....                                     | 39 |
| Panel B: Election and Economic Data .....   | 39 |
| Table 2.2 Pre-Election Returns and CSR.....                                       | 40 |
| Panel A: Baseline Regression .....  | 40 |
| Table 2.3 IV Test.....  | 42 |
| Table 2.4 Robustness Tests .....  | 43 |
| Panel A: Elements of CSR and Returns .....  | 43 |
| Panel B: Bloomberg ESG and Returns .....  | 43 |
| Panel C: Panel Data Regression.....   | 44 |
| Panel D: Presidential Elections .....   | 44 |
| Table 2.5 Pre-Election Volatilities and CSR.....                                  | 45 |
| Table 2.6 Stakeholder Relations and CSR During Periods of Political Uncertainty . | 46 |
| Table 2.7 Systematic Risk and CSR During Periods of Political Uncertainty.....    | 47 |
| Table 2.8 Other Potential Explanations .....                                      | 48 |
| <br>  |    |
| Table 3.1 Descriptive Statistics.....   | 69 |
| Table 3.2 Ex-Post Adjustment .....  | 70 |
| Table 3.3 Cultural Dimension Analysis .....                                       | 72 |
| Table 3.4 Stock Swap Deals.....   | 73 |
| Panel A: Ex-post cultural adjustment.....   | 73 |

## List of Tables

---

|   |     |
|---|-----|
| Panel B: Ex-ante impact of cultural gap on deal’s payment method .....  | 74  |
| Table 3.5 Employees’ Influence .....  | 75  |
| Table 3.6 Analysis of Acquiring Firms’ Short and Long-Term Performance .....  | 76  |
| Table 4.1 Descriptive Statistics.....   | 105 |
| Table 4.2 Regressions with Financial Controls: Testing Hypotheses 4.1 and 4.2 ...   | 106 |
| Table 4.3 Regressions with Financial Controls: Testing Hypotheses 4.1 and 4.2 ....  | 109 |
| Table 4.4 Digital Resilience as Alternative Measurement for Work-From-Home..  | 110 |
| Table 4.5 Heckman Test .....  | 111 |
| Table 4.6 Robustness Check: Baseline Regression with Additional Controls for<br>CEO- Leadership and Corporate Governance..... | 112 |
| Table 4.7 Panel Regression: Firms’ Financials determining the B/M Ratio.....  | 113 |
| Table 4.8 The B/M Ratio Effect on WFH Policies: Moderating Role of Financial<br>Constraints.....                              | 114 |
| Table 4.9 The B/M Ratio Effect on WFH Policies: Moderating Role of Innovation   | 115 |
| Table 5.1 Overview of the Thesis by Chapter.....  | 120 |
| Appendix.....   | 121 |
| Table A Variable Definitions for Chapter 2.....   | 121 |
| Table B.1 Pre-Election Returns and CSR Using Double-Cluster Standard Errors by<br>State and Year .....                        | 125 |
| Table B.2 Pre-Election Returns and CSR with Extra Control of Political Donation   | 126 |
| Table C Variable Definitions for Chapter 3 .....  | 127 |
| Table D Variable Definitions for Chapter 4.....   | 131 |
| Table E Correlation Matrix .....  | 134 |
| Table F Firms’ distribution by state and industry. ....   | 136 |
| Table G Baseline Regressions of Table 4.2 with Standard Errors Clustered at the<br>Industry Level .....                       | 138 |

---

|  |     |
|--|-----|
| Table H Propensity Score Matching used in analysis of Table 2: Post-matching diagnostics.....  | 139 |
| Table I The Thirty Most Representative and Most Frequently Occurring Words in the Culture Dictionary of Li, Mai, Shen, and Yan (RFS, 2021). .... | 140 |

## List of Figures

|   |     |
|---|-----|
| Figure 1.1 The Relationships Between Corporate Culture, CSR, and Employees .....        | 11  |
| Figure 2.1 Mean of Weekly Volatility around 1992–2019 US Gubernatorial Elections .....  | 37  |
| Figure 2.2 CSR Effects on Returns around Gubernatorial Elections from 1992 to 2019..... | 38  |
| Figure 4.1 Firm’s Information on Flex Index Website (Example: Zoom) .....               | 104 |

# Chapter 1

## Introduction and Literature Review

### 1.1 Introduction

In recent decades, awareness of corporate social responsibility (CSR) has increased significantly, both among practitioners and in academia (Flammer et al., 2013; Bardos et al., 2020). For example, by 2020, 90% of S&P 500 firms had released annual sustainability reports, compared to 20% in 2012 and 50% in 2015 (Governance & Accountability Institute, 2012, 2020). CSR is now considered one of the most influential areas in accounting and finance, as evidenced by the growing number of academic papers and discussions (Tsang et al., 2023). While many companies have long practiced some form of corporate social and environmental responsibility (Rangan et al., 2015), the mechanisms through which these trends arise are still being explored. Gillan et al. (2021) point out the need for further research particularly with regards to corporate finance and firms' ESG/CSR performance.

The reasons behind firms embracing CSR and building a strong social corporate culture can be multifaceted. Firms face increasing pressure (or compulsion) from societal norms and government regulations to engage in ethical and socially responsible practices to maintain their operations (Zheng et al., 2015; Wang et al., 2022). It is worth noting that – at least in the short term - ethic and social engagement often comes with additional costs if compared to adopting low-cost, irresponsible behaviours. For instance, firms that aspire to uphold high standards of business ethics may allocate significant resources to benefit their stakeholders. However, these costs can be viewed as *strategical investments* (Kuokkanen and Sun, 2020). Even though the returns on the initial investments may not be immediate, by proactively disclosing information on their ethic and socially-responsible commitments and policies, firms can strengthen their ties with the public and

with governance bodies, ultimately reaping longer-term profits (e.g., McWilliams et al., 2006; Nguyen et al., 2020).

Conversely, a good CSR/corporate culture can also be intertwined with a manager's personal interest, as positive contributions to stakeholders not only reflect the firm's image but also the image of the firm's decision-makers (Cai et al., 2020). This aspect can become problematic – however - when entrenched managers divert the firm's resources to build their personal reputations, often overlooking the firm's priorities. Additionally, managers may choose to focus on projects related to business ethics to attain a more comfortable work-life balance (Cronqvist et al., 2009). Excessive spending on such non-operational activities without a strategical focus can lead to more binding financial constraints and reduced investment efficiency, among other challenges (Barnea and Rubin, 2010; DesJardine et al., 2021).

Understanding a firm's incentives to engage in investment in such intangible assets is a critical question in this area of research. A better understanding of the incentives allows us to predict when and why a firm might choose to act ethically or otherwise. For example, if a firm's motivation for ethical behaviour is based only on public perception, the firm may be more inclined to act ethically when it acts in the public eye and less so in private deals. The understanding of firm's incentives can assist policymakers, industry regulators, and business leaders in designing more effective policies and strategies. It is also beneficial for investors: if a certain positive relationship between business ethics and financial performance is established, investors could use ethical and CSR-driven criteria to select what they think will be more profitable firms in the future. Understanding firms' incentives can also help investors identify whether a firm is genuinely committed to contributing to the society or if it is simply engaging in greenwashing or diversity-washing practices (Lyon and Montgomery, 2011; Chen and Chang, 2013; Baker et al., 2023).

## 1.2 General Literature Review

### *1.2.1 The definition and measurement of corporate culture*

There are general and subject-related definitions of corporate culture. Crème (1993) defines corporate culture as the unspoken code of communication among members of an organization. O'Reilly and Chatman (1996) understand it from a social control perspective, where corporate culture represents a set of forms and values that are widely

shared and strongly held throughout the organization. In practice, executives also believe in this social control view and think it can guide employees' actions (Graham et al., 2022a, 2022b). Psychologists and economists (Guiso, Sapienza, and Zingales, 2015a) focus on the tangible appearance of corporate culture, defining it as a pattern of behaviour developed in a firm. More recently, Grennan and Li (2023) further explore this avenue, defining corporate culture as an informal institution. Although it may not shape employees' behaviours directly like policies do, it still has the potential to induce changes among employees and in the business.

In terms of measuring corporate culture, Grennan and Li (2023) summarize the evolution of quantitative measurements of corporate culture so far, and argue that it has progressed through several stages, going from surveys/interviews to firm-invariant proxies, then to time-varying proxies, and finally to computational linguistic models.

There are evident advantages of measuring corporate culture through interviews with top executives, such as allowing tailored questions and responses based on specific research objectives (e.g., Pellegrino and Zheng, 2024) and gaining a deeper understanding of the respondents' perspectives. However, the drawback is that the measurement might be prone to selection bias (e.g., Bethlehem, 2010) and the process could be time and labour-intensive (e.g., Couper, 2017). Therefore, more objective proxies that can represent larger sample data have been introduced, such as executives' cultural heritage (e.g. Nguyen, Hagendorff, and Eshraghi, 2018) or those associated to executives' personal traits (e.g. Levi, Li, and Zhang, 2010; Biggerstaff, Cicero, and Puckett, 2015; etc). As more digital data such as degree of religiosity in the county where the firm is located (Hilary and Hui, 2009) and CSR (e.g. Bereskin et al., 2018), becomes available, time-varying proxies, capable of capturing cultural changes and their influence over time, are becoming a more favourable choice.

More recently, some researchers have started employing computational linguistics models to measure corporate culture. For example, Guiso et al. (2015a) collect frequently mentioned terms from the corporate websites of S&P 500 firms which refer to corporate values: integrity, teamwork, innovation, respect, quality, safety, community, communication, and hard work (in descending order of frequency). Although appealing, this method has been criticized for relying on the 'advertised' rather than the actual

corporate values (Cumming et al., 2023). Employees might sometimes describe their corporate culture differently from the advertised one (Graham et al., 2022a).

An alternative approach is the one of Fiordelisi and Ricci (2014) that use textual analysis to extract from the 10-K reports in the SEC's Edgar database four terms related to corporate culture: collaborate, compete, control, and create. Their measurement of corporate culture based on these terms can offer more objective results and is available for a larger sample of firms. Most recently, Li, Mai, Shen, and Yan (2021) analyse firms' earnings call transcripts and employ a machine learning word-embedding model to measure the corporate culture based on the first five values identified by Guiso et al. (2015a). Using this novel model, the measurement of corporate culture has shown significant improvement as evidenced by several validation tests they carry out, such as the well-established markers for best practices in corporate five values being positively and significantly associated.

Notably, some papers have focused on more specific cultural elements, especially integrity as this is the most recurring value across listed firms, mentioned by 52% of the companies (Guiso et al., 2015a). The corporate fraud history is commonly used as a measurement of corporate integrity (e.g., Pacelli, 2019).

### *1.2.2 The definition and measurement of CSR*

Many papers utilize CSR as a representation of corporate culture, a rationale supported by Gao et al. (2014) and Hoi et al. (2013). These scholars argue that a firm's CSR codes encapsulate shared beliefs and values within a company, serving as a critical component of the broader corporate culture. However, despite their intrinsic connection, nuanced differences persist between CSR and corporate culture.

CSR is a framework aimed at understanding the role that businesses play or/and should play in society (Carroll, 1999; Goodpaster, 1983). It underscores the social impact of business. Doukas and Zhang (2021) refer to it as corporate social culture. A widely accepted definition for CSR is 'the extent to which businesses meet the economic, legal, ethical, and discretionary responsibilities imposed on them by their stakeholders' (Maignan and Ferrell, 2000). This definition, commonly adopted by recent CSR research, narrows down the specific responsibilities of firms to stakeholders, rather than to the society at large.

Stakeholders are any identifiable group or individual who can influence the achievement of an organization's objectives or is affected by such achievement (Freeman and Reed, 1983). Specifically, stakeholders are categorized into primary and secondary stakeholders based on their importance to a business survival. Primary stakeholders are those whose continued participation is crucial for business survival and include customers, employees, shareholders, suppliers, the community, and government regulatory agencies. Secondary stakeholders have less direct influence on the firm and are less necessary for its survival; they encompass special-interest groups, the mass media, competitors, and trade associations (Maignan et al., 2005).

Available databases on CSR are more developed than those for corporate culture measurements. The common databases used in most CSR research are MSCI ESG, Refinitiv, Bloomberg, Sustainalytics, RepRisk, and ISS ESG. These databases commonly split the CSR measurement across various dimensions and evaluate the firm's relationship with each stakeholder (community, customers, employees, and regulators are the most common CSR categories in these databases).

### *1.2.3 The interplay between CSR and corporate culture*

Corporate culture is believed to be a determinant of CSR (Galbreath, 2010). Culture is perceived as a set of beliefs or values, while CSR tends to focus on the corporate impact on stakeholders. Specifically, a firm's culture guides employees and management behaviours, determines product and service quality, ethics in advertising content, and the fair treatment of customers and employees (Herndon, Fraedrich, and Yeh, 2001). Hence, corporate culture is expected to impact CSR. For example, a culture focussed on high quality of products and services can foster a positive relationship between customers and the firm.

Notably, not every aspect of the corporate culture leads to responsible firm behaviours. According to Hartnell et al. (2011), for example a hierarchical culture emphasizes stability, control, and internal focus, requiring employees to meet clear expectations when their roles are visibly defined. As a result, the firm is expected to achieve efficiency and timeliness. While this can be beneficial for certain aspects of the business operations, it may limit the organization's ability to adapt to the diverse needs and expectations of various stakeholders. Stakeholder relationships often require flexibility and responsiveness, areas where hierarchical structures may struggle to provide.

Contrastingly, the ‘clan’ culture type is associated with positive employee attitudes (Hartnell et al., 2011). This culture affirms that organizations’ success depends on hiring, developing, and retaining their human resource base (Cameron et al., 2006).

Compared with research on CSR, corporate culture is still a developing area, due also to the limited data availability and the difficulty in measuring culture, as discussed in section 1.2.1. For example, according to Gillan et al. (2021), existing research has identified several determinants of CSR, including twelve market characteristics, twelve firm leadership characteristics, and eleven ownership characteristics, while so far only some firm leadership characteristics have been confirmed empirically as determinants of corporate culture (Graham et al., 2022b).

#### *1.2.4 Employee relations: A vital CSR component*

Good employee-related CSR practices include investments in work-life balance (e.g., childcare allowances and flexible work time), health and safety, and employee involvement in decision making (Flammer and Luo, 2017). Such practices are vital to the overall CSR performance (Shan and Tang, 2023). Many CSR programs are employee-related (e.g., Flammer, 2015), making employee relations an integral example of influential CSR practices (Mao and Weathers, 2019). Additionally, employees make an essential contribution to business success: they are a firm’s most valuable asset and a key source of its competitive advantage (Coff, 1997).

The way a firm treats and deals with its employees can have various impacts on the firm. On the one hand, better employee treatment can improve productivity (Bellet et al., 2023), enhance innovation (Chen et al., 2016), reduce susceptibility to acquisitions (Macias and Pirinsky, 2015), and add long-term value (Edmans, 2011). Contrasting evidence is provided by Mueller, Ouimet, and Simintzi (2017) who show that firms with higher pay inequity (low pay for rank-and-file employees relative to top executives) exhibit higher valuation and better operating performance. Additionally, Ben-Nasr and Ghouma (2018) find that high levels of employee welfare standards contribute to stock price crash risk. The agency theory also predicts that managers using generous employee welfare plans may aim to minimize the likelihood of employees exposing management wrongdoings (Ben-Nasr and Ghouma, 2018).

The study of employee relations and its impact on firms’ performance and strategies remain therefore an important area of study, as the role of employees has been relatively

under-investigated in the past literature. Unlike other stakeholders such as suppliers or customers, employees are perceived to have less direct impact on a firm's profitability. Traditional competitive cultures emphasize firm's control over employees and prioritization of high profits, often resulting in the neglect of employees' interests and needs, leading to poor demonstration of social responsibility (Galbreath, 2010). Taylor (1911) regarded employees as unskilled labour with no special status, similar to other inputs like raw materials. In this view, employee welfare was considered wasteful expenditure, conflicting with management's goal of maximizing output while minimizing costs.

However, in recent decades, firms have become more human capital-intensive due to technological advancements and changes in the nature of business and processes (Chen et al., 2016). Additionally, more recently, there has been a cultural shift towards values of equality, diversity, and inclusion, and firms are increasingly improving employees' welfare (Shan and Tang, 2023). Consequently, the corporate culture is more focussed on values such as teamwork, respect, and flexibility as they are reflected in higher attention towards employee relations (Fauver et al., 2018).

The relationship between the three topics of corporate social responsibility, corporate culture, and employee relations is described in Figure 1.1. Corporate culture affects CSR, and that includes its relationship with employees (and other stakeholders).

### 1.3 Thesis Outline

The thesis is organised as follows. Chapters 2 to 4 constitute the main body of this thesis, presenting the novel research undertaken. The final chapter provide an overview and summary of the results. Chapters 2, 3, and 4 complement each other as they focus on CSR and corporate culture within corporate finance-related questions; however, each one stands as an independent study that offers unique findings contributing to its respective literatures.

In Chapter 2, we analyse the impact of firms' CSR on financial performance during periods of political uncertainty. We employ data from U.S. gubernatorial elections as a measure of political uncertainty, as these elections occur more frequently in the U.S. and can be considered exogenous shocks. The baseline results reveal that firms with higher CSR ratings outperform those with lower CSR ratings before gubernatorial elections. The

CSR value in protecting returns becomes more pronounced in closely contested elections characterized by higher unpredictability. By using the CSR ratings of peer firms headquartered in the same metropolitan area as an instrument, we address and overcome potential endogeneity challenges. The results are not influenced by the post-election outcomes or political donations made by firms. Further analysis indicates that the increase in returns can be attributed to the enhanced relationship between firms and their internal stakeholders.

In Chapter 3, we examine corporate cultural changes following a merger to assess whether there is active effort from the acquirer to align with the preferences of new investors and employees. The data used for this analysis come from a newly developed cultural index created using machine learning techniques by Li, Mai, Shen, and Yan (2021). This index encompasses five cultural categories: integrity, teamwork, innovation, quality, and respect. Following mergers, acquiring companies adjust their corporate culture to align more closely with that of the target, especially when they acquire target shareholders through stock swaps. These results hold true when considering either the aggregate cultural index or when focusing on the individual cultural categories. Furthermore, we examine the impact of cultural differences between the acquirer and target on long-term announcement returns and find that cultural diversity does have a significant effect.

Chapter 4 investigates the factors driving the choice for work-from-home (WFH) at the firm level. We utilize a novel dataset (the Flex Index) to determine those choices after the COVID-19 pandemic and control for both firm-level and state-level determinants of flexible working arrangements measured by a categorized variable, including Fully Flexible, Structured Hybrid, and Full Time in Office. As alternative measurement of WFH we use the minimum number of days that companies require employees to work from the office each week. Our findings reveal that firms located in a state with stronger social capital, with a corporate cultural more focussed on innovation, with a lower book-to-market ratio are more inclined to adopt flexible working practices. This result remains consistent even when employing propensity score matching and Heckman test to address sample selection bias. To gain deeper insights into the underlying mechanisms, we examine several mitigating factors of the impact of the market overvaluation on WFH (need for human capital, stronger innovation orientation, and more significant financial constraints). The results indicate that overvalued firms with greater financial constraints

are more likely to implement work-from-home arrangements, primarily for cost-saving purposes.

#### 1.4 Intended Thesis Contributions

While many papers have studied the impact of CSR/culture on various aspects of firms, such as investment decisions (Bhandari and Javakhadze, 2017; Cao and Rees, 2020), financial decisions (Verwijmeren and Derwall 2010; Ng and Rezaee, 2015), and risk management (Albuquerque et al., 2019), we have identified and worked on some interesting gaps in the literature.

The first study investigates whether CSR affects firm performance in the context of political uncertainty. While there is extensive discussion on the value-adding role of CSR (Flammer 2013; Malik 2015), relatively little is known about its value-protecting role (Bae et al., 2019). This research shows that CSR has precisely this role during periods of heightened political uncertainty and so it enriches the ongoing discourse on the value that CSR provides to shareholders. Additionally, it contributes to the existing literature on corporate resilience by highlighting CSR investments' ability to mitigate the adverse effects of external shocks. This implies that firms should invest in stakeholder engagement through CSR to better prepare for political risks and other adverse events.

The second study addresses a broader question: when, how, and for whose benefit does a firm undertake changes in its corporate culture? This question is empirically challenging due to the difficulty in measuring cultural changes in the first place, and in distinguishing motivations and actors driving them in the second place (managers, shareholders, and stakeholders). One of the contributions of this study lies in using: i) stock swap deals to capture exogenously how changes in shareholder structures influence the acquirer's corporate culture after a merger; ii) employees power in the target firm to capture the influence of retained employees in the same context. The research provides evidence that shareholders' and employees' cultural preferences play a dominant role in shaping a firm's cultural adjustment after a merger. This also implies that companies actively align themselves with the beliefs of their new investors, aligning with findings by Golubov et al. (2020) and Huang and Wu (2020).

The final study contributes to our understanding of the factors influencing firms' decisions regarding WFH. Following the COVID-19 period, a significant number of

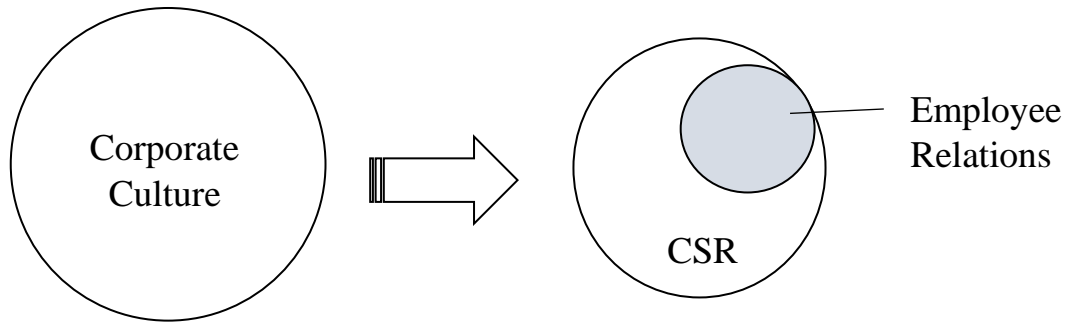
firms adopted work-from-home practices after the pandemic trials. However, some firms have announced a return to traditional working styles post-lockdown. This research question is of great significance because employees are one of the most important categories of stakeholders (Schuler, 2000) and the uncertainty surrounding corporate working arrangements has an impact on regional economies (e.g., Delventhal and Parkhomenko, 2020), labour market outcomes (e.g., Hou et al., 2022), and firm performance (e.g., Bloom et al., 2015; Ng et al., 2021). Exploring the determinants of these decisions can assist the public and the decision-makers in predicting and understanding the current trends in work-from-home. Furthermore, this research makes a pioneering use of the novel firm-level data from the Flex Index in academic research. The dataset is very comprehensive and includes various dimensions of work-from-home arrangements, such as the required number of days for employees to work onsite and the degree of allowed flexibility, among others.

**Figures for Chapter 1**

**Figure 1.1**

**The Relationships Between Corporate Culture, CSR, and Employees**

This figure shows that corporate culture on the left can influence CSR, and the category of employee relations which is included in CSR.



## Chapter 2

# Political Uncertainty, Corporate Social Responsibility, and Firm Performance

### 2.1 Introduction

Political uncertainty is a crucial factor that affects economic development, corporate decision-making, and asset prices. Election cycles cause fluctuations in economic growth (Hibbs, 1977; Garfinkel and Glazer, 1994), discourage corporate investment (Julio and Yook, 2012; Giambona et al., 2017; Jens, 2017), increase the cost of debt and equity financing (Waisman, Ye, and Zhu, 2015; Colak et al., 2017), and prompt firms to hold more cash (Cheng et al., 2018). As a result, the market demands a higher risk premium in response to political news (Pástor and Veronesi, 2013), which drives down the current share price (Liu Shu and Wei, 2017).

The adverse effects of political uncertainty have been well-documented in existing literature. However, cross-sectional differences between firms in their response to uncertainty are not yet fully understood. This study aims to advance our knowledge on this issue by investigating how a firm's CSR performance influences its stock return during periods of political uncertainty. Due to mixed evidence on the effect of CSR on firm decision-making, the answer to our question is not self-evident. Some scholars believe that high CSR investment is a reflection of a severe agency problem, whereby managers use a firm's resources to build up their reputations while sacrificing shareholder benefits (Cespa and Cestone, 2007; Barnea and Rubin, 2010; etc.). If this is the case, high CSR firms should be less resilient during times of higher uncertainty (Lins et al., 2013; Nguyen et al., 2015). However, other researchers have documented evidence that CSR

investment helps firms improve their stakeholder relationships and pays off in the long term (Aktas et al., 2011; Deng et al., 2013; Ferrell et al., 2016; Li et al., 2022). This view would predict an outperformance of high CSR firms during political uncertainty.

We follow Jens (2017) and use US gubernatorial elections as our primary setting for political uncertainty. Like presidential elections, gubernatorial elections occur at fixed intervals and can be considered exogenous events. This allows us to isolate the effect of political uncertainty from other confounding risk factors. The election schedule varies among states, creating cross-sectional variation that can better help us identify the effect on firm outcomes. Figure 2.1 illustrates the trend of volatility around gubernatorial elections from 1992 to 2019. We observe that average stock volatility of firms in states interested in elections generally increases towards election week and decreases after the election results are released. The evolving stock return volatility around gubernatorial elections reflects investors' awareness of the uncertainty associated with these elections.<sup>1</sup>

We define the event window as the 60 and 90 days before the election and examine the effect of CSR on stock returns during this period using a sample of US public firms from 1992 to 2019. Our test results reveal a positive relationship between CSR score and pre-election stock returns, even after controlling for various observable and unobservable factors that are expected to affect returns. A one-standard-deviation increase in the CSR rating is associated with a 0.44% increase in returns 60 days prior to an election and a 0.60% increase in returns 90 days prior. We expand the tests to different event windows and find that the effect starts to emerge around 120 days before an election, peaks at about 60 days, and then subsides post-election, coinciding with the expected change in political uncertainty. Comparing the effect of closely contested elections to other more predictable ones, we find that the effect is much stronger in close elections. Our results provide further evidence that the influence of CSR on stock returns is more significant when the level of political uncertainty is higher.

To address potential endogeneity challenges, we perform a two-stage least square (2SLS) test using an instrumental variable approach, following the rationale provided by previous studies. Gillan et al. (2021) suggest that CSR activities have a geographical reliance, while Jha and Cox (2015) show that a firm's CSR rating is related to the location of its

---

<sup>1</sup> A similar pattern has also been identified by previous studies, such as Li and Born (2006), Gemmill (1992), and Bialkowski et al. (2008).

headquarters. We use the average CSR score of firms in the same Metropolitan Statistical Area (MSA) as our instrument variable. To remove the correlation caused by common fundamentals, we follow Bustamante and Frésard (2021) and exclude potential product market competitors and firms with vertical or horizontal links. Our selection of the instrumental variable satisfies the relevant condition because of the geographic clustering of CSR performance (Jha and Cox, 2015) and the exclusion condition because the CSR performance of unrelated local neighboring firms is unlikely to influence the focal firm's stock return. Our 2SLS test results are consistent with the findings in the baseline model.

We perform further robustness tests to check whether our main results are consistent when using different measurements of CSR score, panel data analysis, and an alternative proxy to measure political uncertainty. Firstly, the MSCI ESG database provides seven aspects to describe a firm's CSR level. In our main tests, we use the aggregation of the six aspects (*Environment, Employee Relations, Human Rights, Community, Diversity, and Product*) to measure CSR performance, but some papers use the first five or all seven dimensions (six aspects and *Corporate Governance*) to proxy CSR. In the robustness check, we apply the latter two alternative measurements. Secondly, to address concerns that a high CSR firm may outperform a low CSR firm regardless of political uncertainty, we use an alternative panel dataset that includes all firm-years observations, regardless of whether the election takes place or not, and use an interaction term to capture the incremental effect of CSR on returns during the election year. Finally, we investigate the CSR-return relationship under the uncertainty associated with the presidential election to generalize our conclusion to a country-level shock. Our test results from these robustness tests remain qualitatively similar to those obtained from the baseline model.

Next, we investigate potential channels driving the higher stock return performance at times of political uncertainty for firms with higher CSR scores. One potential explanation of our results is that the improved stock return might be associated with higher risk. CSR investment made by the firm could potentially have political implications, and investors might demand higher compensation in the form of higher expected stock returns due to political uncertainty (Ansolabehere et al., 2003). If this is the main driver of our findings, we should expect the additional risk associated with higher CSR performance to be reflected in higher pre-election stock volatility. However, our results show that firms with higher CSR experience a lower level of stock volatility before the election. Therefore, the superior performance of high CSR firms is not likely to be risk-driven.

An alternative explanation for the results of our study could be offered by a stakeholder perspective. On the one hand, the unpredictability of election outcomes may stimulate voter engagement leading to potential distractions in the workplace (Bursztyn et al., 2017). On the other hand, political uncertainty can have tangible effects on corporate decision-making, resulting in reductions in corporate investments (Jens, 2017), and mergers and acquisitions (Bonaimen et al., 2018). These reductions do not only affect employees' perceptions of the firm's future perspectives but they may also have an impact on their compensation. Given that previous research has demonstrated the significant impact of the firm's relationship with internal stakeholders on corporate financial performance (Edmans, 2011), a firm's stronger commitment to improving internal employees' treatment can help to build trust and mitigate the negative effects caused by high political uncertainty. To test this hypothesis, we follow Becchetti et al. (2015), and decompose the aggregate CSR measure into stakeholder-related elements across six aspects of CSR and other elements and investigate which of these categories drives our findings. Our results show that the higher strength score in stakeholder-related elements dominates other elements in explaining the positive effect of CSR on pre-election stock returns, implying that better relationships between stakeholders and the firm are more likely to be the driver of our findings. These findings agree with Luo and Bhattacharya (2009), who believe that firms with good social capital are likely to cope better with both internal and external shocks thanks to the insurance-like protection from their loyal stakeholders.

We further investigate which group of stakeholders is the most influential in driving the relationship between CSR and pre-election stock returns. To do so, we follow Lins et al. (2017) and divide the *CSR score* into *Internal stakeholders' elements (Employee Relations and Diversity)* and *External stakeholders' elements (Community, Human Rights, and Environment)*, and include both in the regression. Our results show that *Internal stakeholders* have a more significant effect on returns. This is consistent with one of findings of Ben-Nasr and Ghouma (2018) that employees' well-being is a key corporate factor and can ensure stock price stability via increased reputation, better shareholder engagement, fewer strikes, and improved employee productivity.

The existing literature argues that firms with higher CSR scores will have lower systematic risk. This could lead to less sensitivity to changes in market conditions, according to Luo and Bhattacharya (2009), Jo and Na (2012), and Albuquerque et al.

(2019). However, Frazzini and Pedersen (2014) find that firms with a lower beta could outperform firms with a higher beta. Therefore, the outperformance of high CSR firms during periods of political uncertainty could just reflect lower beta. To test this hypothesis, we add beta as an additional control variable in our baseline regression and find that it does not have significant explanatory power in pre-election stock returns. These results suggest that the main findings are unlikely to reflect the lower systematic risk of firms with higher CSR scores.

Finally, we test two alternative explanations for our findings. First, Di Giuli and Kostovetsky (2014) find that CSR performance is related to the political party in power, with firms in Democratic-leaning states spending significantly more on CSR compared to firms in Republican-leaning states. It is possible that our findings reflect CSR-driven investors welcoming Democratic governors. However, we find that the effect of CSR on the returns is significant for both subsamples of Democratic- and Republican-won elections, and the difference between the coefficients is not statistically significant. These results suggest that our findings are not dominated by the outcome of elections and which political party wins them.

Second, firms could use CSR investments as a channel to build political connections and engage with political agendas (Zhao, 2012; Qian and Chen, 2021; Hasan and Jiang, 2023). Their political participation may lead to better skills in managing the relationship with a political party and, therefore, a better performance pre-election. We test this hypothesis by looking at the cross-sectional differences in the effect of CSR on the pre-election return between political donors and non-donors. Our results do not support this prediction, as we do not find that this effect is driven by political donors.

Our research makes a significant contribution to the existing literature in several ways. Firstly, we build upon previous studies on corporate resilience, such as Newman et al. (2017), Ho et al. (2022) by highlighting the positive impact of CSR investments in mitigating negative external shocks. The study most relevant to our work is that of Lins et al. (2017), which examines the effect of CSR on stock performance during a financial crisis. While our findings are consistent with those of Lins et al. (2017), our research differs in that we focus on political uncertainty associated with gubernatorial elections, a more frequent and exogenous setting compared to their rare and highly correlated financial crisis settings, which are associated with *economic* uncertainty.

Second, our study contributes to the literature by highlighting the significant role of CSR in mitigating the adverse effects of political uncertainty on corporate decision-making. Previous studies have shown that high levels of political uncertainty can lead to a decrease in corporate investments (Giambona et al., 2017; Jens, 2017) and a more challenging environment for acquiring financial capital (Waisman et al., 2015; Colak et al., 2017). Our research demonstrates that a firm's CSR investment, particularly in relation to stakeholder engagement, can serve as a potential mitigation channel to counteract the negative impact of political uncertainty.

Lastly, our findings contribute to the ongoing discussion regarding the value that CSR investments brings to shareholders. This literature is characterized by mixed results. Some studies, such as Servaes and Tamayo (2013), Brooks and Oikonomou (2018), and Ozkan, Temiz, and Yildiz (2022), argue that CSR creates shareholder value, while others, such as Cespa and Cestone (2007), Barnea and Rubin (2010), and Krüger (2015), hold the opposite view. While our study does not provide a definitive conclusion to this debate, we do offer evidence of the value-enhancing role of CSR in the context of high political uncertainty.

This chapter is structured as follows. Section 2.2 introduces the related literature and develop the hypotheses of the study. Section 2.3 illustrates data and descriptive statistics. Section 2.4 contains the main results of the study and robustness tests. Section 2.5 discusses the tests on the driving channels and the potential explanations for the findings. Finally, Section 2.6 provides the conclusions.

## 2.2 Related Literature and Hypothesis Development

### *2.2.1 Political uncertainty and stock returns*

Political uncertainty is often viewed as detrimental to the economy. First, political cycles can induce economic fluctuations because different political parties have varying preferences regarding economic policies, which can significantly influence inflation and unemployment (Hibbs, 1977; Mauro, 1995). Second, political uncertainty tends to significantly delay corporate investment rates (Pindyck and Solimano, 1993; Mauro, 1995) because firms generally adopt a more cautious stance around elections, leading to reduced investment expenditure (Julio and Yook, 2012). Third, it can also precipitate declines in output by increasing stock price volatility (Bittlingmayer, 2002).

In particular, political uncertainty influence both the returns and the risk levels of financial assets. Studies by Pastor and Veronesi (2012) and Liu et al. (2017) confirm that political uncertainty leads to a notable decline in firm values, particularly during election periods. Pastor and Veronesi (2012) model the impact of uncertainty, distinguishing between uncertainty regarding government policy changes and uncertainty about the future effects of new policies. They find that the discount rate effect consistently outweighs the cash flow effect, leading to negative stock market returns on average when new policies are announced. Brogaard and Detzel (2015) show that economic policy uncertainty depresses market returns, while Bali, Brown, and Tang (2017) find that economic uncertainty is negatively priced in equity portfolios. Pastor and Veronesi (2013) suggest that the risk premium increases in uncertain environments, regardless of whether political shocks are orthogonal to fundamental economic shocks. Other research supports the idea that political uncertainty elevates long-term risk (Croce, Nguyen, and Schmid, 2012), industry return volatility (Boutchkova et al., 2012), and market volatility (Brogaard and Detzel, 2015).

### *2.2.2 CSR and corporate resilience*

Furthering stakeholder theory (Donaldson and Preston, 1995; Margolis and Walsh, 2003; Kramer and Porter, 2006) and good management theory (Waddock and Graves, 1997), CSR resilience theory argues that CSR activities generate a type of moral capital or goodwill for firms, serving as a form of “insurance-like” protection in the event of adversity (Gardberg and Fombrun, 2006; Godfrey, 2005; Godfrey et al., 2009; Jiraporn et al., 2014). To be specific, employing an event study methodology, Godfrey et al. (2009) find that socially responsible firms tend to experience a less negative market reaction to bad news, indicating an insurance-like effect of CSR. Jiraporn et al. (2014) argue that credit rating agencies perceive socially responsible firms as less risky due to their engagement in CSR.

There is a body of empirical research that examines the performance of firms with robust CSR engagement during negative events. For example, Lins et al. (2017) provide support for the positive relationship between CSR and firm performance during severe crises, such as financial crises, when overall economic confidence is low. Albuquerque et al. (2020) focus on another exogenous and unparalleled shock, the COVID-19 pandemic period, and discover that stocks with higher environmental and social ratings exhibit significantly higher returns and lower return volatility. Bamiatzi et al. (2023) confirm the

insurance provision of CSR in preserving firm financial performance during negative events, such as a cyber security breach. Zhang et al. (2022) find that high-CSR acquirers generally preserve higher returns during the announcement of an acquisition event.

Considering the aforementioned literature, we formulate our hypothesis. The theory of political uncertainty (e.g., Pástor and Veronesi, 2012) predicts that political uncertainty leads to lower stock returns. Additionally, the stakeholder theory (e.g., Aktas et al., 2011) posits that firms with high CSR perform better than their counterparts in challenging times. Therefore, we expect that firms with higher CSR ratings outperform those with lower CSR ratings during periods of political uncertainty. We derive the following hypothesis:

*Hypothesis 2.1: A higher (lower) CSR rating is significantly associated with higher (lower) return in periods of political uncertainty due to a strong stakeholder relationship.*

### *2.2.3 Political capital, risk and stock return*

Classic financial theory suggests that the expected return of asset is positively related to risk (Fiegenbaum & Thomas, 1986; Kim, Hwang, and Burgers, 1993; Li and Vermeulen, 2021). In the context of this paper, if higher CSR scores are positively related to political risk, we can also expect a higher stock return as compensation.

CSR score can be positively correlated with risk. First, CSR investment can be viewed as a means of accumulating political capital. For example, Lin et al. (2015) find that the level of CSR activities significantly increases after the replacement of local government leaders. In returns, these firms receive higher level of government subsidies or have a higher propensity to receive such subsidies. Bertrand et al. (2020) discover that 6.3% corporate charitable donations in the US are likely to be political motivated and serve as a means of gaining political influence. The political engagement associated with CSR activities can increase the proximity to power and consequently lead to higher risk (Kim et al., 2012). In addition, the potential change in government leadership could also result in the diminishment of political capital invested, thereby increasing the risk of investment in the first place (Chatjuthamard et al., 2021).

On the other hand, existing studies also find evidence that CSR can lead to lower systematic risk. Albuquerque et al. (2019) argue that CSR investment helps firm to increase product differentiation and, therefore, profit margin. This could lead to a decrease in systemic risk and an increase in firm value. The reduction in systemic risk

can actually lead to outperformance of stock, as recent literature highlights the outperformance of low beta portfolio in asset pricing (Frazzini and Pedersen, 2014).

To conclude, the risk-based explanation could lead to our second hypothesis:

*Hypothesis 2.2: A higher (lower) CSR rating is significantly associated with higher (lower) return in periods of political uncertainty due to the risk nature of high CSR firm.*

#### *2.2.4 Political preference on CSR*

Finally, it is also plausible that the higher returns we have identified could be attributed to the alignment of political preference between firms and the ruling party. Rubin (2008) believes that CSR is related to political preferences: for instance, in the US companies located in areas with Republican voters' majority have, on average, a lower CSR rating than companies in areas with Democratic voters' majority. A consistent finding from Di Giuli and Kostovetsky (2014) is that firms characterized by Democratic political environments are more socially responsible.

Jiao and Ren (2024) argue that firms whose executives are ideologically aligned with the ruling party tends to have better firm performance. Since elections are generally expected to reflect the popularity of candidate in the local community, when an advocate of CSR (in the US, this is more likely to be a democratic candidate) is elected, their political ideology will be more likely to align with firms that also support CSR initiative. This alignment of ideology can therefore lead to a higher firm value, which could give rise to our third hypothesis.

*Hypothesis 2.3: A higher (lower) CSR rating is significantly associated with higher (lower) returns during periods of political uncertainty when Democratic party wins.*

### 2.3 Data and Summary Statistics

#### *2.3.1 CSR and return variables*

We extract firms' CSR ratings from the MSCI ESG Stats Database. As in Di Giuli and Kostovetsky (2014), we focus on the main six categories (environment, employee relations, human rights, community, diversity, and product). We follow the method in Lins et al. (2017) to calculate a net CSR performance. Specifically, for each of the six categories, we calculate the ratio of the number of CSR strengths to the maximum possible number of strengths. Then we perform the same calculation for the weaknesses. The maximum number of strengths and weaknesses are time-variant as the available

items on the MSCI ESG databases are changing. We use the difference between the two ratios as our measure of CSR performance of the firm in each category and then aggregate this across the six categories to get an overall measurement for the firm. The calculation method can be expressed in the following equation:

$$CSR\ category_t^i = \frac{\sum_{p=1}^{n_t^i} strength_p^i}{n_t^i} - \frac{\sum_{q=1}^{m_t^i} weakness_q^i}{m_t^i} \quad (2.1)$$

In the equation above,  $CSR\ category_t^i$  is the firm's CSR score for category  $i$  at time  $t$ ;  $strength_p^i$  is the  $p^{th}$  strength indicator for category  $i$  at time  $t$ ;  $weakness_q^i$  is the  $q^{th}$  weakness indicator for category  $i$  at time  $t$ ; both indicators are dummy variables that equal to 1 if the firm meets strength  $p$  or weakness  $q$ , otherwise 0; and  $n_t^i$  and  $m_t^i$  are the total number of strength and weakness indicators, respectively, at time  $t$ . In the equation (2.2) below,  $CSR\ Score_t$  is the CSR score at time  $t$ , calculated as the simple average of the first six categories ( $r=6$ ).

$$CSR\ Score_t = \frac{1}{r} \sum_{i=1}^r CSR\ category_t^i \quad (2.2)$$

We use gubernatorial elections as our main measurement and presidential elections as an alternative measurement because they are consistent and observable sources of political uncertainty (Jens, 2017). Kelly et al. (2016) argue that it is better to use an event like an election instead of a broader uncertainty index when measuring the effects of political uncertainty, as broader uncertainty indexes also contain economic uncertainty. For example, one broader uncertainty index, the BBD index developed by Baker et al. (2016), is correlated not only with presidential elections, but also with wars, terrorist attacks, major stock market events, and recent financial crises (Jens, 2017). We include all 50 states gubernatorial elections data from year 1992 to 2019 in our sample.

Following Hou et al. (2017), the period of high political uncertainty is the quarter prior to an election. Therefore, we use the 60 and 90 days prior to an election as our main window to measure the pre-election stock returns. To be specific, our main stock return measures for each firm are *Pre-election Returns (60 days)* and *Pre-election Returns (90 days)*, which are the firm's raw buy-and-hold returns over the 60 days (90 days) prior to the election, respectively. Most gubernatorial elections happen in early November, except for several elections in Iowa, California, West Virginia, and Wisconsin. Thus, the period

of 60 days prior to the election is mostly from early September to early November while the period of 90 days prior to the election mostly starts from early August. We calculate these cumulative returns (60 days and 90 days) by year and state. For example, in 1992, the gubernatorial election in Delaware took place on November 3. We then calculate the 60-day return by cumulating daily returns from September 4, 1992, to November 2, 1992. Both 60-day and 90-day pre-election returns are time-variant, as the returns vary in every election year.

### 2.3.2 Baseline regression model

We estimate various regression models to examine how stock returns change during the election period depending on different levels of CSR and controlling for additional variables. The dependent variables are *Pre-election returns (60 days)* and *Pre-election returns (90 days)*. Our main variable of interest is *CSR Score*. All models include year and industry fixed effects (defined by 2-digit SIC), because some industries may be more likely to invest in CSR than others and may have been affected differently by the uncertainty in specific years. To eliminate the influence caused by other firm characteristics that correlate with CSR, we also control for those which have been found to affect stock returns, following Brogaard et al. (2020). These control variables are *Market Cap*, *Book-to-Market*, *Return on Assets*, *Long-Term Debt*, and *Volatility*. It is reasonable to control for these variables: *Long-Term Debt* and *Return on Assets* provide a gauge of a firm's overall health and its capacity to endure adverse events. *Market Cap* and *Book-to-Market* are crucial firm characteristics that could impact stock returns (e.g., Daniel and Titman, 1997). Finally, stock price volatility may also influence returns (Goyal and Santa-Clara, 2003). The detailed definition of these variables could be found in Appendix Table A. Pástor and Veronesi (2013) argue that in a recession political uncertainty tends to have a stronger impact, as the government is more likely to adopt new policies such as subsidies and changes in tax codes. Therefore, variables measuring economic conditions at the state level are controlled in the model. These variables are the annual state unemployment rate from the Bureau of Labor Statistics (bls.gov) and the annual change in state gross domestic product (*GDP*) from the Bureau of Economic Analysis (bea.gov) (Jens, 2017).

To mitigate the effect of outliers, we winsorize the returns and the other firm characteristics at the 1<sup>st</sup> and 99<sup>th</sup> percentiles. We then relate the pre-election return

measures to the CSR score from the previous year, in the prediction of the impact of the political uncertainty caused by the election.

We estimate the following baseline model:

$$Return_{i,t} = b_0 + b_1 CSR_{i,t-1} + b_2 \mathbf{X}_{i,t-1} + \text{Year and industry Fixed Effects} + e_{i,t} \quad (2.3)$$

Where  $Return_{i,t}$  is the raw return computed over the 60 or 90 days before an election,  $CSR_{i,t-1}$  is the proxy for CSR, measured one year before the election year and  $\mathbf{X}_{i,t-1}$  is a vector of control variables including firm financial characteristics and economic controls. The CSR variable and financial controls are lagged one year in response to endogeneity concerns. We select all firm-year observations for states where gubernatorial elections have occurred in that year.

### 2.3.3 Sample construction and descriptive statistics

Our stock return data comes from CRSP and our accounting data comes from Compustat. We merged these two databases using the 6-digit CUSIP (Committee on Uniform Securities Identification Procedures) and year. Since the MSCI ESG database records CUSIPs only after 1994, for years before 1994 (including 1994), we used another identifier in the database, the Ticker, to merge CSR data and accounting data. Our goal is to merge as much data with CSR variables as possible to obtain the most representative sample. For observations after 1994, we initially use the 6-digit CUSIP for merging and then utilize the Ticker to add additional matches. Finally, we incorporate election data and economic condition data using the year and state.

We remove financial firms (SIC 6000-6999) as these have high leverage (Lins et al., 2017). Additionally, following Lins et al. (2017), we remove micro-cap stocks (stocks with a market capitalization below \$250 million as of one year before the election year), as these stocks are more subject to the price pressure effects of trading, which will be more prominent during election periods.

After combining firms with sufficient data coverage on the CRSP and Compustat databases and firms on the ESG Stats database, we obtain a sample of 6,781 firm-year observations for which all explanatory variables are available during at least one election period.

Table 2.1 provides descriptive statistics for CSR score, returns, elections, and control variables. The first row in Panel A shows that the CSR score has a mean value of  $-0.003$

and a median value of zero. This means that the average firm has slightly more CSR concerns than strengths. The median value of the 60- and 90-day pre-election returns are 0.028 and 0.034, respectively. Table 2.1 and Appendix Table A also provide definitions and descriptive statistics for firm characteristics that we use as control variables in our models.

Panel B provides summary statistics for 1207 states and 316 election-year observations. *Close* is a binary variable equal to one if the vote differential, i.e., the difference in the percentage of votes received by the first and second-placed candidates, is below 5%. Of the 316 elections in the sample, 76 are defined as close.

## 2.4 Pre-Election Returns

### 2.4.1 Baseline results

Panel A of Table 2.2 contains our baseline regression models. Columns (1) and (3) show that firms with higher CSR ratings performed significantly better during the gubernatorial election. The effect of CSR on returns is economically significant: a one-standard-deviation increase in CSR (0.545) is associated with a 0.49% increase in 60-day pre-election returns and a 0.55% increase in 90-day pre-election returns. The results controlling for macroeconomic variables presented in columns (2) and (4) confirm these findings. The coefficients of the control variables are mostly consistent with previous papers: the negative effect from *Market Cap* (Brogaard et al., 2020), *Book to Market* (Lai et al., 2014), and the positive effect from *Return on Asset* (Brogaard et al., 2020) and *Volatility* (Brogaard and Detzel, 2015). We found that *Long-term Debt* has a negative effect on returns during periods of political uncertainty over the 60 days prior to elections, but not at a significant level during the 90 days prior to elections.<sup>2</sup>

In terms of economic significance, the effects of volatility, return on assets, and unemployment rate are the most pronounced. According to the model in column (2), a one-standard-deviation increase in volatility (0.066), return on assets (0.124), and unemployment (0.019) is associated with changes in 60-day pre-election returns of 1.33, 0.657, and 0.51 percentage points, respectively. To compare, the economic impact of CSR ratings on returns during periods of political uncertainty is more than one-third of the impact of

---

<sup>2</sup> The standard errors in this baseline model are clustered at the firm level. We have performed additional check by double clustering the standard errors at the state- and firm-level and our results, reported in Table B.1, remain qualitatively similar.

volatility and more than four-fifths of the impact of return on assets and GDP. This indicates that CSR is indeed important in explaining pre-election period returns.

Although these 60- and 90-day periods can, in general, proxy the periods with a strong level of political uncertainty, to make sure that our results are not driven by the specific time window selected, we further perform the test using daily returns accumulated from 180 days, 150 days, and 120 days prior to a gubernatorial election and returns from 30 and 90 days after the election. The coefficient of CSR in these tests and their 95% confidence intervals have been plotted in Figure 2.2. We can observe that the effect of CSR on the stock return increases in the period leading to the pre-election quarter, and gradually diminishes after the election. This is consistent with the change in the political uncertainty associated with the election – it increases before the election and diminishes after it.

Gubernatorial elections are in general associated with a higher level of political uncertainty. This uncertainty is expected to be even more prominent when the outcomes are less predictable, and votes are close. If the CSR performance can indeed boost stock performance under political uncertainty, the effect will be even stronger for these close elections.

Following the literature, we use actual vote differences to measure closeness (Julio and Yook, 2012; Jens, 2017). This measurement is ex-post as *Vote difference* is calculated from the outcome of a gubernatorial election in November. We further measure closeness in two other common ways. First, we use a dummy (*Close\_5%*) which equals one if the vote difference between the winning candidate and the runner-up is below 5%, and zero otherwise (Akey and Lewellen, 2017; Alok and Ayyagari, 2020). We also construct *Predictable\_5%* as the opposite of *Close\_5%*. This dummy variable is equal to one if the vote difference between the winning candidate and the runner-up is above 5%, and zero otherwise. Second, we use a dummy (*Close\_Quartile*) which equals one if the vote difference between the winning candidate and runner-up is in the lowest quartile of the vote differences distribution, and zero otherwise (Julio and Yook, 2012; Li et al., 2020). We also created the variable *Predictable\_Quartile*, which equals one if the vote difference between the winning candidate and the runner-up is not in the lowest quartile, and zero otherwise.

We then construct the interaction variables  $CSR_{i,t-1} \times Close$  and  $CSR_{i,t-1} \times Predictable$  to capture the CSR effects on returns during close elections and during predictable elections separately. We conducted tests using  $Close\_5\%$  and  $Predictable\_5\%$  first and then replaced them with  $Close\_Quartile$  and  $Predictable\_Quartile$ . The dependent variables are still the 60- and 90-day returns prior to a gubernatorial election. The regression is:

$$Returns_{i,t} = b_0 + b_1 CSR_{i,t-1} \times Close + b_2 CSR_{i,t-1} \times Predictable + b_3 \mathbf{X}_{i,t-1} + Year\ and\ industry\ Fixed\ Effects + e_{i,t} \quad (2.4)$$

Panel B of Table 2.2 shows the results. The CSR effect on both the 60- or 90-day returns during either close elections or a predictable election is significant and positive. This is consistent with our baseline regression that firms with higher CSR scores will perform better during election periods. However, during close elections, the CSR score has more than double the positive effect on returns than during predictable elections. Using either below 5% or the lowest quartile to classify the dummy variable *Close* does not change the results. These results confirm our hypothesis that firms with higher CSR scores will have a higher return when the level of political uncertainty is high, and also extends our theory that the magnitude of the CSR effect increases with the level of political uncertainty, proxied by the election results' closeness.

#### 2.4.2 Identifying the effects of CSR

Our measurement of political uncertainty is exogenous as it is linked to election cycles set on a fixed term since the 18<sup>th</sup> century (Category: Gubernatorial elections in the United States by year, 2022). As the year of gubernatorial elections varies between states and our sample period is quite long, from 1992 to 2019, including 316 gubernatorial elections, the possibility that several elections have happened at the same time is unlikely to bias our results. However, the relationship between CSR and returns may be subject to a potential endogenous bias, as it is possible that omitted and confounding factors would drive CSR and returns simultaneously. To address this potential issue, following Jiraporn et al. (2014) and Bustamante and Frésard (2021), we perform a two-stage least squares (2SLS) regression using the average CSR performance of unrelated neighbour firms in the same metropolitan statistical area (MSA) as our instrumental variable (IV).

This identification strategy based on geographical location satisfies the relevance condition. Firms located in the same area may share similar characteristics due to investor clientele, local competition, and/or social interactions (Jiraporn et al., 2014). For example, firms in the same area may attract common local investors. To accommodate the CSR preference or agenda of these investors, firms' CSR investments may converge in the long run, even if their business operations are unrelated. Another reason for the similarity of CSR policies is the local competition – neighbouring firms are natural benchmarks for comparison, so their CSR investments are more likely to be correlated. Lastly, personal interaction and opinions' exchange are likely to be more intense within a local community. More frequent communication can foster the formation of a consensus, leading to a similar 'taste' for investment in CSR.

Our instrumental variable also satisfies the exclusion condition as long as the focal firm and local neighbouring firms do not share a business link, e.g., the stock performance of a car maker is unlikely to be influenced by the CSR performance of a shoemaker even if they are operating in the same city. Following Bustamante and Frésard (2021), we use the following procedure to exclude potentially related firms when calculating the IV. For each firm, the *Average CSR of geographically near firms* variable is taken by calculating the mean value of all qualifying firms with headquarters in the same MSA apart from that firm. Starting from all neighbouring firms in the same MSA, we follow three steps to exclude firms that might have a direct or indirect link with the focal firm to ensure that these firms' business operations are truly unrelated. First, we eliminate neighbouring firms with horizontal links by removing firms in the same Fama–French 12 industry (Fama and French, 2007). These firms might be related to the focal firms as they could be potential competitors of the focal firm. Second, following Bustamante and Frésard (2021), we eliminate firms with vertical links based on the input–output tables from the Bureau of Economic Analysis (BEA) and customer segmentation files from Compustat. This process helps us to eliminate the potential customers or suppliers of the focal firms, and therefore eliminates the information transmission via the supply chain. To further ensure that the qualified firms are unrelated, we also eliminate the neighbouring firms that might share an indirect link: when neighbouring firms and the focal firm share the

same product market peers, these firms are also excluded because they might be indirectly related to the focal firm's operations.<sup>3</sup>

After the selection of qualifying neighbouring firms, we calculate the average CSR of these firms and use it as our IV to perform the 2SLS model. In the first stage of our analysis, we estimate the following regression:

$$\begin{aligned} & \text{Average CSR of geographically near firms}_{i,t} \\ & = b_0 + b_1 \text{CSR}_{i,t} + b_2 \mathbf{X}_{i,t} + \text{Year and Industry Fixed Effects} + e_{i,t} \quad (2.5) \end{aligned}$$

We measure the variable of the average CSR of geographically near firms one year before an election, to make it consistent with the independent CSR-score variable used in the baseline regression. We include the same control variables and the same industry and year fixed effects as in the baseline test.

In column (1) of Table 2.3, the coefficient in the first stage regression is positive and highly significant for the average CSR score of the geographically close firms. The results at the bottom of this table show that the p-value of the F-test of the instrumental variable is close to zero, suggesting that this is a strong instrument. After controlling for other firm-specific factors on top of these industry and time effects, the result indicates that a particular firm's CSR score is highly related to the CSR levels of its neighbouring firms. The results from the second-stage regression reported in columns (2) and (3) show that the coefficients of the instrumented CSR score remain positive and statistically significant. Overall, the 2SLS regression test suggests that firms' CSR scores are positively related to returns, after controlling for possible endogeneity between the dependent and key independent variable (CSR score).

#### 2.4.3 Robustness tests

We conduct further robustness checks to verify our findings. First, we employ an alternative definition of CSR score. Instead of defining CSR as the sum of six categories, we use first five categories and then seven categories and re-run the model (2.1). As seen in Panel A of Table 2.4, all results remain consistent.

---

<sup>3</sup> We use TNIC code to identify potential product market peers. This method was introduced by Hoberg and Phillips (2010, 2016), who used a text analysis to identify the competitors of every firm in the same district.

We also use an alternative dataset, the Bloomberg ESG disclosure score, as alternative measurement of firms' adoption of socially-responsible policies (Li et al., 2018). This dataset mainly collects information from published disclosure and news items and turns the information into ESG disclosure score ranging from 0.1 to 100. Panel B of Table 2.4 presents the results. Bloomberg's ESG only starts in 2006 and the firm coverage is lower than the MSCI ESG database, so we have fewer observations with available information than in the baseline results. The ESG disclosure score's effects on both 60- and 90-day pre-election returns are still positive and statistically significant.

Our baseline test is based on firms' observations in each election cycle (for firms in affected states). While this research design highlights the cross-sectional differences in the effect of CSR on pre-election returns, the time series differences are largely missing. To take this into consideration, we construct a new sample using panel data covering the years with no election. To match the structure of the dataset, we use annual returns as dependent variable in this test. Then, we interact the CSR variable with the election dummy. The model used in the panel data regression is described as follows:

$$\begin{aligned} Return_{i,t} = & b_0 + b_1 CSR_{i,t-1} \times Election + b_2 CSR_{i,t-1} + b_3 Election \\ & + b_4 X_{i,t-1} + Year \text{ and Industry Fixed Effects} + e_{i,t} \end{aligned} \quad (2.6)$$

*Election* represents a binary variable equal to one if a gubernatorial election occurred in that state in that year. The  $b_1$  coefficient of the interaction term  $CSR_{i,t-1} \times Election$  captures the incremental effect of CSR on the returns when an election is held, while the  $b_2$  coefficient shows the effect without an election.

In fact, by including now the data points between elections, i.e., the periods when we do not expect political uncertainty to play a major role, we can also use the model to capture how the effect of CSR on returns differs between the politically "stable" and politically "uncertain" periods for each given firm.

Our results, reported in Panel C of Table 2.4, show that the coefficient of the interaction between the gubernatorial election and CSR is positive and statistically significant. It indicates that firms with higher CSR may have higher returns in periods of political uncertainty.

We also performed a further test using the presidential election as the event. Using the gubernatorial election events allows a higher degree of cross-state variation, and therefore

we use them in our main research design. However, one could argue that the presidential elections are the really important ones that would create a higher level of political uncertainty. To make sure that our results are robust to both settings, we perform further tests by replacing the event with a presidential election. Panel D of Table 2.4 show that our results remain robust even using the alternative event.

Overall, the results of our robustness checks suggest that the identified superior performances of firms with higher CSR scores during periods of political uncertainty remain robust, even after using alternative measures, model specifications, and election events.

## 2.5 Additional Tests and Further Discussion

### 2.5.1 Pre-election volatility

Our tests have confirmed that firms with higher CSR scores can lead to better performance when experiencing political uncertainty. One potential explanation would be that these firms also suffer from higher volatility (Becchetti et al., 2015). The higher returns during a pre-election time could be then a compensation for the higher risk. If that is the case, we should observe elevated volatility for firms with higher CSR scores during the pre-election period. To test this hypothesis, we estimate the following model:

$$Volatility_{i,t} = b_0 + b_1 CSR_{i,t-1} + b_2 X_{i,t-1} + Year\ and\ Industry\ Fixed\ Effects + e_{i,t} \quad (2.7)$$

The dependent variables of the model are *Pre-election volatility (60 days)* and *Pre-election volatility (90 days)*, which are the volatility of a firm's daily stock return 60 and 90 days before an election, multiplied by 100. We adopt similar control variables as in Harjoto and Jo (2015) and Becchetti et al. (2015). They are *Long-Term Debt*, *Assets*, *Capital Expenditure*, and *Growth Rate*. The regressions in this section also include the economic variables and industry and year fixed effects as in the main test.

Our results are reported in Table 2.5. As illustrated in both columns (1) and (2), the coefficient of the CSR score is negative and statistically significant at the 1% level. All the signs of the coefficients of control variables are consistent with Harjoto and Jo (2015). Our results are inconsistent with the higher volatility hypothesis and indicate that firms with a higher CSR score are actually characterized by having lower volatility during periods of political uncertainty.

### 2.5.2 Stakeholder relations

Another potential explanation for our findings is that they relate to an improvement in firm-stakeholders' relations. Earlier studies (Putnam, 1993 and Lins et al., 2017) suggest that firms investing in social capital in the form of CSR can build a much better relationship with stakeholders. Firms with higher stakeholder commitment will have more trust among employees and suppliers, and higher social status in their local community, making them more attractive to investors and customers (Cheung, 2016). Investments in social capital and CSR will eventually pay off when firms are facing a negative shock or a higher level of uncertainty, and these good relationships could play vital roles in protecting firms from political uncertainty too.

To test this hypothesis, we use the *stakeholder risk* indicator defined by Becchetti et al. (2015) to measure the risk of conflict with stakeholders. This variable is defined as the sum of stakeholders' concerns related to community, environment, employee relations, diversity, human rights, and product.<sup>4</sup> We then use the negative inverse of *stakeholder risk* as *stakeholder strength* to proxy the stakeholder advantage of a firm.

The result of Panel A in Table 2.6 shows that the coefficient for *stakeholder strength* is significant. This shows that support from stakeholders can, to some extent, protect the firm during periods of political uncertainty. For example, if a firm with good stakeholder relationships faces the risk of being negatively affected by policy changes, its employees may decide to support it, rather than absenting from their role and even considering working for another firm, this effectively mitigating the effects of political uncertainty.

### 2.5.3 Internal vs external stakeholders

Stakeholders are not a homogeneous group, so we perform further tests to identify which group of stakeholders play a more important role in driving our findings. Lins et al. (2017) classifies stakeholders into internal stakeholders – most importantly, the employees, and external stakeholders – and the stakeholders in the wider community. Following Lins et al. (2017) and Chang et al. (2019), we disaggregate the CSR score into the internal stakeholders' CSR score, which includes the dimension of diversity and inclusion as well as employee relations, and the external stakeholder CSR score, which includes the dimensions of community, environment, and human rights.

---

<sup>4</sup> A detailed definition of *stakeholder risk* can be found in Appendix Table A.

We then re-estimate our baseline model in equation (2.3) after replacing the aggregate CSR score with the score disaggregated into internal and external stakeholder CSR scores and report our results in Panel B of Table 2.6. Our results show that internal stakeholders, rather than external stakeholders, are the ones associated with better stock performance. This is consistent with Doukas and Zhang (2021), who report that internal stakeholders' interests, such as workforce diversity, employee relations, and supplier relations are valuable to firms across different industries. Because of this more direct connection, internal stakeholder relationships will have a more profound effect on firms' returns. The more the employees view their firm as ethical, the better productivity and profitability the firm experiences (Guiso et al., 2015a). More diverse firms tend to save costs on employee turnover, become more productive by attracting better labour (Bouslah et al., 2013) and expand their market share (Berman et al., 1999). Furthermore, this finding is aligned with one of the hypotheses developed by Ben-Nasr and Ghouma (2018), who explained that good relationships with employees help the firm to mitigate potential risks (e.g., strikes) and stabilize their share price.

#### 2.5.4 Systematic risk exposure

Another potential channel through which CSR can influence stock returns is by reducing the firms' exposure to systematic risk – i.e. the firm' beta (Luo and Bhattacharya, 2009; Jo and Na, 2012; Cheung, 2016; Albuquerque et al., 2019). Fama and French (2007) argue that a firm with higher CSR performance can lower systematic risk due to investors' preference for CSR and enhanced customers loyalty. Investors in firms with higher CSR scores are likely to support and reward firms' CSR activities. Similarly, in support of CSR activities, customers may be more loyal to firms with higher CSR scores and cause inelasticity of the demand curve for that firm, which protects its profitability. A view has recently emerged in the finance literature arguing that there may be a negative relationship between *beta* and stock return rather than the classic 'CAPM-view'. For example, Frazzini and Pedersen (2014) find this negative relationship as investors face funding constraints, and it affects investors' required returns across securities. If so, the better performance of high CSR firms during political uncertainty could be the result of a lower *beta* which increases (rather than decreases) stock returns.

To investigate this hypothesis, we first use the market model to estimate the *beta* for each firm. Specifically, the coefficient of *beta* is measured by the market model using monthly

stock returns of the previous twenty-four months ending in December before the election, as in equation (2.8):

$$Return_{i,t} = b_{0,t} + b_{1,t}Return_{m,t} + e_{i,t} \quad (2.8)$$

Where  $Return_{i,t}$  is the monthly return of firm  $i$  at month  $t$ ,  $Return_{m,t}$  is the monthly return on the CRSP value-weighted index at month  $t$ ,  $b_{0,t}$  and  $b_{1,t}$  are the regression parameters. and  $b_{1,t}$  is the beta for firm  $i$ .

Then we estimate the following model:

$$Return_{i,t} = b_0 + b_1CSR_{i,t-1} + b_2Beta_{i,t-1} + b_3 \mathbf{X}_{i,t-1} + Year \text{ and Industry Fixed Effects} + e_{i,t} \quad (2.9)$$

The estimation results of model (2.9) are reported in Table 2.7. We find even if we include the *beta* of the firm as a control in our baseline regression, our main results remain robust and the coefficient of *beta* is not statistically significant. These results show that the effect of CSR during periods of political uncertainty is unlikely to be driven by systematic risk.

### 2.5.5 The effect of political party and donations

The higher stock performance of firms with higher CSR scores may also be attributed to the differential effect political parties have on the stock market. Riley and Luksetich (1980) believe that the market prefers Republicans to Democrats; therefore, aggregate stock prices should rise following a Republican victory and decline following a Democratic victory in the presidential election. However, Santa-Clara and Valkanov (2003) find that the excess return in the stock market is higher under Democratic than Republican presidencies. Also, firms tend to have higher CSR when they are headquartered in Democratic- rather than Republican-leaning states. Hence, firms with higher CSR are generally Democratic-leaning firms. If the market prefers Democrats, then the higher CSR firms should have higher returns because of their political position. Another explanation is that higher CSR firms have high returns in periods of political uncertainty because of political connections (Child et al., 2021). Firms with a higher CSR score might have donated their money to a candidate or party in the political campaign. Therefore, having some political connections can mitigate the risk of political uncertainty before an election.

To address this general problem of omitted correlated factors, we split our sample into subsamples based on the political parties and campaign donations. We measure political parties by the election result (either Democratic victory or Republican victory) in every gubernatorial election. Political donation is measured by a dummy variable (*donors*) that represents the political action committee (PAC) of S&P 500 companies<sup>5</sup> who have donated money to a political party during the four years prior to a gubernatorial election. Firms that have made political donations will have the dummy variable *donors* set to 1, otherwise *donors* will be 0. We then apply the baseline regression (2.3) to the different subsamples.

Results are reported in Table 2.8. Due to the removal of some observations where an independent party has won the elections, the total number of observations in the two subsamples is not equal to the number of observations in the baseline regression.<sup>6</sup> Panel A reports the results for different election results (Republican win vs. Democratic win), while Panel B reports results for the different subsamples depending on whether a firm has political connections or not (based on the dummy *donor*). The coefficients of the *CSR Score* in Panel A are all positive. The coefficient estimate of the *CSR Score* in the 60 days before an election is significant at 1% level when Republicans win. For Democratic victories, while the significance of the coefficient of *CSR Score* in the period of both 60 days and 90 days decreases, it is still 10% significantly different from zero. As the size of a regression coefficients for CSR score varies across the two sub-samples, we perform a Chi-square test which shows that the difference in coefficients between the Democratic victories' subsample and the Republican victories' subsample is not statistically significant. We utilize the measurement of election winners, an ex-post measurement, and changing to an ex-ante measurement should not affect the results, as Jens (2017) claimed that the ex-ante data (poll data) is 0.88 correlated with the ex-post data. In Panel B, the sample size has been decreased to around one-fourth of the original sample due to the limited campaign finance data. This may have affected the significance of the result. In the table, although none of the coefficients of the *CSR Score* is significant, the size of the coefficients is close to our main tests. For example, the coefficient of the *CSR Score* in column (2) is 0.008 while this coefficient is 0.009 in the main test. Importantly, the

---

<sup>5</sup> We thank Bertrand et al. (2020) for sharing the linkage between the gvkey and code by Federal Election Commission at <https://www.openicpsr.org/openicpsr/project/116689/version/V1/view>

<sup>6</sup> Observations from six instances where an independent party has won the elections in a certain state and year have been removed out of a total of 316 elections (in different years across states).

coefficient of *CSR Score* is not significantly different between the donors' subsample and non-donors' subsample<sup>7</sup>.

A possible concern here is that a firm's CSR score might be correlated with its campaign contributions, which in turn could drive the observed results. To mitigate this concern, we augment the baseline model (2.3) by adding the campaign contributions as additional control variable and report the estimation results in Appendix Table B.2. The effect of the CSR score on returns remains similar to the one estimated by the baseline regression, confirming that the impact of CSR on returns is not driven by campaign donations.

Overall, the results in this section confirm that, due to their better stakeholder relationships, firms with higher CSR are less affected in periods of political uncertainty regardless of the market preference for a political party or any firm's political connection.

## 2.6 Conclusions

This study shows that firms with a higher CSR score perform better in periods of political uncertainty connected to US state-level elections, after controlling for other firm characteristics and state and year fixed effects. Specifically, we observe that these firms have higher returns and lower volatility before electoral periods. These results are robust to correction for endogeneity bias. In fact, we relate the pre-election returns of affected firms to their CSR score one year before the election in case some firms change their CSR policies when facing higher political uncertainty. Furthermore, we use a novel instrument for the CSR score, the average CSR score of local firm-peers, to perform two stage-least squares analysis. The result survives the endogeneity checks, as well as other robustness checks (alternative measurements of CSR performance, different election events, and using alternative panel data analysis). The study also examines two possible channels that usually explain the effect of CSR on firm's performance: the stakeholder relations channel and the systematic-risk channel. We find that only the stakeholder relations' channel can explain the positive effect of CSR on firms' returns before elections, hence in periods of higher political uncertainty.

This study provides some useful suggestions for corporate executives. Due to the fixed-term nature of the election cycles, political uncertainty is an issue that all public firms

---

<sup>7</sup> We have also split the sample into Democratic donors and Republican donors and found that the difference in coefficients between the Democratic and Republican donor subsamples is not statistically significant.

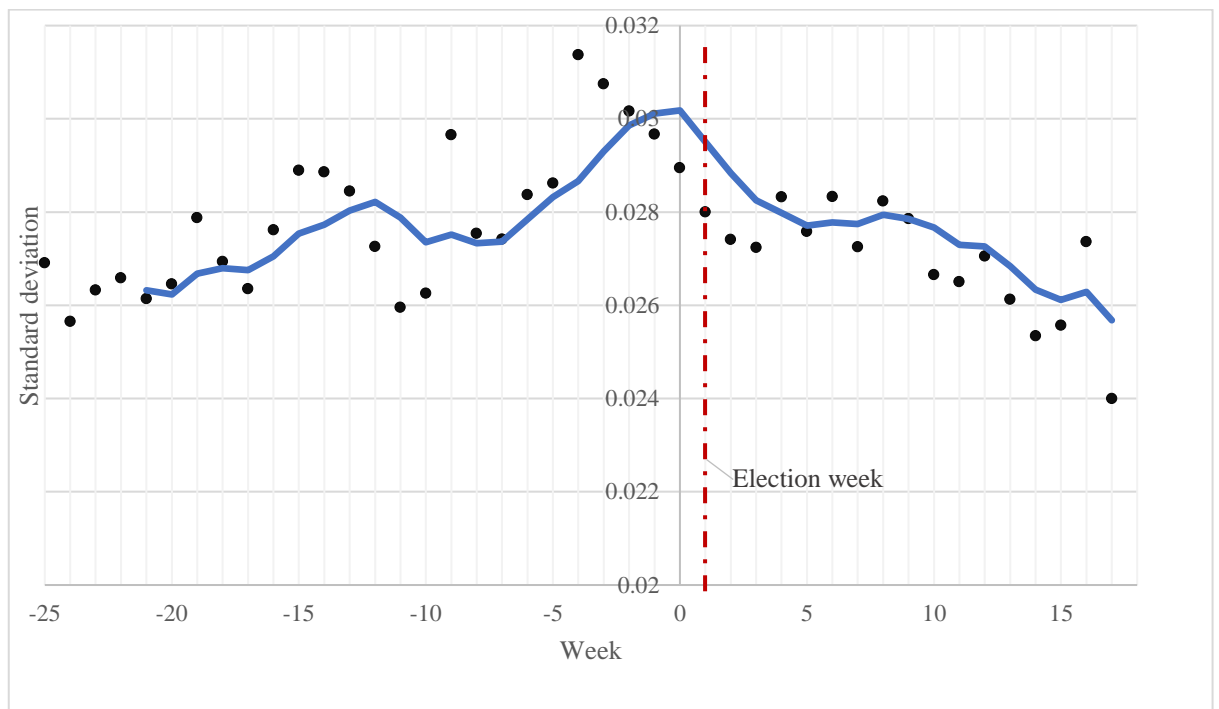
need to face at some point in time. Rather than delaying corporate activities to the post-election period, they could use CSR investments to mitigate the effects of this uncertainty, by building up a good CSR reputation over a sustained period. These findings are also useful for managers or analysts forecasting risk during periods of political uncertainty. To be specific, it might be less necessary for managers of firms with a superior CSR reputation to take precautions, such as increasing cash holdings (Duong et al., 2020), lower IPO offer prices, etc.. before elections, as they may not as adversely affected by political uncertainty as other firms. To improve a firm's CSR rating, managers might consider several aspects. These include working on their relationship with employees such as allowing more employee community involvement (Muthuri, Mattefrn, and Moon, 2009), improving formal strategic CSR planning and organizational culture (Galbreath, 2010), and understanding the demographics and characteristics of socially responsible investors (Cheah, Jamali, and Sung, 2011) so to engage them with financing.

**Figures and Tables for Chapter 2**

**Figure 2.1**

**Mean of Weekly Volatility around 1992–2019 US Gubernatorial Elections**

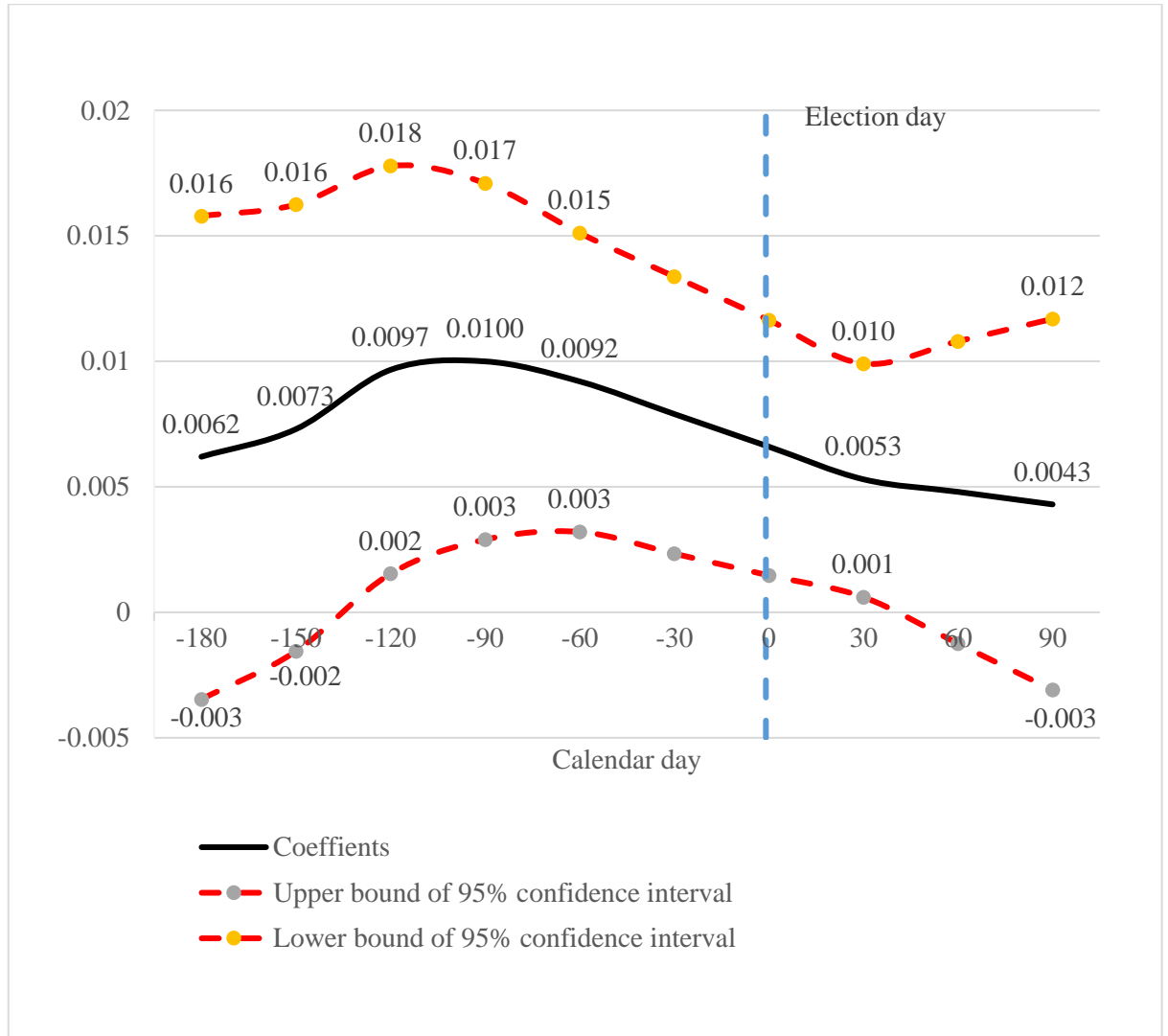
This figure plots the mean of weekly actual volatility (proxied by standard deviation) from 25 weeks prior to a gubernatorial election to 17 weeks after an election from the years 1992 to 2019. To construct the sample, we select the firms affected by gubernatorial elections according to the state in which firms are based. Firms without the information of *state* and *returns* have been excluded from the sample. Since gubernatorial elections usually, but do not always, happen in the same week of the year, we made some further adjustments. We set the week where the gubernatorial election happens as week 0 every year and collect firms' return data within the weeks [-25, 17]. To mitigate the effect of outliers, we winsorize the returns in this sample to the 1<sup>st</sup> and 99<sup>th</sup> percentiles. The solid dots are the actual means of the standard deviations of returns among all the firms in the US by election-adjusted week. The blue line represents the moving average over 5 weeks and shows the trend.



**Figure 2.2**

**CSR Effects on Returns around Gubernatorial Elections from 1992 to 2019**

This figure plots the economic effect of CSR on the returns accumulated over different periods around elections (election day is set to day 0), that is [-180, 0], [-150, 0], [-120, 0], [-90, 0], [-60,0], [30, 0], and [90, 0]. The dashed lines and the area between the two dashed lines represent the 95% confidence intervals of the economic effect. This figure is based on the estimated coefficients of CSR using Model 2.3.



**Table 2.1**

**Descriptive Statistics**

Panel A shows the summary statistics for the firm-level variables. The sample consists of 6,781 firm-year observations with CSR data available from the MSCI ESG STATS database, in addition to stock returns and financial data available during the period 1992–2019. The CSR Score and all financial controls are lagged by one year. Panel B shows the summary statistics for state-level variables for a sample of 1,207 state-year observations from the same period. Control variables, stock returns and economic variables are winsorized at the 1<sup>st</sup> and 99<sup>th</sup> percentiles. All variables are defined in Appendix Table A.

**Panel A: CSR, Return and Financial Data**

|  | N     | Mean   | Std Dev | 25th perc. | Median | 75th perc. |
|--|-------|--------|---------|------------|--------|------------|
| CSR Score                              | 6,781 | -0.016 | 0.545   | -0.333     | 0.000  | 0.200      |
| Pre-election Returns (60 days)         | 6,781 | 0.029  | 0.155   | -0.063     | 0.028  | 0.118      |
| Pre-election Returns (90 days)         | 6,781 | 0.037  | 0.17    | -0.068     | 0.034  | 0.134      |
| Pre-election volatility *100 (60 days) | 6,787 | 2.404  | 1.217   | 1.575      | 2.130  | 2.897      |
| Pre-election volatility *100 (90 days) | 6,787 | 2.349  | 1.130   | 1.560      | 2.127  | 2.842      |
| Market Capitalization                  | 6,781 | 8072   | 19830   | 804        | 1985   | 5665       |
| Long-Term Debt                         | 6,781 | 0.208  | 0.189   | 0.026      | 0.187  | 0.314      |
| Return on Assets                       | 6,781 | 0.029  | 0.124   | 0.011      | 0.046  | 0.084      |
| Book-to-Market                         | 6,781 | 0.406  | 0.285   | 0.208      | 0.364  | 0.560      |
| Volatility                             | 6,781 | 0.108  | 0.066   | 0.063      | 0.090  | 0.129      |

**Panel B: Election and Economic Data**

|   | N     | Mean   | Std Dev | 25th perc. | Median | 75th perc. |
|---|-------|--------|---------|------------|--------|------------|
| Whole Sample  |       |        |         |            |        |            |
| Unemployment rate                                       | 1,207 | 0.054  | 0.019   | 0.041      | 0.051  | 0.064      |
| GDP   | 1,207 | 0.046  | 0.028   | 0.031      | 0.045  | 0.062      |
| Gubernatorial election                                  | 1,207 | 0.255  | 0.436   | 0.000      | 0.000  | 1.000      |
| Election Observations Only (gubernatorial election = 1) |       |        |         |            |        |            |
| Unemployment rate                                       | 316   | 0.054  | 0.019   | 0.041      | 0.051  | 0.063      |
| GDP   | 316   | 0.048  | 0.024   | 0.033      | 0.046  | 0.061      |
| Termlim   | 316   | 0.703  | 0.458   | 0.000      | 1.000  | 1.000      |
| Close_5%  | 316   | 0.241  | 0.428   | 0.000      | 0.000  | 0.000      |
| Votediff  | 316   | 15.925 | 13.194  | 5.300      | 12.750 | 21.850     |

**Table 2.2**

**Pre-Election Returns and CSR**

This table presents OLS regression estimates of pre-election returns on CSR and control variables. Panel A is our baseline regression. In columns (1) and (2) the dependent variable *Pre-election returns* is measured as 60 days of accumulated raw stock returns before a gubernatorial election, while in columns (3) and (4) it is measured as 90 days accumulated raw stock returns before a gubernatorial election. *CSR score*, which is the net (strengths minus concerns) CSR score, is computed using six main categories, measured at the end of the year before a gubernatorial election. Panel B presents regression estimates of pre-gubernatorial election period returns on the interaction terms  $CSR_{i,t-1} \times Close$  and  $CSR_{i,t-1} \times Predictable$  and additional controls. The control variables and returns are winsorized at the 1<sup>st</sup> and 99<sup>th</sup> percentiles. Industry (two-digit SIC code) and year fixed effects are controlled in all regressions. All variables are defined in Appendix Table A.

Standard errors are clustered at the firm level. t-statistics are reported in brackets. \*\*\*, \*\*, \* indicate that the parameter estimate is significantly different from zero at the 1%, 5%, or 10% level, respectively.

**Panel A: Baseline Regression**

|                                 | Return (Pre-gubernatorial election) |                     |                       |                       |
|---------------------------------|-------------------------------------|---------------------|-----------------------|-----------------------|
|                                 | (1)<br>60 days                      | (2)<br>60 days      | (3)<br>90 days        | (4)<br>90 days        |
| CSR score                       | 0.009***<br>(3.106)                 | 0.009***<br>(3.016) | 0.010***<br>(2.872)   | 0.010***<br>(2.761)   |
| Market Cap                      | -0.002<br>(-1.331)                  | -0.002<br>(-1.440)  | -0.005***<br>(-3.083) | -0.005***<br>(-3.163) |
| Long-Term Debt                  | -0.017<br>(-1.600)                  | -0.017<br>(-1.607)  | -0.019<br>(-1.448)    | -0.019<br>(-1.490)    |
| Book to Market                  | -0.003<br>(-0.478)                  | -0.004<br>(-0.510)  | -0.015*<br>(-1.805)   | -0.016*<br>(-1.868)   |
| Return on Assets                | 0.052**<br>(2.530)                  | 0.053**<br>(2.568)  | 0.022<br>(0.890)      | 0.022<br>(0.901)      |
| Volatility                      | 0.203***<br>(5.091)                 | 0.202***<br>(5.079) | 0.075*<br>(1.674)     | 0.076*<br>(1.698)     |
| GDP                             |                                     | -0.192*<br>(-1.821) |                       | -0.375***<br>(-3.037) |
| Unemployment Rate               |                                     | 0.270*<br>(1.691)   |                       | 0.254<br>(1.303)      |
| Constant                        | 0.067*<br>(1.843)                   | 0.063<br>(1.617)    | 0.089**<br>(2.068)    | 0.099**<br>(2.178)    |
| Observations                    | 6,781                               | 6,781               | 6,781                 | 6,781                 |
| Year and Industry Fixed Effects | Yes                                 | Yes                 | Yes                   | Yes                   |
| Adjusted R-squared              | 0.274                               | 0.274               | 0.186                 | 0.188                 |

(Continued)

**Table 2.2 – Continued**

**Panel B: Election Closeness and CSR**

|                                 | Return (Pre-gubernatorial election) |                       |                     |                       |
|---------------------------------|-------------------------------------|-----------------------|---------------------|-----------------------|
|                                 | (1)<br>60 days                      | (2)<br>90 days        | (3)<br>60 days      | (4)<br>90 days        |
| CSR x Close_5%                  | 0.018***<br>(3.243)                 | 0.016**<br>(2.279)    |                     |                       |
| CSR x Predictable_5%            | 0.007*<br>(1.897)                   | 0.008**<br>(2.072)    |                     |                       |
| CSR x Close_Quartile            |                                     |                       | 0.019***<br>(3.323) | 0.016**<br>(2.303)    |
| CSR x Predictable_Quartile      |                                     |                       | 0.006*<br>(1.823)   | 0.008**<br>(2.045)    |
| Market Cap                      | -0.002<br>(-1.460)                  | -0.005***<br>(-3.184) | -0.002<br>(-1.445)  | -0.005***<br>(-3.177) |
| Long-Term Debt                  | -0.017<br>(-1.580)                  | -0.019<br>(-1.467)    | -0.017<br>(-1.578)  | -0.019<br>(-1.466)    |
| Book to Market                  | -0.003<br>(-0.482)                  | -0.016*<br>(-1.842)   | -0.003<br>(-0.480)  | -0.016*<br>(-1.841)   |
| Return on Assets                | 0.053**<br>(2.562)                  | 0.022<br>(0.897)      | 0.053**<br>(2.560)  | 0.022<br>(0.896)      |
| Volatility                      | 0.201***<br>(5.062)                 | 0.075*<br>(1.676)     | 0.201***<br>(5.061) | 0.075*<br>(1.675)     |
| GDP                             | -0.190*<br>(-1.799)                 | -0.374***<br>(-3.023) | -0.190*<br>(-1.797) | -0.374***<br>(-3.023) |
| Unemployment Rate               | 0.278*<br>(1.744)                   | 0.258<br>(1.326)      | 0.278*<br>(1.741)   | 0.258<br>(1.324)      |
| Constant                        | 0.063<br>(1.607)                    | 0.099**<br>(2.178)    | 0.063<br>(1.602)    | 0.099**<br>(2.175)    |
| Observations                    | 6,780                               | 6,780                 | 6,780               | 6,780                 |
| Year and Industry Fixed Effects | Yes                                 | Yes                   | Yes                 | Yes                   |
| Adjusted R-squared              | 0.274                               | 0.188                 | 0.275               | 0.188                 |

**Table 2.3**

**IV Test**

This table reports the results from the two-stage least squares (2SLS) regressions (first and second stage). In the second stage regression stock returns in the period prior to a gubernatorial election are regressed on of the instrumented CSR score. Column (1) displays the first-stage regression of the CSR score on the Average CSR of geographically near firms (the instrumental variable) and other control variables. Columns (2) and (3) report the second-stage regression results, in which the dependent variables are 60 days and 90 days of accumulated returns before a gubernatorial election, respectively. All variables are defined in Appendix Table A. All regressions include the same control variables and the same industry and year fixed effects as in Table 2.2.

Standard errors are clustered at the firm level. t-statistics are reported in brackets. \*\*\*, \*\*, \* indicate that the parameter estimate is significantly different from zero at the 1%, 5%, or 10% level, respectively.

|  | Return (Pre-gubernatorial election) |                     |                     |
|--|-------------------------------------|---------------------|---------------------|
|  | First stage                         | Second stage        |                     |
|  | [1]<br>CSR score                    | [2]<br>60 days      | [3]<br>90 days      |
| Average CSR of geographically near firms | 0.155***<br>[3.837]                 |                     |                     |
| CSR score (instrumented)                 |                                     | 0.103*<br>[1.858]   | 0.126*<br>[1.838]   |
| Constant                                 | -1.315***<br>[-5.201]               | 0.232***<br>[2.889] | 0.326***<br>[3.125] |
| Firm Characteristic Controls             | Yes                                 | Yes                 | Yes                 |
| Economic Controls                        | Yes                                 | Yes                 | Yes                 |
| Year and Industry Fixed Effects          | Yes                                 | Yes                 | Yes                 |
| Observations                             | 6,077                               | 6,077               | 6,077               |
| Adjusted R-squared                       | 0.243                               | 0.270               | 0.186               |
| F- test (p-value)                        | 20.7314 (<0.001)                    |                     |                     |

**Table 2.4**  
**Robustness Tests**

This table shows several robustness tests. Panel A presents regression estimates of pre-election returns on the CSR score measured this time using five elements (environment, employees, human rights, community, and diversity) and then seven elements (environment, employees, human rights, community, diversity, product, and corporate governance) and additional control variables. Panel B presents regression estimates of pre-election returns on Bloomberg’s ESG data. Here the sample includes 1,273 observations with ESG data available from the Bloomberg database, in addition to returns and financial data available from the period 2006–2019. In Panel C, we use the full panel data and create an additional interaction term between CSR Score and a gubernatorial election dummy. The panel data sample here includes 25,382 observations with CSR data available from the MSCI ESG STATS database, in addition to returns and financial data available during the period 1992–2019. In Panel D, we change the proxy of political uncertainty to the presidential election year. The presidential election year sample consists of 6,054 observations in the period 1992-2019. All variables are defined in Appendix Table A. All regressions include the same control variables and the industry and year fixed effects as in Table 2.2.

Standard errors are clustered at the firm level. t-statistics are reported in brackets. \*\*\*, \*\*, \* indicate that the parameter estimate is significantly different from zero at the 1%, 5%, or 10% level, respectively.

**Panel A: Elements of CSR and Returns**

|                                 | Return (Pre-gubernatorial election) |                    |                     |                    |
|---------------------------------|-------------------------------------|--------------------|---------------------|--------------------|
|                                 | (1)<br>60 days                      | (2)<br>60 days     | (3)<br>90 days      | (4)<br>90 days     |
| CSR score (five elements)       | 0.008**<br>(2.528)                  |                    | 0.011***<br>(2.687) |                    |
| CSR score (seven elements)      |                                     | 0.007**<br>(2.453) |                     | 0.007**<br>(2.186) |
| Constant                        | 0.064<br>(1.627)                    | 0.060<br>(1.530)   | 0.115**<br>(2.406)  | 0.110**<br>(2.311) |
| Observations                    | 6,781                               | 6,781              | 6,781               | 6,781              |
| Firm Characteristic Controls    | Yes                                 | Yes                | Yes                 | Yes                |
| Economic Controls               | Yes                                 | Yes                | Yes                 | Yes                |
| Year and Industry Fixed Effects | Yes                                 | Yes                | Yes                 | Yes                |
| Adjusted R-squared              | 0.274                               | 0.274              | 0.188               | 0.187              |

**Panel B: Bloomberg ESG and Returns**

|                                 | Return (Pre-gubernatorial election) |                     |                     |                     |
|---------------------------------|-------------------------------------|---------------------|---------------------|---------------------|
|                                 | (1)<br>60 days                      | (2)<br>60 days      | (3)<br>90 days      | (4)<br>90 days      |
| Bloomberg_ESG                   | 0.001**<br>(2.252)                  | 0.001*<br>(1.663)   | 0.002**<br>(2.276)  | 0.001*<br>(1.720)   |
| Constant                        | 0.157***<br>(4.161)                 | 0.163***<br>(3.407) | 0.181***<br>(3.868) | 0.224***<br>(3.700) |
| Observations                    | 1,273                               | 1,273               | 1,273               | 1,273               |
| Firm Characteristic Controls    | Yes                                 | Yes                 | Yes                 | Yes                 |
| Economic Controls               | No                                  | Yes                 | No                  | Yes                 |
| Year and Industry Fixed Effects | Yes                                 | Yes                 | Yes                 | Yes                 |
| Adjusted R-squared              | 0.286                               | 0.168               | 0.286               | 0.168               |

(Continued)

**Table 2.4 – Continued**

**Panel C: Panel Data Regression**

|                                    | (1)<br>Annual return |
|------------------------------------|----------------------|
| Gubernatorial Election × CSR Score | 0.021***<br>(2.579)  |
| Gubernatorial Election             | 0.017***<br>(3.481)  |
| CSR score                          | 0.010<br>(1.130)     |
| Constant                           | 0.294***<br>(8.694)  |
| Observations                       | 25,177               |
| Firm Characteristic Controls       | Yes                  |
| Economic Controls                  | Yes                  |
| Year and Industry Fixed Effects    | Yes                  |
| Adjusted R-squared                 | 0.240                |

**Panel D: Presidential Elections**

|                                 | Pre-presidential election return |                     |
|---------------------------------|----------------------------------|---------------------|
|                                 | (1)<br>60 days                   | (2)<br>90 days      |
| CSR score                       | 0.006*<br>(1.652)                | 0.012***<br>(2.652) |
| Constant                        | 0.171***<br>(5.265)              | 0.239***<br>(6.927) |
| Observations                    | 6,054                            | 6,054               |
| Firm Characteristic Controls    | Yes                              | Yes                 |
| Economic Controls               | Yes                              | Yes                 |
| Year and Industry Fixed Effects | Yes                              | Yes                 |
| Adjusted R-squared              | 0.402                            | 0.389               |

**Table 2.5**

**Pre-Election Volatilities and CSR**

This table presents regression estimates of pre-gubernatorial election period stock return volatilities on the CSR score and additional controls. The sample period is 1992–2019. The control variables and returns are winsorized at the 1<sup>st</sup> and 99<sup>th</sup> percentiles. All variables are defined in Appendix Table A. All regressions include the same economic control variables and the same industry and year fixed effects as in Table 2.2. Standard errors are clustered at the firm level. t-statistics are reported in brackets. \*\*\*, \*\*, \* indicate that the parameter estimate is significantly different from zero at the 1%, 5%, or 10% level, respectively.

|                                 | Volatility*100 (Pre-gubernatorial election) |                        |
|---------------------------------|---|------------------------|
|                                 | (1)<br>60 days                              | (2)<br>90 days         |
| CSR score                       | -0.069***<br>(-2.933)                       | -0.053**<br>(-2.378)   |
| Long-Term Debt                  | 0.466***<br>(5.856)                         | 0.469***<br>(6.144)    |
| Assets                          | -0.212***<br>(-21.476)                      | -0.226***<br>(-24.316) |
| Capital Expenditure             | 0.930***<br>(2.861)                         | 0.824***<br>(2.629)    |
| Growth Rate                     | 0.241***<br>(5.259)                         | 0.211***<br>(5.187)    |
| Constant                        | 2.319***<br>(7.535)                         | 2.390***<br>(8.769)    |
| Observations                    | 6,787                                       | 6,787                  |
| Economic Controls               | Yes   | Yes                    |
| Year and Industry Fixed Effects | Yes   | Yes                    |
| Adjusted R-squared              | 0.444                                       | 0.436                  |

**Table 2.6****Stakeholder Relations and CSR During Periods of Political Uncertainty**

This table presents regression estimates of pre-gubernatorial election period returns on the CSR variables related to stakeholder relations and additional controls. In Panel A, the *CSR score* is split into two components: *Stakeholder Strength* and *Other items*. In Panel B, the *CSR score* is split into *External Stakeholders* and *Internal Stakeholders*. All variables are defined in Appendix Table A. All regressions include the same control variables and the same industry and year fixed effects as in Table 2.2.

Standard errors are clustered at the firm level. t-statistics are reported in brackets. \*\*\*, \*\*, \* indicate that the parameter estimate is significantly different from zero at the 1%, 5%, or 10% level, respectively.

**Panel A: Stakeholder Strength**

|                                 | Return (Pre-gubernatorial election) |                     |                    |                    |
|---------------------------------|-------------------------------------|---------------------|--------------------|--------------------|
|                                 | (1)<br>60 days                      | (2)<br>60 days      | (3)<br>90 days     | (4)<br>90 days     |
| Stakeholder Strength            | 0.014***<br>(3.468)                 | 0.014***<br>(3.364) | 0.011**<br>(2.212) | 0.011**<br>(2.105) |
| Other items                     | -0.002<br>(-0.592)                  | -0.002<br>(-0.489)  | -0.004<br>(-0.886) | -0.003<br>(-0.731) |
| Constant                        | 0.050<br>(1.326)                    | 0.047<br>(1.165)    | 0.073*<br>(1.664)  | 0.084*<br>(1.808)  |
| Observations                    | 6,781                               | 6,781               | 6,781              | 6,781              |
| Firm Characteristic Controls    | Yes                                 | Yes                 | Yes                | Yes                |
| Economic Controls               | No                                  | Yes                 | No                 | Yes                |
| Year and Industry Fixed Effects | Yes                                 | Yes                 | Yes                | Yes                |
| Adjusted R-squared              | 0.274                               | 0.274               | 0.186              | 0.187              |

**Panel B: External and Internal Stakeholders**

|                                 | Return (Pre-gubernatorial election) |                   |                     |                     |
|---------------------------------|-------------------------------------|-------------------|---------------------|---------------------|
|                                 | (1)<br>60 days                      | (2)<br>60 days    | (3)<br>90 days      | (4)<br>90 days      |
| External Stakeholders           | 0.007<br>(1.451)                    | 0.007<br>(1.423)  | 0.002<br>(0.355)    | 0.002<br>(0.326)    |
| Internal Stakeholders           | 0.010**<br>(1.973)                  | 0.009*<br>(1.875) | 0.017***<br>(2.917) | 0.016***<br>(2.791) |
| Constant                        | 0.066*<br>(1.815)                   | 0.063<br>(1.611)  | 0.089**<br>(2.065)  | 0.100**<br>(2.178)  |
| Observations                    | 6,766                               | 6,766             | 6,766               | 6,766               |
| Firm Characteristic Controls    | Yes                                 | Yes               | Yes                 | Yes                 |
| Economic Controls               | No                                  | Yes               | No                  | Yes                 |
| Year and Industry Fixed Effects | Yes                                 | Yes               | Yes                 | Yes                 |
| Adjusted R-squared              | 0.273                               | 0.274             | 0.186               | 0.187               |

**Table 2.7**

**Systematic Risk and CSR During Periods of Political Uncertainty**

This table presents regression estimates of pre-gubernatorial election returns on the CSR score and additional controls. All variables are defined in Appendix Table A. All regressions include the same control variables and the same industry and year fixed effects as in Table 2.2.

Standard errors are clustered at the firm level. t-statistics are reported in brackets. \*\*\*, \*\*, \* indicate that the parameter estimate is significantly different from zero at the 1%, 5%, or 10% level, respectively.

|                                 | Return (Pre-gubernatorial election) |                     |
|---------------------------------|-------------------------------------|---------------------|
|                                 | (1)<br>60 days                      | (2)<br>90 days      |
| CSR score                       | 0.007*<br>[1.767]                   | 0.011***<br>[2.599] |
| Beta                            | 0.001<br>[0.186]                    | 0.001<br>[0.265]    |
| Constant                        | 0.159***<br>[5.112]                 | 0.229***<br>[6.816] |
| Observations                    | 5,946                               | 5,946               |
| Firm Characteristic Controls    | Yes                                 | Yes                 |
| Economic controls               | Yes                                 | Yes                 |
| Year and Industry Fixed Effects | Yes                                 | Yes                 |
| Adjusted R-squared              | 0.414                               | 0.398               |

**Table 2.8****Other Potential Explanations**

In Panel A, we re-run the baseline regression of Table 2.2 on two sub-samples based on the gubernatorial election results. In Panel B, re-run the baseline regression of Table 2.2 on two sub-samples of S&P 500 companies based on the firm's political donation (donors vs. non-donors). All variables are defined in Appendix Table A. All regressions include the same control variables and the same industry and year fixed effects as in Table 2.2.

Standard errors are clustered at the firm level. t-statistics are reported in brackets. \*\*\*, \*\*, \* indicate that the parameter estimate is significantly different from zero at the 1%, 5%, or 10% level, respectively.

**Panel A: Political Parties**

|                                 | Return (Pre-gubernatorial election) |                   |                    |                   |
|---------------------------------|-------------------------------------|-------------------|--------------------|-------------------|
|                                 | 60 days                             |                   | 90 days            |                   |
|                                 | [1]                                 | [2]               | [3]                | [4]               |
|                                 | Rep win                             | Dem win           | Rep win            | Dem win           |
| CSR score                       | 0.012***<br>[2.587]                 | 0.008*<br>[1.853] | 0.011**<br>[2.156] | 0.009*<br>[1.693] |
| Constant                        | 0.067<br>[1.434]                    | 0.016<br>[0.279]  | 0.067<br>[0.839]   | 0.042<br>[0.791]  |
| Diff in coeff. Test             | 0.45<br>[0.504]                     |                   | 0.13<br>[0.714]    |                   |
| Observations                    | 3,478                               | 3,285             | 3,478              | 3,285             |
| Firm Characteristic Controls    | Yes                                 | Yes               | Yes                | Yes               |
| Economic Controls               | Yes                                 | Yes               | Yes                | Yes               |
| Year and Industry Fixed Effects | Yes                                 | Yes               | Yes                | Yes               |
| Adjusted R-squared              | 0.259                               | 0.291             | 0.174              | 0.211             |

**Panel B: Political Donations**

|                                 | Return of S&P 500 companies (Pre-gubernatorial election) |                    |                    |                  |
|---------------------------------|--|--------------------|--------------------|------------------|
|                                 | 60 days  |                    | 90 days            |                  |
|                                 | (1)  | (2)                | (3)                | (4)              |
|                                 | Donors   | Non-donors         | Donors             | Non-donors       |
| CSR score                       | 0.003<br>[0.487]   | 0.008<br>[1.627]   | 0.001<br>[0.161]   | 0.007<br>[1.014] |
| Constant                        | 0.053<br>[0.815]   | -0.062<br>[-0.731] | -0.016<br>[-0.166] | 0.04<br>[0.569]  |
| Diff in coeff. test             | 0.38<br>[0.537]  |                    | 0.31<br>[0.577]    |                  |
| Observations                    | 578  | 1,406              | 578                | 1,406            |
| Firm Characteristic Controls    | Yes  | Yes                | Yes                | Yes              |
| Economic Controls               | Yes  | Yes                | Yes                | Yes              |
| Year and Industry Fixed Effects | Yes  | Yes                | Yes                | Yes              |
| Adjusted R-squared              | 0.312  | 0.289              | 0.186              | 0.175            |

## Chapter 3

# Cultural Convergence after Mergers

### 3.1 Introduction

Corporate culture plays a pivotal role in shaping various aspects of a company's behaviour<sup>8</sup>, influencing how management and employees interact, make decisions, and contribute to the overall organizational environment (Sørensen, 2002). Additionally, corporate culture can impact a company's adaptability, innovation (Wang et al., 2021; Büschgens et al., 2012), and response to changes. Hence, understanding and managing corporate culture is essential for a firm to foster a positive work environment, promoting employee engagement, and achieving long-term success in the business landscape (Chen et al., 2007; Hartnell et al., 2012).

In the context of mergers and acquisitions (M&A) some previous research has shown that acquiring firms are less likely to target culturally-different firms (Rossi and Volpin, 2004; Siegel et al., 2011), and that firms with cultural differences are less likely to complete M&A deals (Dikova et al., 2010), or more likely to incur losses after the merger (Ahern et al., 2015; Doukas and Zhang, 2021). However, there is a notable scarcity of literature addressing changes in the acquirers' culture after deal completion (Vermeulen and Barkema, 2002). A merged firm's culture will certainly be similar to that of the acquirer, as the acquiring firm often possesses significant power: it decides both the degree of integration with the acquired firm and the extent to which it replaces the top management team of the acquired firm (Zollo and Singh, 2004). Hence, the question we pose in this

---

<sup>8</sup> National or country culture also affects company behaviours, as they can shape corporate culture (e.g., Doidge, Karolyi, and Stulz, 2007).

study is: will the culture of the target firm gradually influence and spread to the acquiring firm?

We posit that there are multiple ways in which acquirers can be influenced by the target firm's culture. Firstly, if learning about the target firm's culture helps to maximize shareholder value and benefits the acquirer, cultural integration after a merger should be commonplace. This perspective is supported by Vermeulen and Barkema (2001), Lim et al. (2016), and Chakrabarti et al. (2009), who advocate for acquirers to embrace the target firm's culture to promote innovation and organizational diversity. However, this view is not unequivocal: other researchers argue that conflicting cultures may result in substantial integration costs (Buono and Bowditch, 2003; Ahern et al., 2015).

Secondly, even though the target firm is being acquired, its culture may still be inherited by the new merged firm. In stock swap deals, the target firm's shareholders become shareholders of the merged firm (Baker et al., 2007). The catering theory posits that managers apply policies or arrange behaviors to cater to shareholders' preferences (Baker and Wurgler, 2004). This has been confirmed in relationship to other strategical choices, such as dividend policy (Baker and Wurgler, 2004), earning management (Rajgopal, Shivakumar, and Simpson, 2007), and investment decisions (Polk and Sapienza, 2009). Hence, managers may also accommodate the culture post-merger to align it with the target-shareholders' preferences.

Moreover, the acquirer firm tends to retain executives and skilled workers of the target firms, as this can enhance the merger's premium (Wulf and Singh, 2011). The retention of the target firm's leaders is particularly interesting in terms of cultural transmission. According to the upper echelons theory, the characteristics of the top management influence the firm's strategies (Chatterjee & Hambrick, 2007; Hambrick & Mason, 1984), either directly, via managerial decision-making, or indirectly via the influence they exert on the organizational culture. The corporate culture then shape the composition of the firm's workforce and guide the decision-making of lower-level employees (Wang et al., 2016).

Moreover, the stakeholders of the target firm, such as retained employees, loyal customers, or the local community are likely to continue impacting the merged firm after a merger. For example, consumers who relied on the target firm tend to maintain their

loyalty in the new merged entity. According to stakeholder theory, a firm's decisions is influenced by its stakeholders' interests, and a positive stakeholder relationship contributes to the firm's profitability (Donaldson and Preston, 1995; Freeman, 1984). Hence, these stakeholders may significantly impact the operations of the merged firm, prompting its efforts to cater to their preferences by assimilating their culture.

In this study, we use the corporate culture data developed by Li, Mai, Shen, Yan (2021) for the investigation of our research question (that is, will the culture of the target firm gradually influence and spread to the acquiring firm?). Applying machine learning techniques to analyze the Q&A sessions of earnings calls, Li, Mai, Shen, Yan (2021) classify corporate culture into five common dimensions: integrity, teamwork, quality, innovation, and respect. Our primary measure of cultural difference is the pre-merger gap in corporate culture between the acquirer and the target. By analyzing 430 completed acquisitions by US firms between 2003 and 2016<sup>9</sup>, our evidence supports the occurrence of culture convergence after a merger. We find that the difference in corporate culture positively influences the acquirer firm's cultural change around the mergers. In other words, the acquirer corporate culture converges towards the one of the acquired firm.

We conduct a battery of robustness checks to validate our findings. First, we measure the post-merger culture in different years following a merger to reduce the likelihood of bias from taking a single measurement at a particular time. Second, we apply an alternative measurement of corporate culture measurement. Third, we break down the total cultural score into its five composing categories to examine whether it is the aggregated corporate culture or some specific components of the corporate culture that are more important for the merged firm and trigger cultural convergence. The results are consistent with our baseline results, and every cultural component has a positive and significant effect on the acquirer's culture after the merger.

Our further analysis shows that the pre-merger cultural gap has a more pronounced effect on post-merger cultural change in stock swap deals, suggesting that the stronger the target's shareholder ownership relative to the acquirer's, the greater the influence exerted by the target. A more noticeable adjustment in the acquirer's culture is also

---

<sup>9</sup> Li, Mai, Shen, Yan (2021) data are available from 2002 to 2021. Since we only include a deal when the cultural variables of three years after a completed merger are available, the time span for the M&A data used in the sample is shorter than that for cultural data. The latest value of the deal announcement year variable in the sample is 2016.

observed when the target firm has a strong employee relationship, indicating that the target's employee power can facilitate changes in the acquirer culture after a merger. We also investigate the short-term returns and operating performance of the merged firm and discover that, although cultural differences do not have a significant effect on short term returns, they do have a significant and positive effect on industry-adjusted return on assets. These findings support the view that corporate cultural diversity can enhance synergy gains and further reinforce our hypothesis.

Our study makes several contributions to the existing literature. Firstly, it enriches the M&A literature by underscoring that the target firm can significantly impact the post-acquisition scenario. Previous studies predominantly focused on other factors in the post-acquisition phase, such as financial performance (e.g., Sudarsanam and Mahate, 2003; Krishnan et al., 2007), integration strategies (e.g., Bauer and Matzler, 2014; Khan et al., 2020), and leadership dynamics (e.g., Nemanich, 2007; Kuvandikov et al., 2014), rather than subsequent cultural or policy changes. This study extends Ahmad et al.'s (2022) research on the influence of the target firm: they find that the cultural orientation of target *countries* affects the probability of firms to become targets and influences the returns to target firms' shareholders. Firms from results-oriented cultures are less likely to be M&A targets and yield higher returns when acquired, while those from tradition or people-oriented cultures are more likely targets but experience lower returns. Our study is different because we focus on the cultural impact of the target on the post-merger cultural changes made by acquirers.

Secondly, we contribute to the literature on culture convergence in a merger. Earlier research has also accentuated the influence of the acquirer firm on a deal and its subsequent integration but has delved less into the effects on the target. Zhang and Xie (2009) as well as Ellis et al. (2016) shows that good country governance/ corporate governance from acquirer can be transferred to the target firm. Bris and Cabolis (2008) find that target firm usually adopts the accounting standards, disclosure practices, and governance structures of the acquiring firm's country. Our study extends the existing literature by showing that the target firm can also exert a persistently long impact on the culture of the acquirer, and a target with less developed culture could contaminate as well.

This study is structured as follows: Section 3.2 reviews the literature and develops the hypotheses. Section 3.3 covers our data and descriptive statistics. Section 3.4 contains

our main results and robustness tests. Section 3.5 discusses additional tests we conducted and provides some discussion. Finally, our conclusions are presented in Section 3.6.

### 3.2. Related Literature and Hypothesis Development

While cultural differences are not commonly considered as one of the major underlying drivers of M&A activities,<sup>10</sup> after a merger the acquiring firm faces the decision of whether to ‘embrace’ the target culture. *Cultural Convergence (Acculturation)*, generally defined as the acquirer and the target firm adapting to each other, resolving emergent conflicts, and developing a jointly determined culture in M&As (Cartwright and Cooper, 1993), commonly occurs in the post-acquisition phase. In this study, we look specifically at the acquirer converging towards the corporate culture of the target firm. This can happen via active learning or passive catering.

In terms of active learning, there are two opposing views on whether the acquirer adopts or adjusts to the target’s culture. The first view argues that the acquirer should embrace the target firm’s culture, as a diverse culture can break the rigidities of acquiring firms (Vermeulen and Barkema, 2001), foster innovation and learning (Lim et al., 2016), improve diversity in organizational strength (Chakrabarti et al., 2009), thereby adding value to the acquirer firm. The second view argues that conflicting corporate cultures may arise, and the time and energy required to facilitate culture integration could be a substantial cost (Buono and Bowditch, 2003; Ahern et al., 2015). For example, Meyer and Altenborg (2008) argue that a firm’s culture is inert and difficult to change, which may result in higher integration costs. However, while learning the target’s culture may not be the primary objective of a merger, the acquirer often assesses the potential challenges arising from cultural differences before initiating the merger. Consequently, deals that have been both started and successfully completed might be the ones with an affordable ‘cost of cultural distance’ (Chakrabarti et al., 2009; Fong et al., 2019; Lawrence et al., 2021).

In terms of passive catering, in stock swap deals acquirer firms ‘inherit’ the shareholders of the target firm (Baker et al., 2007). Consequently, the management team may then

---

<sup>10</sup> According to Rabier (2017), common motives for acquisitions include the target’s product offering (75% frequency), access to the target’s geographic footprint (42%), achieving economies of scale and cost reduction (39%), and reducing competition (19%), among others.

have to cater to the demands of these new shareholders and adjust to their culture. An example of catering behavior is provided by Golubov et al. (2020), but in relation to dividend policy, not cultural assimilation: they find strong evidence that acquirers in stock-for-stock mergers adjust their dividend payout to align with that of the target in the three post-merger years.

Some related literature confirms the firm leadership's influence on corporate culture, for example, Greham et al. (2022b) argue that "leaders define the firm's culture, especially the founder." After a merger, directors and senior executives from the target firm may continue to serve on the board of the merged firm, as they can invest in developing knowledge or relationships specific to the firm (Wulf and Singh, 2011). Ishii and Xuan (2014) discover that stronger social ties between the top management teams of the acquiring and target firms increase the likelihood of the target firm's executive team remaining on the board. In this scenario, the culture of the target firm may be further promoted, and related policies may be implemented by the new top management team in the acquiring firm.

Furthermore, most acquirer-firms make significant efforts to retain employees from the acquired firm (Cannella and Hambrick, 1993). These employees, representing the traditions or code of ethics of the target firm, continue to work in the merged firm. If employees in the target firm are highly valued by acquirers (Ranft and Lord, 2002; Kiessling and Harvey, 2006), they can disseminate their work ethics amongst the merged firm's employees and contribute to culture integration (Reus and Lamont, 2009).

Additionally, some M&A deals are motivated by the desire to expand a firm's market share overseas. If this type of deal is completed, then catering to the preferences of the new overseas customers can be an effective operational strategy after the merger to achieve the goal of expanding the market share. Previous research has demonstrated that the behaviour of consumers and business customers towards a product or service can differ in various markets (Hewett et al., 2006; Tellis et al., 2009). If the merged firm seeks to retain as many of the target's customers as possible, they need to satisfy these customers (Keller, 1993; Weitz and Bradford, 1999) and understand well customers' philosophy and expectations from the acquired firm (Piercy and Rich, 2009). Therefore, they must interpret, adopt, and implement the corporate culture of the target firm to avoid conflict (Nakata and Sivakumar, 2001) and loss of customers.

Previous literature finds that cultural distance, especially at the country level, may lead to a reduction in the volume of cross-border M&As (Rossi and Volpin, 2004; Siegel et al., 2011; Erel et al., 2012) and result in disappointing outcomes (Ahern et al., 2015; Doukas and Zhang, 2021). However, there is so far limited discussion about how the corporate culture of the acquiring firm changes after the completion of the deal.

Building on the preceding arguments, we propose Hypothesis 3.1a and 3.1b.

Hypothesis 3.1a: *The culture of the merged firm will significantly converge toward that of the target firm.*

Hypothesis 3.1b: *The culture of the merged firm won't significantly converge toward that of the target firm.*

As mentioned earlier, according to the catering theory, the management team of the acquiring firm might have to cater to the demands of the new shareholders-investors inherited from the acquired firm and adjust to their culture. Some literature provides evidence of firms' catering behaviors to investors, outside the context of M&As. For example, firms adjust dividend payouts based on investors' sentiment for dividends (Baker and Wurgler, 2004), and managers modify earnings surprises to meet investors' demands (Rajgopal et al., 2007). Consequently, as investors may exert pressure on firms to adopt specific policies, they can also influence the firm to adjust to their culture. Anecdotal evidence supports this idea; for instance, Facebook appointed Sheryl Sandberg to its board in response to investors' demands for the inclusion of a female member on their all-male board of directors. In the context of M&As, we can look at swap deals as a shock to the acquirer's shareholder structure and then test the catering theory in relationship to cultural convergence. Based on the above discussion, we propose our second hypothesis:

Hypothesis 3.2: *The target firm's culture will have a more significant impact on the merged firm's culture in stock swap deals, because of the cultural influence of the 'inherited' shareholders.*

According to the stakeholder theory, employees are a firm's internal stakeholders and, as such, they too may affect corporate decisions, strategies, and culture in a significant way. Often the key employees of the target firm are retained by the merged firm as it aims to

(Kiessling et al., 2016; Shi et al., 2023 ). If employees of the target firm maintain a good relationship with that firm, they can then shape the new acquiring firm's culture. Hence, we propose the following hypothesis:

*Hypothesis 3.3: The target firm will exert a more significant impact on the merged firm's culture via its retained employees if those employees are highly valued by the target firm.*

The previous discussion about active learning provides instead the theoretical basis for cultural diversity creating long-term synergies. Cultural differences, rather than cultural similarities, can be a source for the merged firm to achieve value creation and learn from the target culture (Reus and Lamont, 2009; Marks and Mirvis, 2011). A culturally diverse environment is then positively related to firm performance. For example, it can broaden the ways of developing products/services and approaching customers (Gomez-Mejia & Palich, 1997). Hence, we propose as the following hypothesis:

*Hypothesis 3.4a: A larger cultural difference between acquirer and target will induce a significant synergy gain for the firm after integration.*

However, a substantial cultural gap between the acquirer and the target can complicate integration, as firms encounter challenges from incompatible values and communication barriers (Ahern et al., 2015), increasing the "liability of foreignness" and raising integration risks and costs (Kogut & Singh, 1988). These differences can lead to inefficiencies and performance declines, complicating resource integration and reducing expected synergies (Datta, 1991; Morosini, Shane, & Singh, 1998).

*Hypothesis 3.4b: A larger cultural difference between acquirer and target will impose a significant cost burden for the firm after integration.*

### 3.3 Sample and Summary Statistics

#### 3.3.1 Main cultural variables

We utilize corporate culture data derived by Li, Mai, Shen, Yan (2021) as our main measure. This approach employs a novel machine learning technique, the word embedding model, to analyze Q&A sessions in earnings call transcripts to score corporate

cultural values. Given that the current CEO is widely viewed as the most influential figure responsible for shaping the firm’s current culture, earnings calls, primarily featuring the CEO and occasionally other top executives conversing with analysts, often unveil the set of values deemed important by a company (Graham, Grennan, Harvey, and Rajgopal, 2022b).

In addition, the decision to use data from the Q&A section to measure corporate culture serves to address concerns about merely capturing “cheap talk” by managers. This is because management presentations in the other parts of an earning call are more likely to be scripted and/or vetted by corporate lawyers and investor relations, as opposed to the Q&A section Li, Mai, Shen, Yan (2021). Furthermore, the derived corporate cultural values are compared with different markers, to validate their reliability.

The database of Li, Mai, Shen, Yan. (2021) is developed along the five most frequently mentioned cultural values by S&P 500 firms based on Guiso, Sapienza, and Zingales (2015a)’s nine cultural values. The five values are: integrity, teamwork, quality, respect, and innovation. Subsequently, a “culture dictionary” is created, encompassing words and phrases closely associated with each of these cultural values. The score assigned to each firm’s values is determined through a weighted-frequency count of the presence of these words and phrases in their earnings call transcripts. The scores we use in this study are obtained after normalizing the document length.

We employ two proxies to measure the distance between the target and acquirer’s corporate cultural scores. The first proxy is *Cultural gap*, illustrated by Equation (3.1), that is the difference between the sum of the five cultural values for the acquirer and the target. This approach aligns with the methodology outlined by Li, Mai, Shen, Yan. (2021) and Li, Liu, Mai, and Zhang (2021).

$$\begin{aligned} & \text{Cultural gap (Tar to Acq)} \\ & = \sum_{n=1}^5 (\text{Cultural values}_{n,-1}^{\text{Tar}} - \text{Cultural values}_{n,-1}^{\text{Acq}}) \quad (3.1) \end{aligned}$$

where:

*Cultural values* $_{n,-1}^{Tar}$ : Is the cultural value score for the  $n^{\text{th}}$  cultural dimension of the target firm in year t-1; and *Cultural values* $_{n,-1}^{Acq}$ : Is the cultural value score for the  $n^{\text{th}}$  cultural dimension of the acquirer firm in year t-1.

The alternative measurement we use is cultural distance, calculated as the Euclidean distance, which is the square root of the sum of squared differences across all five cultural values for each pair of firms (target and acquirer) – see Equation (3.2). This method has been employed in various studies, including Morosini, Shane, and Singh (1998), Brouthers and Brouthers (2001), and Li et al. (2020).

$$\text{Cultural distance (Tar to Acq)} = \sqrt{\sum_{n=1}^5 (\text{Cultural values}_{n,-1}^{Tar} - \text{Cultural values}_{n,-1}^{Acq})^2} \quad (3.2)$$

Following previous literature, we assess the acquirer's cultural change over three distinct periods: the cultural change between one year before the announcement and one, two, and three years after deal completion, denoted as  $\Delta\text{Cultural change } (-1 \text{ to } +1)$ ,  $\Delta\text{Cultural change } (-1 \text{ to } +2)$ , and  $\Delta\text{Cultural Change } (-1 \text{ to } +3)$ , respectively (Golubov et al., 2020).

### 3.3.2 Data and sample

We source U.S. M&A data from the Securities Data Company (SDC) Platinum database, stock return data from CRSP, and accounting data from Compustat. Our sample period spans from January 1, 1980, to December 31, 2020. To ensure a well-defined sample, we applied the following selection criteria:

1. Given that corporate culture can be influenced by regulations (Liang et al., 2017), we excluded financial firms (SIC code 6000-6900) and utility firms (SIC 4900-4949) from our sample due to the additional regulations they may face in their respective industries.
2. To maintain consistency in the sample size when altering the measure of cultural change ( $\Delta\text{Cultural change } (-1 \text{ to } +1)$ ,  $\Delta\text{Cultural change } (-1 \text{ to } +2)$  and  $\Delta\text{Cultural change } (-1 \text{ to } +3)$ ), we only include observations where data is available for acquirer's cultural score one year before the deal announcement, as well as one, two, and three years after completion.

3. Both the acquirer and the target must be listed firms, and the M&A deal status should be marked as completed with an effective date.
4. Both the acquirer and the target should have financial measures available from Compustat one year before the merger's announcement.

These criteria are applied to ensure a robust and relevant dataset for our analysis.

To mitigate issues related to outliers, we apply winsorization at the 1<sup>st</sup> and 99<sup>th</sup> percentiles to the financial variables. Appendix C provides detailed definitions for the variables used in our models.

### 3.3.3 Baseline regression model

The dependent variable in our baseline regression model is the change in the culture of the acquiring firm. A higher value of this variable indicates an improvement in the acquirer's culture, considering the total value across the five dimensions (integrity, teamwork, quality, respect, and innovation), compared to the time before a merger. Conversely, a lower value would imply the opposite. The cultural gap is the main variable of interest, as we examine the impact that the initial acquirer-target cultural distance has on post-merger changes in the acquirer's culture. We also include a set of other acquirer-level control variables that the existing literature, such as Li, Mai, Shen, Yan (2021) and Suk and Wang (2021), has found to affect cross-border acquisitions. The control variables are *Size* (the total logarithmic value of assets), *Profit* (net income before extraordinary items scaled by total assets), *Leverage* (total financial debt, long-term debt plus debt in current liabilities, divided by the book value of total assets), *Market-to-Book* ratio (market capitalization divided by the book value of equity), *Cash Flow to Equity* (income before extraordinary items plus depreciation minus dividends on common and preferred stock divided by the number of shares outstanding times the closing stock price), and *Sales Growth* (% change in sales).

Additionally, we incorporate controls for  $\Delta Earnings$  (the change in earnings per share over the corresponding periods, i.e., starting one year before the deal announcement and ending one, two, or three years after deal completion) and  $\Delta Growth Opportunities$  (the change in the acquirer's market-to-book ratio over the corresponding period). This inclusion of these variables is crucial to control for the possibility that changes in the

acquirer's culture are attributed to changes in the profitability of the merged firm (Golubov et al., 2020). All the independent variables are measured one year ahead of M&A announcements to mitigate the reverse causality concern. Our baseline model can therefore be written in the form of Equation (3.3).

$$\Delta Cultural\ change_{-1\ to\ +j}^{Acq} = b_0 + b_1 Cultural\ gap_{i,t-1} + b_2' X_{t-1} + Year\ and\ Industry\ Fixed\ Effects + e_{i,t} \quad (3.3)$$

where  $\Delta Cultural\ change_{-1\ to\ +j}^{Acq}$  represents the difference in the acquirer's cultural score over the corresponding period,  $Cultural\ gap_{i,t-1}$  signifies the cultural difference between the acquirer and target one year before the deal announcement and  $X_{i,t-1}$  is a vector of control variables, including firm financial characteristics. We follow Li, Mai, Shen, Yan (2021) to control for year and industry fixed effects. Moreover, we cluster standard errors at the acquirer firm level to allow for possible series correlations in firm outcomes.

After consolidating data from firms with adequate coverage in the SDC Platinum, Compustat, and corporate culture databases, we compiled a sample of 430 public-to-public M&A transactions.

### 3.3.4 Descriptive statistics

Table 3.1 presents descriptive statistics for main cultural variables, firm characteristics, and deal characteristics. In Panel A, we can observe that the acquiring firm in general experiences an average increase in cultural value following acquisition of 0.427, 0.860, and 0.821 in years 1, 2, and 3 after the deal completion, respectively. The mean of the cultural gap is positive, suggesting that the average target firm in our sample has a higher cultural score than the average acquirer across the five cultural values considered. The alternative variable, cultural distance, shows a similar trend. Panel B reports the firm characteristics for actual acquirers and targets separately. Consistent with the existing literature, we find that the acquirer firm is larger than the target firm in size, profit, leverage, and sale growth rate (e.g., Bereskin et al., 2018).

Panel C provides additional characteristics about the sample of mergers in terms of relative size, percentage of stock, hostile and tender offers, and industry relatedness. In our

sample, 57% of merging firms are in the same industry, and the median target in our sample is 32% the size of the acquirer. On average, the acquirer pays 25% of the deal value with its stock. Hostile and tender offers are not the majority, occupying only 0.5% and 27% of the total deals, respectively.

### 3.4 Cultural Convergence in Post-merger

#### 3.4.1 Baseline results

Table 3.2 presents our ordinary least square (OLS) regression models, with each regression incorporating the same firm-level controls, as well as year and industry fixed effects. The dependent variables are  $\Delta Cultural\ change$  ( $-1$  to  $+1$ ),  $\Delta Cultural\ change$  ( $-1$  to  $+2$ ), and  $\Delta Cultural\ change$  ( $-1$  to  $+3$ ) respectively for the first three columns, and the independent variable is *Cultural gap*. For the last three columns, we replace *Cultural gap* with *Cultural distance* and replace  $\Delta Cultural\ change(s)$  with  $\Delta Cultural\ distance(s)$ . In columns (1), (2), and (3), we observe that acquirer firms, which have a lower aggregate cultural score than the target firms before a merger, tend to enhance their cultural score after the merger. On the contrary, when the target firm has a lower corporate culture score than the acquirer, after a merger, the merged firm's cultural score declines. The impact of the cultural gap on the acquirer's cultural change is economically significant: a one standard deviation increase in the cultural gap (5.659) is associated with a 1.1261.092, and 1.279 increase in cultural score change in the first, second, and third year after deal completion, respectively. Columns (4), (5), and (6) show similar results using the alternative cultural distance measurement. While it might be assumed that the acquirer's culture is inevitably influenced by the target firm after a merger, such as through the integration of target firm employees into the acquirer's workforce, both the cultural gap and cultural distance measurements indicate that acquirer's cultural score change becomes more pronounced three years after a merger is completed than one year after. This result is meaningful, as acquiring firms are continuously influenced by the target's culture rather than just undergoing a one-off change.

The results from the baseline regressions show that there is a trend of cultural convergence after a merger, which confirms our hypothesis that the target firm's culture affects the merged firm persistently. These findings are consistent with recent literature such as Wang and Xie (2009) who found cultural convergence in corporate governance

after a merger. To be specific, they show that acquisitions of firms with poor corporate governance by firms with good corporate governance will result in an improvement in corporate governance at the target.

### 3.4.2 Cultural dimensions

The analysis demonstrates that the target's culture can generally influence the acquirer's culture; however, it does not conclusively identify which specific cultural aspect primarily drives this effect. Therefore, we conduct further tests by categorizing culture into multiple dimensions – Integrity, Teamwork, Innovation, Respect, and Quality – to discern their respective impacts.

The change in culture within each specific dimension is calculated similarly to how we compute the aggregate variable. Taking Integrity as an example, the *Integrity gap* is calculated as the target firm's integrity score minus the acquirer firm's integrity score, while  $\Delta$  *Integrity* [-1 to +3] is calculated as the acquirer firm's integrity score three years after a merger minus the integrity score one year before an announcement. The detailed results are provided in Table 3.3. The coefficients for each cultural dimension measure are positive and significant at the 1% level, suggesting that cultural convergence occurs across all measured dimensions. These results are also consistent when we measure the change over different time horizons such as [-1,1], [-1,2] or [-1,3]<sup>11</sup>.

The Innovation gap exhibits the largest economic impact among these five cultural categories. A one-standard-deviation increase in the *Innovation gap* (2.216) is associated with a 0.571 increase in innovation cultural change during the year before the merger and three years after the merger. Comparatively, a one-standard-deviation increase in the *Quality gap* (2.178), *Respect gap* (1.663), *Integrity gap* (1.271), and *Teamwork gap* (1.649) is associated with changes in their respective cultural dimensions: 0.488, 0.429, 0.338, and 0.267. Consequently, the economic impact of the *Innovation gap* on innovation changes for the merged firm is more than double the impact of the *Teamwork gap*.

---

<sup>11</sup> To conserve space, we only report the results for the time horizon [-1,3] in Table 3.3.

### 3.4.3 Stock swap deals

In this section, we examine whether the extent of the acquirer's cultural change, as outlined above, varies in cross-section depending on the importance and weight of the target firm's shareholders. We utilize deal-level characteristics, specifically *Percentage of Stock*, which represents the portion of the deal paid by the acquirer using stock. Our goal is to assess whether the magnitude of cultural change is more pronounced when the target firm constitutes a substantial portion of the shareholders' weight.

When the target firm holds a larger share in the new acquiring firm, it can more actively engage with the company's management and board to advocate for changes in corporate culture, or other policies aligning with their values (e.g., Cronqvist and Fahlenbrach, 2008). Hence, there could be a larger impact on the culture of the merged firm. We, therefore, test whether the influence of the target firm's culture, captured by the positive coefficient on the variable *Cultural gap*, is stronger for deals in which the acquirer uses stock as a form of payment. To investigate this, we add to the model (3.3) an interaction term between *Cultural gap* with *Percentage of Stock* and also include the variable *Percentage of Stock* in the regression (Golubov et al., 2020).

The estimation results in Table 3.4 confirm our intuition that the acquirer's culture is more likely to be influenced by the merger when target shareholders are inherited through a stock swap deal. The coefficient on the interaction term *Cultural gap \* Percentage of Stock* is positive and significant at the 10% level, and the coefficient of *Cultural gap* is still positive and significant at the 1% level. This test confirms Hypothesis 3.2 and demonstrates that the shareholders of the target firm transiting to the merged firm can exert a significant influence on corporate culture. The result aligns with the catering theory.

The cultural gap between target and acquirer can also impact the choice of payment method in M&A deals. Acquirers may opt to avoid inheriting target shareholders when the target culture significantly differs from that of the acquirer and the cultural adjustment may be too costly. There are indeed potential risks associated with cultural integration. For instance, different corporate cultures may clash, and resistance from employees (manifested in difficulties in communication and collaboration, low employee retention) and other stakeholders may impede the post-merger integration process (Larsson and

Lubatkin, 2001; Renneboog and Vansteenkiste, 2019). Hence, the acquirer may favor a pure cash offer rather than an offer that includes equity if the cultural gap with the target firm is wider. Consequently, we examine the existence of this ex-ante effect by investigating whether differences in the corporate culture of the merging firms, as captured by the cultural gap variable, influence the choice of payment method. The results of this analysis are presented in Panel B of Table 3.4.

We conduct two regressions in which the dependent variable is either the fraction of deal consideration in the form of stock (*Percentage of Stock*) or an indicator variable that takes the value of one for pure stock swaps and zero otherwise (*All Stock Dummy*). Our primary variable of interest is *Cultural gap*, and the ex-ante effect explained above implies a negative association of this variable with the propensity to pay for the deal with stock. We also include firm-level controls for size, leverage, market-to-book ratio, profit, cash flow to equity, and sales growth for both the acquirer and target. Additionally, we incorporate deal-level controls for the same-industry deals (*Industry Relatedness* (3-digit SIC)) and the relative size of the deal (*Relative size*). We finally control for acquirer's industry fixed effects and year fixed effects. Since we no longer need to tack the post-merger characteristics in this test, our sample size increases to 744.

The estimation results confirm our conjecture. In both regressions, the coefficient on the *Cultural gap* variable is negative and highly statistically significant. When the distance between the cultural score of acquirer and target is narrow, acquirers are more inclined to structure deals as pure stock swaps. These findings also align with the notion of ex-ante catering to shareholders through the choice of the deal structure. Our result is consistent with Alexandridis et al. (2022) which indicates that cultural dissimilarities in corporate social responsibility between firms involved in an M&A deal can decrease the likelihood of payment by stock.

#### 3.4.4 Employee's influence

The retention of key employees is identified as a crucial factor for the success of an acquisition (Gomes et al., 2011); hence, it becomes a focal point for the acquirer. Also, the acquirer may need to respond not only to shareholders' requests, but also to the demands coming from the target firm's retained employees, if it aims towards a cultural integration with the target firm. The adjustment towards the target's culture also serves as a positive

signal to the employees of the target firm, encouraging them to stay with the new acquiring firm and fostering improved coordination within the organization.

Intuitively, a good relationship with employees is considered a valuable intangible asset for the firm, contributing positively to the firm's long-term performance (Edmans, 2011). Consequently, we expect that a target firm with a better relationship with them may exert a more significant influence on the merged firm during the cultural integration process. For example, acquirers may be more inclined to adopt specific aspects of the target's culture, such as teamwork spirit and work-from-home environment, to foster a positive relationship with the target firm's employees.

To test this conjecture around the influence of target employees, we use the Employee Relations Score from the MSCI ESG database. We follow the methodology outlined by Lins et al. (2017) and Chen et al. (2020) to create our measure of Employee Relations. Given that the items underscoring the employee relations in the MSCI ESG database change across the years, we calculate the total items the firm achieved for each year and divide it by the total number of available items in the strengths of Employee Relations. We follow the same procedure to calculate the weakness score for Employee Relations and obtain the final Employee Relations score by subtracting the weakness score from the strength score. We then add to the model (3.3) the interaction term between *Cultural gap* and *Employee Relations* and also include the variable *Employee Relations* in the regression. The results are reported in Table 3.5.

Due to the additional variables' availability required for these tests for the target firm one year before a merger, the sample size drops from 430 to 241 in the test with the Employee Relations variable. The regression results show that when the target firm has stronger employee relations, the merged firm is more likely to be influenced by the target firm's culture, with significance at the 5% level. These results confirm our Hypothesis 3.3.

### 3.5. Additional Tests and Further Discussion

Our tests so far provide evidence of corporate cultural convergence post-merger. However, the benefits of this convergence for the firm remain unclear. Section 3.4.3 indicates that firms are hesitant to use shares as a payment method when the cultural gap is larger, highlighting concerns about the costs and uncertainties associated with cultural

integration. This finding also suggests that shareholders may not view a wide cultural difference positively, potentially leading to less favorable valuations at the announcement of such deals.

Although shareholders may not view cultural differences positively at the time of a deal's announcement, the impact on ex-post operational performance remains uncertain. This distinction is common in M&A literature, where short-term announcement returns often behave differently from long-term operational performance. For example, Malmendier et al. (2018) suggest that the expected synergies announced during a deal may be overestimated, attributed to factors like behavioral biases, biased bidder press releases, price pressure, merger integration frictions, or unforeseen changes in the economic environment. Positive short-term announcement returns often fail to materialize over the long term.

In our context, the long-term effects of cultural convergence are not clear. Previous literature, such as Cartwright and Cooper (2001) and Teerikangas and Very (2006), indicates that cultural diversity can enhance firm performance. This may imply that greater cultural divergence pre-merger, leading to more diversity within the merged firm, could positively impact operational efficiency. Conversely, a more diverse culture might increase communications friction, potentially diminishing performance, as suggested by Hofstede (1980) and Björkman et al. (2007).

To test the competing hypotheses, we construct a short-term performance metrics, specifically the cumulative abnormal returns (CARs) around the deal announcement for the two merging firms, and a long-term performance metrics, the industry-adjusted return on assets (ROA) for the merged firm as dependent variables. We use these performance metrics as dependent variables. CARs are calculated using the market model, with parameters estimated over the period starting 240 days and ending 41 days prior to the announcement. We consider CARs over the window one day before to one day after announcement, CAR (-1, +1), and over the alternative window one day before to three days after announcement, CAR (-1, +3). Industry-adjusted ROA represents the acquirer's returns on assets, adjusted for industry-specific factors. We use this variable in different time periods in the tests; the periods both start one year before the merger is announced and end one year or three years after the merger is completed. Our main variable of

interest remains the cultural gap between the acquirer and target firm. All other controls and fixed effects remain the same as in model 3.3. The results are presented in Table 3.6.

In Panel A of Table 3.6, the coefficients of *Cultural gap* in the regressions for CAR (-1, +1) and CAR (-1, +3), pertaining to both the acquirer and target, are negative but not statistically significant. This suggests that the cultural gap between the merging firms does not have any discernible impact in the short term. However, the long-term effects, as shown in Panel B, reveal that the cultural gap has a positive and statistically significant impact on the industry-adjusted ROA. This supports Hypothesis 3.4a, that is, a more diverse culture can positively contribute to the merged firms' future operational efficiency.

### 3.6 Conclusions

This study shows that following a merger, the acquirer's culture undergoes a shift in the direction of the target's culture. Acquiring firms exhibit a more pronounced adjustment in their culture when they 'inherit' the target firm's shareholders through a stock-swap transaction or when in the target firm employees have a stronger influence. This result remains robust to alternative measurements of the acquirer-target cultural difference, and to the various cultural dimensions and the different time periods considered. Our analysis suggests an ex-ante catering effect to shareholders, indicating that acquirers are more inclined to use stock as a form of payment when the target exhibits a narrower cultural difference than the acquirer. Finally, we find that a substantial cultural gap between the two merging firms and a resulting higher cultural diversity in the merged firm leads to a higher industry-adjusted ROA for the merged firm.

Our study contributes to expanding our understanding of how the corporate culture of a target firm can affect the acquirer's culture development and M&A performance. Capturing corporate culture empirically with meaningful variable is not straightforward (Renneboog and Vansteenkiste, 2019). Many papers have used corporate social responsibility (CSR) as a proxy for corporate culture (e.g., Aktas et al., 2011; and Deng et al., 2013). However, CSR only represents one of the ethical dimensions of corporate culture, not its full spectrum, which this study tries to account for. We observe that the acquirer's culture can be significantly influenced by the target's culture. This cultural influence and the consequent higher cultural diversity post-merger can further influence

the firm's strategies and performance. Further research could therefore extend the investigation and look into the impact of knowledge transformation and cultural diversity after the completion of M&A deals, especially in a cross-border dimension.

**Tables for Chapter 3****Table 3.1****Descriptive Statistics**

The sample comprises 430 completed M&A deals announced between the years 2003 to 2016, with all corporate culture data from Li, Mai, Shen, Yan (2021) and financial data available. Subscripts "Acq." and "Tar." are used to denote characteristics of the acquirer and target, respectively. Unless otherwise specified in the variable definitions, all firm financials are measured one year prior to the announcement of the deal. All continuous variables are winsorized at the 1st and 99th percentiles. Definitions for all variables can be found in Appendix Table C.

| Sample descriptive statistics (N = 430) |     |        |        |        |        |        |
|---|-----|--------|--------|--------|--------|--------|
| Variable                                | n   | Mean   | S.D.   | 0.25   | Median | 0.75   |
| <i>Main culture-related variables</i>   |     |        |        |        |        |        |
| $\Delta$ Cultural change [-1 to +1]     | 430 | 0.437  | 3.503  | -1.712 | 0.525  | 2.611  |
| $\Delta$ Cultural change [-1 to +2]     | 430 | 0.860  | 3.628  | -1.157 | 0.745  | 2.821  |
| $\Delta$ Cultural change [-1 to +3]     | 430 | 0.821  | 3.838  | -1.547 | 0.731  | 3.163  |
| Cultural gap (Tar. - Acq.)              | 430 | 0.968  | 5.659  | -2.301 | 0.826  | 4.490  |
| $\Delta$ Cultural distance [-1 to +1]   | 430 | 1.301  | 0.664  | 0.800  | 1.165  | 1.684  |
| $\Delta$ Cultural distance [-1 to +2]   | 430 | 1.369  | 0.746  | 0.857  | 1.219  | 1.732  |
| $\Delta$ Cultural distance [-1 to +3]   | 430 | 1.417  | 0.705  | 0.927  | 1.289  | 1.761  |
| Cultural distance (Tar. and Acq.)       | 430 | 2.008  | 1.135  | 1.230  | 1.710  | 2.470  |
| Total Cultural score (Tar.)             | 430 | 15.288 | 5.330  | 11.61  | 14.538 | 18.066 |
| Total Cultural score (Acq.)             | 430 | 14.321 | 4.884  | 10.716 | 13.549 | 17.107 |
| <i>Firm characteristics</i>             |     |        |        |        |        |        |
| Size (Acq.)                             | 430 | 8.575  | 1.847  | 7.157  | 8.656  | 10.097 |
| Size (Tar.)                             | 430 | 6.089  | 1.705  | 4.771  | 6.076  | 7.164  |
| Profit (Acq.)                           | 430 | 0.047  | 0.148  | 0.027  | 0.066  | 0.101  |
| Profit (Tar.)                           | 430 | -0.063 | 0.300  | -0.05  | 0.028  | 0.071  |
| Leverage (Acq.)                         | 430 | 0.204  | 0.172  | 0.069  | 0.19   | 0.284  |
| Leverage (Tar.)                         | 430 | 0.196  | 0.248  | 0.000  | 0.124  | 0.297  |
| Market to book (Acq.)                   | 430 | 3.67   | 4.557  | 1.918  | 2.861  | 4.138  |
| Market to book (Tar.)                   | 430 | 2.86   | 4.482  | 1.45   | 2.297  | 3.693  |
| Cash flow to equity (Acq.)              | 430 | 0.053  | 0.151  | 0.038  | 0.061  | 0.089  |
| Cash flow to equity (Tar.)              | 430 | -0.117 | 0.917  | -0.006 | 0.046  | 0.087  |
| Sales growth rate (Acq.)                | 430 | 0.165  | 0.421  | 0.013  | 0.093  | 0.215  |
| Sales growth rate (Tar.)                | 430 | 0.151  | 0.474  | -0.019 | 0.082  | 0.197  |
| $\Delta$ Earnings                       | 430 | -0.004 | 0.370  | -0.076 | 0.009  | 0.087  |
| $\Delta$ Growth Opportunities           | 430 | -0.573 | 4.632  | -1.085 | -0.246 | 0.477  |
| <i>Deal characteristics</i>             |     |        |        |        |        |        |
| Relative size                           | 429 | 0.306  | 0.435  | 0.032  | 0.128  | 0.419  |
| Percentage of Stock                     | 377 | 25.133 | 37.842 | 0.000  | 0.000  | 48.655 |
| Hostile                                 | 430 | 0.005  | 0.068  | 0.000  | 0.000  | 0.000  |
| Tender                                  | 430 | 0.270  | 0.444  | 0.000  | 0.000  | 1.000  |
| Industry relatedness                    | 430 | 0.570  | 0.496  | 0.000  | 1.000  | 1.000  |

**Table 3.2**

**Ex-Post Adjustment**

This table provides OLS regression estimates for the change in acquirer culture and in the distance in acquirer culture from one year before the deal to one, two, and three years after the deal [ $\Delta$  Cultural Change (-1 to +1),  $\Delta$  Cultural Change (-1 to +2),  $\Delta$  Cultural Change (-1 to +3),  $\Delta$  Cultural Distance (-1 to +1),  $\Delta$  Cultural Distance (-1 to +2),  $\Delta$  Cultural Distance (-1 to +3)]. *Cultural Gap* is defined as the difference between the pre-merger culture of the target and the pre-merger culture of the acquirer. All regressions incorporate industry and year fixed effects, as well as the following control variables: *Size (Acq.)*, *Size (Tar.)*, *Leverage (Acq.)*, *Leverage (Tar.)*, *Market to book (Acq.)*, *Market to book (Tar.)*, *Profit (Acq.)*, *Profit (Tar.)*, *Cash flow to equity (Acq.)*, *Cash flow to equity (Tar.)*, *Sales growth (Acq.)*, *Sales growth (Tar.)*,  $\Delta$  Earnings,  $\Delta$  Growth opportunities. Definitions for all variables are available in Appendix Table C. Standard errors are clustered at the firm level, and t-statistics are presented in brackets. The notation \*\*\*, \*\*, \* indicates that the parameter estimate is significantly different from zero at the 1%, 5%, or 10% level, respectively.

|                       | (1)                      | (2)                      | (3)                      | (4)                        | (5)                        | (6)                        |
|-----------------------|--------------------------|--------------------------|--------------------------|----------------------------|----------------------------|----------------------------|
|                       | $\Delta$ Cultural Change | $\Delta$ Cultural Change | $\Delta$ Cultural Change | $\Delta$ Cultural Distance | $\Delta$ Cultural Distance | $\Delta$ Cultural Distance |
|                       | [-1 to +1]               | [-1 to +2]               | [-1 to +3]               | [-1 to +1]                 | [-1 to +2]                 | [-1 to +3]                 |
| Cultural gap          | 0.199***<br>(5.543)      | 0.193***<br>(4.380)      | 0.226***<br>(4.953)      |                            |                            |                            |
| Cultural distance     |                          |                          |                          | 0.098**<br>(2.444)         | 0.088**<br>(2.202)         | 0.127***<br>(3.586)        |
| Size (Acq.)           | 0.016<br>(0.123)         | 0.152<br>(1.197)         | -0.014<br>(-0.102)       | -0.021<br>(-0.832)         | 0.003<br>(0.096)           | -0.002<br>(-0.071)         |
| Size (Tar.)           | 0.184<br>(1.419)         | 0.069<br>(0.418)         | 0.268<br>(1.590)         | -0.020<br>(-0.734)         | -0.004<br>(-0.120)         | 0.009<br>(0.271)           |
| Leverage (Acq.)       | -0.023<br>(-0.019)       | -0.973<br>(-0.753)       | -0.255<br>(-0.184)       | -0.368<br>(-1.513)         | -0.460*<br>(-1.846)        | -0.478**<br>(-2.244)       |
| Leverage (Tar.)       | 1.124<br>(1.303)         | 0.446<br>(0.484)         | -0.309<br>(-0.351)       | 0.184<br>(1.288)           | 0.060<br>(0.334)           | 0.141<br>(0.865)           |
| Market to book (Acq.) | 0.058<br>(0.991)         | -0.022<br>(-0.303)       | 0.096<br>(1.394)         | -0.009<br>(-1.047)         | 0.007<br>(0.752)           | 0.007<br>(0.594)           |
| Market to book (Tar.) | 0.019<br>(0.567)         | 0.064<br>(1.457)         | -0.001<br>(-0.030)       | 0.007<br>(1.027)           | 0.003<br>(0.328)           | 0.002<br>(0.222)           |

|                               |          |          |          |           |          |          |
|-------------------------------|----------|----------|----------|-----------|----------|----------|
| Profit (Acq.)                 | 2.945    | -0.022   | 2.275    | -0.658    | -1.604** | -1.440** |
|                               | (1.142)  | (-0.007) | (0.608)  | (-1.131)  | (-2.447) | (-2.239) |
| Profit (Tar.)                 | -0.155   | 0.312    | -1.625   | -0.008    | -0.032   | -0.073   |
|                               | (-0.174) | (0.411)  | (-1.518) | (-0.051)  | (-0.236) | (-0.427) |
| Cash flow to equity (Acq.)    | -3.171   | 0.186    | -3.543   | 0.431     | 1.082*   | 1.096    |
|                               | (-1.002) | (0.047)  | (-0.837) | (0.721)   | (1.654)  | (1.525)  |
| Cash flow to equity (Tar.)    | 0.051    | 0.255    | 0.282    | -0.033    | -0.008   | -0.046   |
|                               | (0.170)  | (1.075)  | (0.700)  | (-0.943)  | (-0.139) | (-1.051) |
| Sales growth (Acq.)           | 0.099    | 0.139    | -0.150   | 0.104     | 0.128    | 0.023    |
|                               | (0.307)  | (0.338)  | (-0.320) | (1.374)   | (1.380)  | (0.362)  |
| Sales growth (Tar.)           | 0.063    | -0.098   | 0.546    | -0.015    | -0.061   | 0.011    |
|                               | (0.202)  | (-0.266) | (1.020)  | (-0.208)  | (-1.087) | (0.112)  |
| Δ Earnings                    | -0.046   | -0.112   | -0.131   | 0.009     | -0.064   | -0.008   |
|                               | (-0.219) | (-0.437) | (-0.434) | (0.222)   | (-1.209) | (-0.196) |
| Δ Growth opportunities        | 0.052    | 0.017    | 0.115**  | -0.016*** | 0.003    | -0.005   |
|                               | (0.946)  | (0.279)  | (2.376)  | (-2.673)  | (0.379)  | (-0.603) |
| Constant                      | -2.707   | 2.784    | -3.309   | 1.528***  | 1.892*** | 1.318*** |
|                               | (-1.045) | (1.112)  | (-1.150) | (3.920)   | (4.064)  | (3.037)  |
| Observations                  | 430      | 430      | 430      | 430       | 430      | 430      |
| Year & Industry Fixed Effects | YES      | YES      | YES      | YES       | YES      | YES      |
| Adjusted R-squared            | 0.141    | 0.100    | 0.143    | 0.169     | 0.193    | 0.202    |

**Table 3.3**

**Cultural Dimension Analysis**

This table presents OLS regression estimates for the changes in acquirer cultural categories from one year before the deal to three years after the deal. The Cultural gap is categorized into five segments: *Integrity gap*, *Teamwork gap*, *Respect gap*, and *Quality gap*. At the bottom of the table, the economic impact of the gap for each cultural dimension, measured by standard deviations, is also reported. Definitions for all analysis variables are available in Appendix table C. All regressions include the same control variables as well as industry and year fixed effects, consistent with Table 3.2.

Standard errors are clustered at the firm level, and t-statistics are enclosed in brackets. The notations \*\*\*, \*\*, \* signify that the parameter estimate is significantly different from zero at the 1%, 5%, or 10% level, respectively.

|                                      | (1)                              | (2)                             | (3)                               | (4)                            | (5)                            |
|--------------------------------------|----------------------------------|---------------------------------|-----------------------------------|--------------------------------|--------------------------------|
|                                      | $\Delta$ Integrity<br>[-1 to +3] | $\Delta$ Teamwork<br>[-1 to +3] | $\Delta$ Innovation<br>[-1 to +3] | $\Delta$ Respect<br>[-1 to +3] | $\Delta$ Quality<br>[-1 to +3] |
| Integrity gap                        | 0.266***<br>(6.359)              |                                 |                                   |                                |                                |
| Teamwork gap                         |                                  | 0.162***<br>(3.703)             |                                   |                                |                                |
| Innovation gap                       |                                  |                                 | 0.258***<br>(4.588)               |                                |                                |
| Respect gap                          |                                  |                                 |                                   | 0.258***<br>(6.941)            |                                |
| Quality gap                          |                                  |                                 |                                   |                                | 0.224***<br>(5.557)            |
| Constant                             | 0.726<br>(1.465)                 | 0.695<br>(0.861)                | -0.863<br>(-0.669)                | -2.389***<br>(-3.174)          | -1.616**<br>(-2.063)           |
| Observations                         | 430                              | 430                             | 430                               | 430                            | 430                            |
| Firm-level controls                  | YES                              | YES                             | YES                               | YES                            | YES                            |
| Year & Industry Fixed Effects        | YES                              | YES                             | YES                               | YES                            | YES                            |
| Adjusted R-squared                   | 0.124                            | 0.0964                          | 0.122                             | 0.263                          | 0.0933                         |
| <i>Economic impact</i>               |                                  |                                 |                                   |                                |                                |
| Coefficients Cultural dimension gaps | 0.266                            | 0.162                           | 0.258                             | 0.258                          | 0.224                          |
| SD (Cultural dimension gaps)         | 1.271                            | 1.649                           | 2.216                             | 1.663                          | 2.178                          |
| SD-impact (Cultural dimension gaps)  | 0.338                            | 0.267                           | 0.571                             | 0.429                          | 0.488                          |

**Table 3.4****Stock Swap Deals**

This table illustrates how the cultural gap affects the acquirer's post-merger culture differently depending on whether stock payments or cash payments are used for the deal (Panel A), and how the cultural gap influences the choice of the deal payment (Panel B). In Panel A, the dependent variable is the change in the acquirer's cultural score from one year before to three years after the deal completion [*Δ Cultural change (-1 to +3)*]. The *Cultural gap* variable is interacted with the percentage of the deal value paid for with acquirer stock (*Percentage of Stock*). In panel B, column (1), the dependent variable is *All Stock Dummy*, an indicator variable taking the value of one for pure stock swaps, and zero otherwise. In column (2), the dependent variable is *Percentage of Stock*. Definitions for all variables are provided in Appendix C. All regressions include the same set of control variables and maintain industry and year fixed effects, as detailed in Table 3.2.

Standard errors are clustered at the firm level, and t-statistics are enclosed in brackets. The notations \*\*\*, \*\*, \* signify that the parameter estimate is significantly different from zero at the 1%, 5%, or 10% level, respectively.

**Panel A: Ex-post cultural adjustment**

|                                    | (1)<br>Δ Cultural change [-1 to +3] |
|------------------------------------|-------------------------------------|
| Cultural gap                       | 0.197***<br>(3.244)                 |
| Cultural gap * Percentage of Stock | 0.002*<br>(1.742)                   |
| Percentage of Stock                | -0.006<br>(-0.944)                  |
| Constant                           | -2.312<br>(-0.882)                  |
| Observations                       | 377                                 |
| Firm-level controls                | YES                                 |
| Year & Industry Fixed Effects      | YES                                 |
| Adjusted R-squared                 | 0.187                               |

**Panel B: Ex-ante impact of cultural gap on deal's payment method**

|                               | (1)             | (2)                 |
|-------------------------------|-----------------|---------------------|
|                               | All stock Dummy | Percentage of Stock |
| Cultural gap                  | -0.021*         | -0.487**            |
|                               | (-1.809)        | (-2.405)            |
| Industry relatedness          | -0.188          | -3.472              |
|                               | (-1.162)        | (-1.145)            |
| Relative size                 | 1.649***        | 77.675***           |
|                               | (3.563)         | (7.539)             |
| Size (Acq.)                   | -0.000***       | -0.000***           |
|                               | (-3.059)        | (-3.223)            |
| Size (Tar.)                   | 0.000*          | 0.001***            |
|                               | (1.739)         | (3.803)             |
| Leverage (Acq.)               | -1.370*         | -36.290*            |
|                               | (-1.767)        | (-1.964)            |
| Leverage (Tar.)               | -1.242***       | -22.806***          |
|                               | (-4.012)        | (-2.945)            |
| Market to book (Acq.)         | 0.937**         | 10.639              |
|                               | (2.037)         | (1.196)             |
| Market to book (Tar.)         | 0.336           | 11.174*             |
|                               | (1.083)         | (1.828)             |
| Profit (Acq.)                 | 0.021*          | 0.700***            |
|                               | (1.955)         | (2.636)             |
| Profit (Tar.)                 | -0.008          | 0.027               |
|                               | (-0.707)        | (0.108)             |
| Cash flow to equity (Acq.)    | 0.761           | 23.911              |
|                               | (1.138)         | (1.206)             |
| Cash flow to equity (Tar.)    | 0.228*          | 2.330               |
|                               | (1.798)         | (0.772)             |
| Sales growth (Acq.)           | 0.104           | 0.723               |
|                               | (0.993)         | (0.355)             |
| Sales growth (Tar.)           | 0.535***        | 9.418***            |
|                               | (4.854)         | (4.562)             |
| Constant                      | -2.101***       | -28.878             |
|                               | (-3.726)        | (-1.269)            |
| Observations                  | 744             | 682                 |
| Year & Industry Fixed Effects | YES             | YES                 |
| Adjusted R-squared            | 0.299           | 0.368               |

**Table 3.5****Employees' Influence**

This table presents regression analyses for the change in the acquirer's cultural score from one year before to three years after the M&A deal [ $\Delta$  Cultural change (-1 to +3)]. These tests require availability of the data of the target firm's *Employee relations* in the MSCI ESG database. Definitions for all variables are provided in Appendix C. All regressions include the same set of control variables and maintain industry and year fixed effects, as detailed in Table 3.2. Standard errors are clustered at the firm level, and t-statistics are enclosed in brackets. The notations \*\*\*, \*\*, \* signify that the parameter estimate is significantly different from zero at the 1%, 5%, or 10% level, respectively.

|   | (1)<br>$\Delta$ Cultural change [-1 to +3] |
|---|--|
| Cultural gap                            | 0.267***<br>(4.146)                        |
| Cultural gap* Employee relations (Tar.) | 0.717**<br>(2.040)                         |
| Employee relations (Tar.)               | -4.193**<br>(-2.000)                       |
| Constant                                | -9.843***<br>(-3.035)                      |
| Observations                            | 241  |
| Firm-level controls                     | YES  |
| Year & Industry Fixed Effects           | YES  |
| Adjusted R-squared                      | 0.250                                      |

**Table 3.6**

**Analysis of Acquiring Firms' Short and Long-Term Performance**

This table provides regression estimates of performance metrics on the cultural gap and other control variables. Definitions for all variables can be found in Appendix Table C. All regression models include the same set of control variables and maintain industry and year fixed effects as specified in Table 3.2. Standard errors are clustered at the firm level, and t-statistics are enclosed in brackets. The notations \*\*\*, \*\*, \* indicate that the parameter estimate is significantly different from zero at the 1%, 5%, or 10% level, respectively.

**Panel A: Cumulative Abnormal Returns (CAR) around M&A announcement**

|                               | (1)                 | (2)                 | (3)                  | (4)                   |
|-------------------------------|---------------------|---------------------|----------------------|-----------------------|
|                               | CAR (-1, +1) Acq.   | CAR (-3, +3) Acq.   | CAR (-1, +1) Tar.    | CAR (-3, +3) Tar.     |
| Cultural gap                  | -0.0002<br>(-0.186) | -0.0006<br>(-0.480) | -0.0025*<br>(-1.768) | -0.0025<br>(-1.625)   |
| Constant                      | -0.015<br>(-0.294)  | 0.115*<br>(1.657)   | -0.008<br>(-0.076)   | -0.357***<br>(-3.521) |
| Observations                  | 479                 | 479                 | 510                  | 510                   |
| Firm-level controls           | YES                 | YES                 | YES                  | YES                   |
| Year & Industry Fixed Effects | YES                 | YES                 | YES                  | YES                   |
| Adjusted R-squared            | -0.0741             | -0.0320             | 0.555                | 0.545                 |

**Panel B: Merged firm's industry adjusted ROA from one year before the deal's announcement to one /three years following deal completion**

|                               | (1)                                       | (2)                                       |
|-------------------------------|---|---|
|                               | $\Delta$ Industry-adjusted ROA [-1 to +1] | $\Delta$ Industry-adjusted ROA [-1 to +3] |
| Cultural gap                  | 0.073*<br>(1.690)                         | 0.051*<br>(1.722)                         |
| Constant                      | -1.943<br>(-0.781)                        | -3.993<br>(-1.412)                        |
| Observations                  | 377                                       | 377                                       |
| Firm-level controls           | 0.356                                     | 0.398                                     |
| Year & Industry Fixed Effects | YES                                       | YES                                       |
| Adjusted R-squared            | 0.211                                     | 0.263                                     |

## Chapter 4

### Work-from-Home Policies and Firm's

### Characteristics: A Cross-Sectional Analysis<sup>12</sup>

#### 4.1 Introduction

Many firms have embraced work-from-home (WFH) policies following the trials during the COVID-19 lockdown periods. In Spring 2022, a survey conducted by McKinsey and Ipsos in the U.S. on a sample of 25,000 representative *individuals*, employed in various occupations and across different sectors and geographical locations, reported that 58 percent of them had some opportunity to work remotely (away from the office) *at least one day* a week. After the pandemic lockdown periods ended (last quarter of 2022), while some firms have planned for or even announced a return to the traditional full-time in-office work style, some others have adopted internal policies to structure WFH more formally.

One reason why WFH policies have become increasingly more common post pandemic is due to the realization that remote or hybrid work setups can be productive and beneficial for employees and firms alike. Companies can adopt various remote work policies to accommodate their workforce. For instance, some organizations offer the option for employees to work *full-time remotely*; this flexibility allows individuals to work away from the office, reducing commuting time and providing a comfortable environment of choice. Some companies implement *hybrid work models* where employees work part-time in the office and part-time remotely; this setup fosters more

---

<sup>12</sup> ☆ We are grateful to Scoop Technologies (<https://www.scoopforwork.com>) and Robert Sadow for sharing the 2022 data of the Flex Index.

interpersonal collaboration and allows for face-to-face interaction, while still providing the benefits of remote work.<sup>13</sup>

Decisions related to WFH practices are generally very fluid. Many organizations are continuously adapting and formalising their policies to find the right balance between productivity (Bloom et al., 2015), employee satisfaction (Markridis and Schloetzer, 2022; Choudhury et al., 2022), and business needs (Kurnia et al., 2015). Also, WFH policies vary a lot based on the industry and the company organisational structure, its financial conditions, culture, and location. Yet, to the best of our knowledge, there is no systematic quantitative study that sheds light on which factors are associated with firms' WFH policies.

Our paper aims to fill this gap as we are the first to employ a database of North-American firms' WFH arrangements (the Flex Index) to look at fully-remote and hybrid work models observed over the period October 2022 to April 2023 (hence, soon after the COVID-19 pandemic) and investigate which firms' characteristics are associated to more generous WFH policies.

Past literature on flexible and remote work is extensive. We summarise here the three main research strands. First, some early literature studies *employees' choices* to work remotely within specific countries and their impact on individual circumstances. For example, Bélanger (1999) studies whether employees' age, skills, sense of identification with organization, and job category, influence their individual decisions to 'telecommute'.<sup>14</sup> Dettling (2017) looks at the impact of remote work on increasing female participation to the labour force, and Piszczek and Pimputkar (2021) study the age-specific effects of flexible schedules on sick-day use, health, work-family conflicts, affective commitment, and work engagement.

---

<sup>13</sup> Some firms also allow flexible work hours, such as flexible start and end times, compressed, or even reduced workweeks; this solution enables employees to manage their work around personal commitments and achieve a better work-life balance. Companies often adopt hot desking practices, where employees do not have assigned desks but can use any available workspace when in the office and use remote collaboration tools and software to enable seamless communication and project management for remote or distributed teams.

<sup>14</sup> The same factors are then reviewed again by Barrero et al. (2023) in their study of the post-pandemic evolution of work from home.

Second, there is a growing literature on the impact of remote work on *firms* and their *employees' productivity and career trajectory*. For example, Bloom et al. (2015), Emanuel and Harrington (2021), Choudhury et al. (2021), Choudhury et al. (2022), and Angelici and Profeta (2020) run field experiments in specific companies and find positive productivity effects of remote working, but often negative promotion effects. Bloom, Liang, and Nan (2022) observe higher job satisfaction. Gibbs et al. (2021) find instead negative effects of remote work on productivity for graduate employees in an Asian IT firm during the pandemic. In terms of *self-assessed* preferences and productivity, Mas and Pallais (2017) find that job applicants would accept an eight percent wage cut, on average, for the option to work from home in a full-time job; Etheridge et al. (2020), Aksoy et al. (2022), and Barrero et al. (2021) show that employees who work from home perceive to be about as productive as in the office.

Third, some more recent research focuses on the extent and incidence of work from home *during* the COVID-19 pandemic, and the outcomes associated with it. For example, Dalton and Groen (2022) use data from the 2021 Business Response Survey, a large, nationally-representative survey of U.S. private sector businesses, and find that telework has been less common in establishments that have increased base wages during the pandemic, and it is associated with reductions in workplace square footage and with relocations. Bai et al. (2021), Davis et al. (2022), Favilukis et al. (2020), Pagano et al. (2023), and Papanikolaou and Schmidt (2020) study the relationship between firm-level stock returns during the COVID-19 pandemic and the capacity of their employees to work from home. Behrens et al. (2021) offer a general equilibrium analysis of work-from-home and its consequences on the economy at the wider level. Delventhal, Kwan, and Parkhomenko (2022), Liu and Su (2022), Ramani and Bloom (2021), and Gupta et al. (2022) look at the effect of an increase in work from home respectively on the shape of the cities, their wage-premiums, migration patterns, and real-estate markets.

Differently from this previous literature, our study focuses on North-American firms' explicit WFH policies, using data collected immediately *after* the COVID-19 pandemic (October 2022 to April 2023) as a context for our investigation.<sup>15</sup> Specifically, our WFH policies data are sourced from the Flex Index, which collects information for a large

---

<sup>15</sup> Due to the nature of our dataset, we cannot assess whether the firms have adopted new policies starting from October 2022 or whether those policies are continuing from 2020 and 2021 (the COVID-19 period) or even before. Our study focuses on which factors are associated to WFH policies out of the 'health emergency' situation.

number of North-American firms, mostly from surveys filled by the firms' current employees and from firms' publicly-accessible websites. Using these data, we create a Flex Index Score, indicating whether a firm allows fully remote work, hybrid work, or requires full-time in-office presence. We also look at the minimum number of days a firm requires employees to work at the office to indicate the level of allowed WFH flexibility. We merge the WFH information with detailed firm's financial and non-financial data to look at whether and how firms' financial and cultural characteristics are systematically associated to their WFH policies (or lack of them). Our study aims to capture the factors that explain the cross-sectional variation in WFH policies, rather than the firms' response to the COVID-19 shock.

First, adopting the perspectives of the resource-based theory (Wernerfelt, 1984; Barney, 1991) and the Tobin's theory of corporate investments (Tobin, 1969), we look at whether a larger availability of financial resources and a higher equity market valuation relate positively to the firms' WFH allowance (in a cross-sectional regression setting). Our findings consistently show that cash-richer firms and those with a relatively *lower* book-to-market ratio (i.e. higher equity valuation, over the book value of the firm) are more likely to allow WFH, as evidenced by the results of the ordered probit models and OLS regressions where the Flex Index Score and the minimum number of days in the office are alternatively used as dependent variables. For instance, a one standard deviation decrease in the book to market ratio is associated with a 0.35-day decrease in the minimum required number of weekdays in the office.

Second, we observe significant findings in support of a cultural 'legitimacy theory' of firms in the context of their WFH decisions. Firms located in states with higher level of social capital and stronger sense of collective trust - measured as in Putnam (2000) - are those that allow more work flexibility (preferring hybrid or fully-remote work over work in the office, and/or lowering the requirement of the minimum number of days in the office). Also, the WFH policies appears related to some of the firm's cultural variables defined by Li, Mai, Shen, and Yan (2021). To be specific, firms with a stronger 'innovation-focussed' culture are more likely to allow work from home, while those with a 'quality-focussed' culture are less likely.

In our empirical setting, sample bias can be a concern. If firms allowing WFH are more inclined to disclose this information, while firms not allowing it tend not to advertise their

choice, then the Flex Index database would have more information on firms with WFH and fewer details on traditional 'office-centric' firms. To address this potential sample bias, we conduct propensity score matching (PSM) using the (remaining firms in the) universe of North-American firms covered by the Compustat database. We also perform a Heckman test. Moreover, to check whether our results are very specific to the context of the post COVID-19 period and to be able to exploit a wider panel regression setting, we replace the Flex Index measures with the 'work-from-home (WFH) index', a digital resilience index constructed by Bai et al. (2021), which spans the pre-pandemic period until the first pandemic year (from 2010 to 2020). While this index does not identify which firms allow employees to work from home, it signals those that are more digitally ready to do so. Our main results survive all these tests.

In particular, a highly significant and negative relationship between book-to-market ratio and WFH is confirmed by all tests we run: a higher premium on the equity capital can accelerate the investments required to implement such work arrangements. In subsample analysis, we explore factors *moderating* this relationship. We observe that amongst the firms with a higher equity-vs-book evaluation, those relying more extensively on digital labour and human capital, and those operating in knowledge-based industries are the ones more inclined to have WFH policies in place. Likely, these firms use and disclose WFH policies also as a tool to signal their work culture and attract the best talent. Furthermore, amongst the firms with higher equity-vs-book evaluation, the ones facing substantial financial constraints are more likely to present formal WFH policies, plausibly for cost-saving purposes.

The paper is organised as follows. Section 4.2 presents the hypotheses development on the factors associated with firm's work-from-home policies. Section 4.3 presents the data and the summary statistics. Section 4.4 shows the main empirical results and robustness tests. Section 4.5 discusses the moderating factors of the book-to-market effect on firm's WFH policies. Finally, Section 4.6 provides the conclusions of our study.

#### 4.2 What affect Firms' Work from Home Policies?

Hansen et al. (2023) observe that the share of job postings that say new employees can work remotely rose more than three-fold in the U.S. from 2019 to early 2023, but *not uniformly* across and within states and industries. Thus, in order to understand firms' decisions on WFH, it is important to consider *first* in which location and industry firms

operate. For instance, service organisations generally have more flexibility than manufacturing organisations and are thus better able to accommodate employees' use of WFH. Also, high-tech global organisations generally face more competitive environments and may be therefore more likely to encourage employees to use WFH as a mechanism to enhance performance and competitiveness (e.g., Boeker, 1991; Den Dulk et al., 2013; Chang and Jo, 2019). In addition to industry and location effects, we investigate other firms' characteristics that may be associated with more explicit and generous work-from-home policies. To do so, we develop some theory-supported hypotheses which are illustrated in this section.

#### *4.2.1 Firm's financial resources*

The major foundation of the resource-based theory is that firms' competitive advantage is a function of resources and capabilities (Wernerfelt, 1984; Connor, 1991; Peteraf, 1993) that are heterogeneously distributed among firms and imperfectly mobile (Barney, 1991). Valuable resources help firms exploit opportunities, avoid threats in their competitive environment, and enable them to develop and implement strategies to improve their efficiency and effectiveness.

Specific to our context, to facilitate policies that implement work from home, firms need to possess IT infrastructure, licences, and resources (e.g., software for remote meetings and work sharing, cloud sharing, etc.) that supports remote work, allowing employees to connect fully virtually or in hybrid meetings, to maintain meaningful teamwork and connections without the constant in-person interaction, and to back-up for any shift in work schedules. As highlighted by Bharadwaj (2000) and Bai et al. (2021), these resources and capabilities require strategic planning, time, and, importantly, financial flexibility.

Moreover, firms also need to acquire specific managerial and human resources and invest in training and digital activities and programs that can foster an effective work-from-home culture (Yarovaya et al., 2021). Managers may also need to set up tools to monitor productivity, track time, evaluate performance (Charbonneau and Doberstein, 2020), support employees' well-being (He et al., 2021), and reduce the challenges due to communication gaps, distractions, and difficulties in managing remote teams (Li, Sun, Tao, and Lee, 2021; Caligiuri, et al., 2020). Changes in firms' hiring practices and in the occupational mix of their workforce and training of existing employees and managers

require time and financial resources and so contribute to the challenges of enabling remote work readiness (Bai et al., 2021).

Consistently with the resource-based theory, if firms have limited financial resources (e.g., high financial constraints, high leverage ratio, lower profitability) and have not yet developed a remote work infrastructure, they are less likely to allow work from home. Less-financially constrained firms have the resources to implement work-from-home policies more easily than smaller and more financially-constrained firms. We therefore formulate hypothesis 4.1:

*Hypothesis 4.1: A firm's reliance on larger financial resources is significantly positively associated with the implementation of work-from-home policies.*

Nevertheless, the resource-based theory can be conducive of an opposite interpretation of the relationship between firm's financial resources and WFH. If firms with limited financial resources aim to reduce fixed costs and gain more financial flexibility, they may look into cutting physical offices' rental costs which is a major fixed costs-component (USPTO, 2015).<sup>16</sup> Hence, these may choose to allow work from home more (without investing heavily in the supporting IT infrastructure due to limited resources). Also, smaller organizations may have more limited resources, but they may be able to offer more informal support with remote work and may encounter lower coordination problems which reduce the hurdles to the formalisation and allowance of WFH policies.

Hence, under the resource-based theory, financial resources matters for firms allowing WFH policies, but the sign of their impact remains an empirical question which we put at test.

#### *4.2.2 Market evaluation of firm's equity capital*

Tobin (1969) theorizes that the rate of capital investments is related to the ratio of the *market* value of assets to the replacement costs of those assets (q-ratio). Different studies have used slightly different formulations of Tobin's q-ratio. Varaiya, Kerin and Weeks (1987) look at the similarity between the firm's market-price to book-value ratio and Tobin's q-ratio in explaining firm's growth and value creation, both theoretically and empirically. A high market-to-book ratio indicates the premium that the market pays for the firm's net assets. Consistent with the logic of the Tobin's theory of corporate

---

<sup>16</sup> In 2015, the USPTO has estimated that \$38.2 million were saved in real estate costs due to remote workers freeing up office space at headquarters.

investments, it reflects high marginal efficiency of capital and high added value over the replacement cost of net assets. In the finance literature, the relationship is usually operationalized as the reciprocal: the book-to-market (or B/M) ratio – the ratio between the book value of the firm's net assets and the equity market capitalisation of the firm. A *lower* book to market ratio reflects higher value of growth opportunity; therefore, it provides incentive for additional equity investment in both *tangible* assets and *intangible* assets of the firm (Dong et al., 2021).

Some literature shows that WFH policies translate into investments in intangible assets: for example, WFH can offer insurance against operational risks (Liu et al., 2023, and Shen et al., 2023) and can increase employee satisfaction and productivity (Bloom, Han, and Liang, 2022). As firms with higher equity valuation may invest at a higher rate and be better appraised in their plans to implement work-from-home policies, we formulate the following hypothesis:

*Hypothesis 4.2: Higher firm's equity valuation is significantly positively associated with the implementation of work-from-home policies.*

#### *4.2.3 State and corporate culture*

Executive decisions on work-from-home policies are never adopted in a 'vacuum'. One key contextual variable that can affect WFH is the societal culture in which the firm is embedded (Peretz and Fried, 2012; Peretz, Levi, and Fried, 2015; Peretz and Rosenblatt, 2011; Rabl, Jayasinghe, Gerhart, and Kuhlmann, 2014). The legitimacy theory suggests that firms must establish congruence between the social norms implied by their organizational activities and the norms of the environment in which they operate. Informal institutions exert mimetic and normative institutional pressure on firms to adhere to cultural norms and beliefs, thus enhancing the firm's legitimacy and increasing its likelihood of survival and success within a given institutional environment (DiMaggio and Powell, 1983; Scott, 1995).

The cultural context of the state where the firm is located exerts "legitimate" effects that either enable or discourage the implementation of WFH policies. States with a high-trust culture may influence firms to implement WFH. A state-level social capital was first defined by Putnam (1993, 2000) as "a propensity of people in a society to cooperate to produce socially efficient outcomes" and highlights "the norms of reciprocity and trustworthiness" that arise from connections among individuals. Previous research shows

that individuals in areas with high social capital are generally more cooperative and trusting of each other because the reputational penalties associated with deviating from norms are higher (Coleman, 1990; Spagnolo, 1999; Gupta et al., 2020).

Executive leaders that work in states with a higher level of social trust are more likely to be altruistic and to trust people around them (Jha and Cox, 2015). Hence, they may be more inclined to adopt work-from-home policies and to believe that employees can maintain productivity even without direct supervision. The key to remote work is in fact establishing a comprehensive framework that ensures productivity with less supervision and fosters a more efficient work style for both the firm and its employees (Lautsch et al., 2009; Kim et al., 2021; Kwan and Matthies, 2022). Hence, we hypothesise that:

*Hypothesis 4.3: A firm's location in a state with higher social capital is significantly positively associated with the implementation of work-from-home policies.*

Corporate culture has long been found to be a key driver of corporate social performance. Specifically, management teams must consider the prevailing corporate culture and develop strategies to appear more legitimate, prompting stakeholders, especially employees, to coordinate more effectively. Haga et al. (2024) find that a stronger corporate culture (i.e. as shared values and beliefs) can lead to better employee treatment and lower workplace safety violations. Similar findings are also provided by Zaman et al. (2024). Given that WFH policies are ultimately a decision taken by the firm to determine its relationship with employees, we can expect that corporate culture plays an important role in this decision-making process. Therefore, we look at the firm's internal culture, in addition to the local state culture. To this aim, we review the corporate value categories identified and illustrated by the seminal paper of Guiso et al. (2015).

Some recent literature points at how the WFH experience during the COVID-19 pandemic has been shaped and influenced by the prevailing corporate culture, besides its governing policies (Ford et al., 2021). While some organisations with supportive policies conducive to remote work have fared well during the pandemic, employees in organizations without or with less support have struggled, evidence of which can be observed in recent phenomena such as "The Great Resignation" or "Quiet Quitting" (see Jiskrova, 2022, and Formica and Sfodera, 2022, for related discussion).

If after the pandemic WFH policies are used by firms as a tool to retain and attract talented employees, this should be more true for firms with a stronger innovation culture, as they

may be more inclined to introduce strategical changes and as they depend more on key human capital and resources. Also, as innovation involves collaboration, a corporate culture of good teamwork that fosters more productive collaborations can enhance innovation further (Folkestad and Gonzalez, 2010) and encourage WFH adoption.

Given the above discussion, we formulate the following hypothesis:

Hypothesis 4.4: *A firm's culture more focussed on innovation and teamwork is significantly positively associated with the implementation of work-from-home policies.*

### 4.3 Data

#### 4.3.1 Data on work-from-home policies: The Flex Index

Research on work from home has predominantly focused on field experiments (Bloom et al., 2015; Choudhury et al., 2022, etc.) and has been limited by the lack of a comprehensive dataset that captures firms' WFH policies systematically.<sup>17</sup> Most of the available surveys on flexible and remote work, such as the American Community Survey (ACS), the Remote Life Survey, and the Global Survey of Working Arrangements (G-SWA), collect data at the individual employees' level rather than at the firms' level. Some studies aggregate these individual-level measurements to the industry- or state-level (e.g., Zhang, Gerlowski, and Acs, 2022). Although the state and industry significantly affect firms' policies, firms' specific circumstances can widely vary within the same operating environment. A few surveys have collected data at the firm level, such as the 2011 UK Workplace Employment Relations Study (Stirpe et al., 2018) and the Wales Workforce Surveys in 2007 (Messersmith et al., 2011). Unfortunately, these datasets have not been updated since the year the surveys were released and often lack high-dimensional measurements.

Given the growing adoption of WFH practices and the wider research interest around the area, Scoop, a company specialised in tech support to hybrid and remote work management, has launched the Flex Index in 2022. As of April 2023, they have collected information on flexible work policies related to work-from-office requirements for more

---

<sup>17</sup> A commonly used subscription-data source, Refinitiv ESG, provides a variable called 'Flexible Working Hours' under the category 'Workforce, Diversity, and Inclusion' (for instance, used in the study by Curti, Fauver, and Mihov, 2023). Despite offering a wide firms' coverage, this 'Flexible Working Hours' variable has a binary nature, as it only indicates whether a firm allows flexible working hours or not, without further detail. This lack of granularity is a limitation, in addition to the pure self-reporting nature of the data (Refinitiv, 2022).

---

than 4,000 companies in North America (U.S. and Canada) that have collectively more than 25,000 office locations and more than 100 million employees.<sup>18</sup>

To compile the Flex Index, information on companies' *office requirements* are obtained from a combination of online surveys and a manual entry of publicly available information. Based on a 2023 Flex Index report, the online surveys provide 32% of the Flex Index information sources, while the remaining 68% comes from publicly available information (Flex Index, 2023). The survey must be submitted by one of the company's employees, who need to provide a work email address to verify the existing employment status. Once a company is integrated into the Flex Index, its representatives are contacted to notify them of the inclusion. Companies can add and update their information on the Flex Index at any point of time. The Flex Index team maintains a stringent criterion for publishing a company's office requirements, doing so only when they also find some explicit statement or description. Hence, they rely also on publicly available information, including statements from the company website, written statements on hiring websites, internal memos on office requirements shared publicly, major media coverage which are corroborated by an explicit company link or quote on policy, or any other public statements made by the company executives regarding work-from-home policies.

Work-from-home policies currently reflect the most common and standardised type of flexible work policies for corporate (desk-based) employees across companies' headquarters, subsidiaries, and branches. Nowadays, companies often provide information on these policies and additional details on their company webpage, where they may accommodate requirements' variations based on job functions, roles, and also different geographical locations. For larger companies, it is not uncommon to observe distinct types of office requirements. For instance, a retailer may have in-store workers who are required to be on-site full-time, corporate employees who are mandated to be in the office a minimum of two days per week, and customer support teams that operate fully remotely. In such cases, the Flex Index database classifies the company as having a

---

<sup>18</sup> Coverage has increased to 7,455 companies worldwide by the end of 2023, but we have used the dataset that provides a snapshot for North-American firms between October 2022 and April 2023.

---

“Minimum Days Policy” of 2 days, as this represents the applicable *office requirement for corporate employees*.<sup>19</sup>

We categorise the information from the Flex Index database into a *Flex Index Score*, a categorical variable with three possible outcomes: *Fully Flexible*, *Structured Hybrid*, and *Full Time in Office*, which are given, respectively, a value of 1, 0.5, and 0. To elaborate, *Fully Flexible* can indicate two situations: either employees have full flexibility to choose their work location any day (work in the office or from home/anywhere else) or the company does not provide physical office space and all employees work remotely. The second type of firms are however quite uncommon in the Flex Index and comprise only around 0.01% of the database. *Structured Hybrid* means that the company has relevant guidelines regarding minimum number of days in the office, specific days, or a minimum percentage of time spent in the office. *Full Time in Office* signifies that the company requires employees to work from the office without any option of remote work.

An alternative measure of work from home is the minimum number of days a company requires employees to work from the office each week (*Min Office Days per Week*), which ranges from 0 to 5. We also construct this variable based on the information from the Flex Index database. For firms with a *Fully Flexible* designation, the *Min Office Days per Week* is 0; while for firms with a *Full Time in Office* classification, it is 5. For *Structured Hybrid* companies, most provide information on the minimum days required (1 to 4). In some cases where this information is not explicitly given, it can be inferred. For instance, if a company mandates all employees to work in the office on Wednesday and Thursday, the minimum days of office work per week are considered 2. Similarly, if a company stipulates 40% of office working time, the minimum office working days are 2 days. Notably, a few companies require employees to work in the office for 50% of the working week, that is 2.5 days.<sup>20</sup> For simplicity, we make that value fall into the 3-day classification because it still requires some work from office on a ‘third’ weekday.

The database that Scoop has shared with us includes data on work-from-home policies of firms collected by Scoop between October 2022 and April 2023, but those firms are

---

<sup>19</sup> Therefore, this dataset facilitates the comparison of firms with different sectorial and industry requirements. For example, even though firms in the pharmaceutical industry may require certain key employees to work in labs every day, they may have WFH in place for their office-based employees.

<sup>20</sup> For only six firms the minimum number of days has been rounded up from 2.5 to 3 days, and for one firm it has been rounded down from 1.25 to 1.

identified by codes, not by names. In addition to the information on work-from-home policies, the shared database contains other firms' information, such as industry, state, and number of employees. The Flex Index information can also be accessed openly and freely online on a company's name-based search (<https://www.flex.scoopforwork.com/explore>) - see Figure 1 for an example of company data available on the website.<sup>21</sup> Hence, we conduct fuzzy matching to identify the firms' names.

First, we manually search the names of *all* firms available in the Flex Index publicly-accessible website. Second, we use the other variables, namely *Number of Employees*, *Industry* and *Headquarters State*, to accurately identify the name of each firm in the aggregate database we have obtained from Scoop. The number of employees is the most informative variable for matching firms across the Flex Index aggregate dataset and its website, as it is uncommon that firms have *exactly* the same number of employees. We start by using this variable to match and identify the unique firm's name. In the uncommon case when two different firms in the shared database have the exact same number of employees, we use *Industry* and *Headquarters State* to resolve the ambiguity. We ensure that every firm (name) we identify from the Flex Index publicly-available website has the exact same values for *Number of Employees*, *Industry*, and *Headquarters State* in the shared (anonymous) database.

Once we have uniquely identified the firms covered by the Flex Index database, we proceed with matching and merging it with the Compustat database of North-American firms, which contains firms' financial information. To facilitate the merge, we focus on firms in the Flex Index with more than 5,000 employees, as smaller firms are not covered by Compustat. We proceed with name-based matching, but in order to mitigate disturbances caused by common non-meaningful words, we remove words like "CO", "PLC", "The", "CORP", "INC", and "LTD" (they generally appear in the list of Compustat company names but not in the Flex Index names). Next, for every Flex Index firm we identify the five best name-matches with Compustat using a similarity ratio. As both databases have information on the headquarter state, we also use this information to aid the matching process. If the similarity ratio is 100% and the states are the same, then

---

<sup>21</sup> The freely-accessible database does not allow a bulk download of the data. It is possible to download all FWA data manually; but using the shared database helped us finding the information on state, industry, and flexible working variables all in 'one place'.

we consider the two firms as a match. If either of these conditions is not satisfied, we check the firms manually and decide whether they match or not. In these manual checks, we notice that while sometimes two firms do not have the same name, they can be still matched based on their official website, main business, and location, so we also rely on these additional pieces of information. Finally, after the matching procedure is finalised, we conduct several random checks by comparing the company's work-from-home information from the Flex Index official website with the information in our matched database, and we observe that the results are always consistent.

Following this procedure, we are able to identify 449 uniquely-matched firms. As financial firms (SIC 6000-6999) and utility firms (SIC 4900-4949) have unique characteristics and financial metrics that differ from other industries, we exclude these firms. Consequently, the sample count in that analysis decreases to 366 firms.

#### *4.3.2 Data on firm's characteristics*

First, we collect data on firms' financials from Compustat North-America: firms' size (natural log of their equity market capitalisation), return on assets (ROA), cash ratio, sales' growth, financial leverage, and book to market ratio (B/M ratio) which is the book value of equity over the market value of equity. A detailed definition of all data and their sources is provided in Appendix Table D.

Second, we measure the 'social' culture of the state where the firm is located using the state-level social capital. This is represented by Putnam (2000) trust score based on the percentage of "Agree" responses to the survey question: "Most people can be trusted".

Third, we collect information about company cultural variables: innovation, integrity, quality, respect, and teamwork. These variables are taken from the database developed by Li, Mai, Shen, and Yan (2021) who use the word-embedding model machine learning technique and 209,480 earnings call transcripts to decipher the strength of these five cultural and social values within each company drawn from a large sample of U.S. firms.

Finally, we also collect information on the characteristics of firms' CEOs from ExecuComp. We retrieve CEOs' age, gender, tenure, compensation and compensation sensitivity to stock prices and stock volatility (delta and vega). We also use a variable describing the CEO general ability (vs. more technical skills). This is the first principal component extracted from PCA analysis on five proxies of general managerial ability:

past number of positions, past number of firms and industries of employment, a CEO experience dummy, and a conglomerate experience dummy (see Custódio et al., 2013). For each firm in our sample, we also collect information from BoardEx about the board and its composition: percentage of non-executive directors, percentage of women in the board, and CEO with dual role (i.e. CEO and Chairman/woman). Previous literature argues that higher percentages of these two women and non-executive directors increase and improve the board monitoring role (see relevant discussion in Adams and Ferreira, 2009, and Nowak and McCabe, 2003).

#### 4.3.3 Summary statistics

The summary statistics for the final sample of firms are presented in Table 4.1.<sup>22</sup> As mentioned in sub-section 4.3.1, *Flex Index Score* (FSI) is a ranking indicator of workplace flexibility. A value of 1 is assigned to firms categorized as “Fully Flexible”. A value of 0.5 is assigned to firms categorised as “Structured Hybrid”: these are firms that set precise guidelines regarding when employees are required to work from an office, in terms of minimum number of days, specific days of the week, or a minimum percentage of time spent in the office. A value of 0 is assigned to firms categorised as “Full Time in Office” as they mandate that employees work exclusively from the office without the option of remote work. The variable *Min Office Days per Week* represents the minimum number of days that companies require for employees to work from the office each week (the number goes from 0 to 5).<sup>23</sup> 24.7% of the firms in the sample have zero minimum number of days required in the office; 4.7% one day only; about 17.2% two days; about 26.3% require three minimum days per week; 3.4% four days; and about 23.8% require a full week in the office. Accordingly, Table 4.1 shows that, on average, firms in our sample adopts hybrid flexible work policies. The mean and median of the *Flex Index Score* are both about 0.5, and the average and median number of days required to be worked in the office (as a minimum requirement) are respectively 2.5 and 3 days. We have slightly more firms’ observations for the *Flex Index Score* than for *Min Office Days per Week* because for 46 firms we do not have specific information on the

<sup>22</sup> In this table, all variables, with the exception of Flex Index Score, Minimum Office Days per Week, and Knowledge Industry dummy, are reported with their 2021 values which are used then in the regression analysis. For CEO-related data, we report the 2021 values but after ensuring that there are no CEO changes in the firms between the years 2021 and 2022.

<sup>23</sup> In the Flex Index database there are originally seven values for this variable, as a handful of companies add fraction of days to the minimum requirement; however, we reduce the number of categories as 1, 2, 3, 4, and 5 days for simplicity.

requirement around the minimum number of office days, and we only know they have adopted some form of structured hybrid.

The average firm in the sample has about 35% leverage ratio, 6% ROA, 14% cash ratio, and 23% year-on-year sales' growth, and 27% B/M ratio. Only 7% of the firms have a woman CEO, but across our sample on average 30% of board members are women, and 72% of board members are non-executive directors, while in 22% of the cases the CEO is also the Chairman/woman of the board.

Table E in Appendix shows the correlation matrix: looking at the financials, we observe that the *Flex Index Score* presents statistically-significant unconditional correlations with the B/M ratio (-20%) and the cash ratio (28%). Table F in Appendix shows the distribution of firms in our sample by US state and industry.

#### 4.4 Empirical Results

In this section we illustrate the results of the cross-sectional regression analysis of firms' characteristics on their choice of WFH policies. We start by presenting a baseline regression where we look at the impact of financial factors and test hypotheses 4.1 and 4.2. The WFH policies relate to the last quarter of 2022 and the first quarter of 2023, hence we use for the regressions financials' values for the previous year 2021, in order to mitigate double-causality and endogeneity problems. We then add controls for state social capital and company cultural dimensions to test respectively hypotheses 4.3 and 4.4.

##### *4.4.1 Baseline regression analysis: Testing hypotheses 4.1 and 4.2 using firm's financials.*

The results of the baseline cross-sectional regressions of firms' financial characteristics on the Flex Index score (higher score indicating higher flexibility) and on the minimum number of days in the office (higher value indicating lower flexibility) are reported respectively in Table 4.2 Panel A and Panel B, at columns (1) and (2). Since the dependent variables are ordinal categories, we estimate the regressions first using an ordered probit model and then an ordinary least squares model. We include state and industry dummies to consider the (unobservable) heterogeneity coming from the systematic differences between firms due to their location and operating sectors.<sup>24</sup>

---

<sup>24</sup> In our dataset, observations are indexed by firm, industry, and state. The distributions of the firms by states and industries are reported in Appendix Table F. Majority of firms are located in California (19%),

Standard errors are corrected for heteroscedasticity. We also cluster standard error by industry level and report the results only for these baseline regressions in Appendix Table G. The results are consistent with the baseline results which we now illustrate.

We observe that two financial variables present consistent signs and statistical significance across all regressions: the cash ratio and the book-to-market ratio (B/M ratio). Consistent with Hypothesis 4.1, a higher cash ratio increases the *Flex Index Score* and decreases the *Min Office Day per Week* requirement, *ceteris paribus*. After controlling for firm's size, leverage, profitability (ROA), growth of sales, and for all unobservable heterogeneity at the state and industry-levels captured by the dummies,<sup>25</sup> we also find that the estimated coefficient for the B/M ratio for the *Flex Index Score* is negative and statistically significant at the 1% level. The estimated coefficient for the B/M ratio for the *Min Office Day per Week* is instead positive and statistically significant at the 1% level. This 'B/M ratio-effect' on WFH has also sizable economic impact. From the OLS results in columns (2) of Table 2 Panels A and B, we see that one standard deviation decrease in the book to market ratio (that has a standard deviation of 0.3) is associated with an average increase in the *Flex Index Score* of approximately 0.07, that accounts for 21% of its standard deviation.<sup>26</sup> A one standard deviation decrease in the book to market ratio is associated with a 0.35-day decrease in *Min Office Days per Week* which also accounts for 20% of its standard deviation. These results are supportive of Hypothesis 4.2.

As explained, in the baseline regressions of Table 4.2 (Panels A and B, columns 1 and 2) we explicitly control for industry dummies. Hence, our results should not be driven by specific industries. However, for robustness, we re-run the regressions after excluding from the sample all firms operating in the information, communications, and technology-related industries, for which allegedly WFH may be an easier option to accommodate.<sup>27</sup>

---

New York (10%), Texas (9%), Illinois (5%), and Virginia (4%). Considering the 2-digit SEC industry classification: majority of firms operate in business services (23%), followed by industrial and commercial machinery and computer equipment (6%), chemicals and allied products (6%), and food and kindred products (5%).

<sup>25</sup> In all Tables we call the state and industry dummies 'fixed effects', but it is important to notice that the regressions are cross-sectional.

<sup>26</sup> The result of a positive association between firm equity valuation and WFH policies is consistent with the wider results for firm's CSR performance, shown for instance by Gregory, Whittaker, and Yan (2016).

<sup>27</sup> We have excluded the following 4-digit SIC industries. In business services: computer programming services, prepackaged software, computer integrated systems design, computer processing and data preparation and processing services, information retrieval services, computer facilities management services, computer rental and leasing, maintenance and repair, and computer related services. In

The results are reported in Table 4.2 Panels A and B, columns 3 and 4, and are very similar to those in the baseline regressions. In un-tabulated results we also replace state fixed effects with county and city fixed effects: all main results of Table 4.2 remain invariant.

According to the Flex Index methodology, company office requirements are derived from a combination of online surveys and manual entry of publicly available information; hence, the available data are based on firms' *voluntary* disclosure of information. We are immediately confronted therefore with a potential sample selection bias: for instance, the disclosing companies may be those that are systematically more inclined to adopt work-from-home policies and want to signal and/or advertise their choice to stakeholders.<sup>28</sup> In order to ameliorate this concern around the validity of our baseline results, we re-perform the cross-sectional regressions adding a matched sample of firms, drawn from the Compustat universe, that do not appear in the Flex Index database. We follow a propensity score matching procedure, where the binary treatment variable is set equal to 1 if a firm has disclosed work-from-home policies data (treated firm), and 0 if the firm has not disclosed them (control firm). To estimate propensity scores, we use a logistic regression where we model the probability of a firm disclosing work-from-home policies based on the set of the observed financial covariates used in Table 4.2. Matching is then performed using the one-to-one nearest neighbour criterion, ensuring that each treated firm is paired to a control firm with the closest propensity score. To be more stringent, we require that each treated firm is paired with a control firm from the same 4-digit SIC industry classification and located in the same state. **Table H** in Appendix shows the post-matching diagnostics.<sup>29</sup> Post matching, we first identify the nearest neighbours-matched

---

communications: radiotelephone and telephone Communications, telegraph and other message communications, cable and other pay television services. In machinery and computer equipment/electronic equipment: electronic computers, computer storage devices, terminals, peripheral equipment, semiconductors and related devices, and electronic components. Lastly, in research and development: commercial physical and biological research and commercial economic, sociological, and educational research.

<sup>28</sup> The Flex Index database has taken actions to mitigate selection bias, such as: 1) employees are allowed to report their firm's flexible work policies; and 2) an update is provided monthly.

<sup>29</sup> First, post-matching we observe a significant improvement in balance between treated and control groups for all financial covariates. Before matching, the size variable shows a substantial 167.8% bias between treated and control groups, which is reduced to -8.6% post-matching, highlighting a 94.9% reduction in bias. Similarly, for leverage the bias is reduced by 94.5%, from 50.9% to 2.8%. For the B/M ratio, the unmatched bias of -7.8% is brought down to 1.7%, indicating a 78.7% reduction. For ROA the initial bias of 33.6% is trimmed down to -2.6%, with a 92.3% bias reduction. The variable cash ratio shows a significant unmatched bias of -79.9%, which is mitigated to 3.2% post-matching, achieving a commendable

control firms as firms that do *not* allow WFH or that require five office-days per week, under the *most conservative* assumption that no disclosure means no remote work practice allowed. We then re-run the cross-sectional regressions on the combined sample of treated and matched-control firms and report the results in Table 4.2 Panels A and B, columns 5 and 6. As alternative methodology for post matching, we *randomly* assign to the nearest neighbours-matched control firms a value of zero for the Flex Index Score (five office-days per week) or 0.5 (2.5 office-days per week) to relax a little this very conservative assumption that no disclosure means no remote work practice allowed. We then re-run again the cross-sectional regressions on the combined sample of treated and matched-control firms and report the results in Table 4.2, Panels A and B, columns 7 and 8. Overall, the regressions we run on the larger sample including both treatment and control firms confirm the results of the baseline ordered probit and OLS regressions.

#### 4.4.2 State and firm culture: Testing hypotheses 4.3 and 4.4

In Table 4.3 we report the results of the ‘extended’ ordered probit and OLS models for *Flex Index Score* and *Min Office Days per Week*, where we add the state and corporate cultural controls to test Hypotheses 4.3 and 4.4. In columns 1, 3, 5, and 7, we add to the baseline regression with financial variables the control for the ‘social’ culture of the state where the company is located. State-level factors are implicitly controlled in the baseline regressions in Table 4.2 by using state dummies (fixed effects), which are now removed to look more explicitly at the state-level of trust measured as in Putnam (2000).

In columns 2, 4, 6, and 8 we also add the company cultural variables (innovation, quality, teamwork, integrity, quality, and respect) which are taken from the database developed by Li, Mai, Shen, and Yan (2021).

Notwithstanding the fact that the cultural dimensions we attempt to measure to test our hypotheses on state and company culture can only be partially detected with the quantitative variables we use, we do observe some interesting results which remain mostly unchanged across the two estimation methodologies (ordered probit and OLS).

---

96% reduction in bias. The sales growth exhibit an unmatched bias of -32.8%, which is almost completely removed post-matching to 0.7%, representing a 97.9% reduction. Second, we also observe that post-matching (M), for all covariates the differences in mean levels between treatment and control samples present insignificant t-values, which underscores some efficacy of the matching process in ensuring comparability between treated and control groups.

First, we find strong evidence in support of hypothesis 4.3. We observe that a higher level of trust in the local state-society is positively associated with the use of work-from-home policies which are based on higher level of employer-employee trust. The variable 'Putnam state trust' has a positive and highly significant impact on the Flex Index Score and a negative (but not statistically) significant one on the minimum number of days required in the office.<sup>30</sup>

Second, we observe a strong impact of an innovation-focussed culture in support of hypothesis 4.4: across all regression specifications a firm that has a higher 'innovation' score is associated with more generous WFH policies and lower minimum requirement on days to be spent in the office each week. A study by Mao and Weathers (2019) shows that 'well-treated' employees increase firm innovation; consistently but differently from them, we show that when innovation is the cultural focus of the firm, employees-friendly WFH policies are more generously allowed. The opposite result is found for 'quality' as a cultural dimension, and only in some specifications for 'integrity'. Table I in the Appendix reports the thirty most representative and most frequently-occurring words in the cultural dictionary developed by Li, Mai, Shen, and Yan (2021). 'Innovation' is related to creativity, passion, technology, capability, thought-leadership, agility, efficiency, re-invention, productivity which (if truly instilled in the company's culture) are all factors that may provoke and facilitate a decision in favour of WFH structural policies. 'Quality' is instead related to words like dedication, end-users (clients and customers), customers' service and relationship, customers' requirements, satisfaction, and expectations. Abstracting from the nature of the industries where companies operate (e.g. more/less consumer-facing), as industry fixed effects are always controlled for, we observe that when the firm's culture is more strongly focussed on the end-users (an 'outward' focus), the firm is less likely to allow generous WFH policies. 'Integrity' is related to ethics, accountability, and responsibility, but also to management, governance, compliance, and control (the latter is the most frequent word associated to this cultural dimension). A strong cultural focus on control by the firm management discourages WFH.

One notable result across all these tests is that the significance of the book-to-market ratio remains always high. Overall, this variable is the one most consistently associated with generous WFH policies across all regression specifications. While all variables used in

---

<sup>30</sup> We also replace the control for the lagged value (2021) of state trust with the current one (2022): the result does not change.

Table 4.3 add to our understanding of which firms' characteristics are associated to WFH structural policies, statistically speaking, the adjusted  $R^2$ s of the regressions in Table 4.3 are not higher than the adjusted  $R^2$ s of the baseline regressions in Table 4.2. This means that the financial determinants, the company equity evaluation in particular, as well as industry- and state-specific dummies, have great explanatory power.

#### *4.4.3 Robustness check: Alternative measure of work from home in panel data analysis*

As the cross-sectional results provided so far rely on the snapshot of Flex Index data collected between October 2022 and April 2023, we seek validation of our results using an alternative measure of WFH which presents some time variation and hence also allows panel data analysis. To this aim, we use the work-from-home index (WFH index) of Bai, Brynjolfsson, Jin, Steffen, and Wan (2021). This index is generated by extracting data from over 200 million U.S. job postings to assess firms' digital resilience to the COVID-19 pandemic based on the work-from-home (WFH) feasibility of their labour demand.

Table 4.4 presents the results of OLS panel regressions that include the same controls of Tables 4.2 and 4.3, but now time-varying, and also adds controls for industry, year, and state fixed effects. Here we can use a wider sample of firms (ranging from 1,235 to 1,425, depending on the regression specification and availability of data for all regressors). We confirm the significant result for the cash ratio (Hypothesis 4.1) and the B/M ratio (Hypothesis 4.2): firms that are relatively cash-richer and firms that are more overvalued in the stock market score higher in the WFH index based on digital reliability. Regarding the as company cultural variables, innovation continues to matter for the WFH index, along with teamwork as additional cultural dimension (Hypothesis 4.4).

While these set of results based on the WFH index are interesting, we need to be cautious about their limitation, as the index is not a direct observation on WFH policies like the *Flex Index Score* and the *Minimum Office Days per Week*.

#### *4.4.4 Additional test for potential endogeneity due to sample selection bias*

Table 4.2 Panel A and B already offer an analysis of the Flex Index data with an extension of the Flex Index sample to 'unobserved' firms based on propensity-score matching, in order to address the potential sample selection bias that can cause endogeneity. In this section, we provide a further robustness check based on the Heckman test. Like for the estimation of propensity scores, we use a binary treatment variable "Flex Info Dummy" that indicates whether a firm has work-from-home policies data in the Flex Index (1 for

“yes” and 0 for “no”). This time, however, the first-stage regression employs a *panel* probit to model the selection process, using a suite of financial predictors, state, and industry fixed effects, and with standard errors corrected for heteroscedasticity. The outcome of this first step is the estimation of the inverse Mills ratio (IMR), which captures the sample selection mechanism. The IMR is determined by taking the ratio of the standard normal density function to its cumulative distribution function, evaluated at the predicted values from the probit model. In the subsequent stage, reported in Table 4.5, ordered probit regressions are estimated for both *Flex Index Score* and *Min Office Days per Week* which incorporate the calculated IMR as a regressor, alongside all the other predictors used in Table 4.3, adjusting for potential biases arising from sample selection. The Heckman correction ensures that the estimated coefficients are consistent and unbiased, reflecting the true relationship while accounting for firms' decisions to disclose WFH information. Notably, the results for the B/M ratio (related to hypothesis 4.2) is confirmed also by the Heckman test. We also find a significant impact from the cash ratio in most specifications. Interestingly, in the specifications where cash ratio is not statistically significant, we find some significant evidence for a ‘firm-size’ effect: larger firms are more inclined towards WFH than smaller firms, which again supports Hypothesis 4.1. Hypotheses 4.3 and 4.4 also cannot be rejected, since we observe a statistically significant and positive impact of the state social capital and company's innovation score.

#### *4.4.5 Robustness check: Control for CEOs' individual characteristics and firms' corporate governance*

As further robustness check, we explore whether CEOs' individual characteristics and firms' corporate governance characteristics are associated with more generous WFH policies. We add to the baseline regression with financial controls more explanatory variables: CEO gender, age, tenure, general ability, compensation, and compensation-sensitivity (delta and vega), the percentage of non-executive directors and of women in the corporate board, and an indicator variable for CEO-Chairman dual role as a measure of CEO power. In order to reduce endogeneity concerns, we use lagged values for 2021 for the CEO characteristics, but we check that there are no CEO changes between 2021 and 2022 in the firms included in our sample. We adopt the same models to explain the *Min Office Days per Week*, using ordered probit and OLS. All results are reported in Table 4.6.

CEO characteristics seem not to matter for WFH policies. Amongst the board-related variables, the only one that has some statistical significance is the percentage of non-executive directors: the highest this percentage, the stronger the board monitoring of CEO decisions, the lower the level of work from home allowed by the firm. Both at the leadership and the board level, more gender diversity is not significantly associated with WFH allowances.<sup>31</sup>

#### 4.5 The Book-to-Market Ratio Effect on Work-from-Home Policies

We observe is that firms with a lower book-to-market ratio in 2021, i.e., firms that are relatively overvalued in the equity market, are more likely to present fully-remote or structured hybrid WFH policies at the end of 2022 and beginning of 2023. In this section, we investigate this result further. In particular, we pose the question of whether the negative book-to-market ratio effect on WFH policies may be moderated by the firm's *financial constraints* (resource-based theory) and/or the firm's *focus on innovation* (legitimacy theory).

Identifying the definite causes of a company's equity overvaluation is challenging (Badertscher, 2011). Thus, we conduct some preliminary panel data analysis on the determinants of firms' B/M ratio for all listed North-American firms available in the Compustat database universe. Table 4.6 shows that, *ceteris paribus*, smaller, less profitable, more leveraged, and cash-richer firms tend to have lower book-to-market ratios (i.e. they are more likely to be overvalued). In addition, the equity market valuation increases with respect to the book value of the firm (causing the B/M ratio to decrease) when firms have higher sales growth, lower net investments for replacement of fixed assets, and higher R&D expenses, i.e. they invest more in innovation. To sum up these preliminary results, we observe that firms that are less cash constrained and on a growth trajectory, so with higher future projected (rather than current) profitability,<sup>32</sup> and investing more to innovate, tend to receive a higher valuation from equity investors, over and above the backward-looking book value of equity capital. This evidence is consistent with the Tobin's theory of corporate investments illustrated in section 4.2.

---

<sup>31</sup> In unreported results we repeat the set of extended regressions in Table 4.6 using the propensity-score matched sample. The key results on the significant impact of financial and cultural dimensions remain invariant, hence they are unaffected by potential sample selection bias.

<sup>32</sup> Our results are consistent with some past evidence that overvaluation is associated with patterns of high earnings growth expectations (Jensen, 2005) and a history of mergers and acquisitions (Travlos, 1987; Moeller et al., 2004).

As explained in that section with reference to the resource-based theory, in order to allow and adopt WFH policies, firms often need to invest in robust IT infrastructure and tools for remote collaboration, including secure network access, communication platforms, project management software, and cybersecurity measures. They also need to invest in training employees and managers to adapt to new technologies and work practices and in better support systems. Nevertheless, while there may be immediate expenses involved in transitioning to WFH and maintaining this setup, WFH can also yield cost-savings in the medium to longer term, such as reduced office overheads, office space, and rental expenses, decrease in business travelling expenses, increase in employee satisfaction, productivity, and retention, leading then to a reduction of labour turnover and associated costs of recruitment and training.

Hence, for firms that pursue a high-growth strategy (reflected in their lower book-to-market ratio), but with existing financial constraints, the adoption of WFH practices will be more or less convenient depending on whether WFH is seen either as a tool to reduce costs or as an additional cumbersome up-front investment. Therefore, we test whether the association between generous WFH policies and lower B/M-ratio is stronger for more or less financially constrained firms.

To test the moderating role of financial constraints, we divide our sample of firms by their level of financial constraints in the previous year. We identify financially constrained firms as those: 1) with a cash ratio *below* the median value of firms in the same industry; 2) with a value of the Kaplan-Zingales index *above* the median value of firms in the same industry; 3) with a value of Z-score *below* the median value of firms in the same industry (i.e., closer to financial default); 4) with a financial leverage *above* the median value of firms in the same industry (i.e. more indebted). We then perform the baseline regression of Table 4.2 over the two sub-samples based on these different measures of financial constraints and report the results in Table 4.8. We observe that the book-to-market ratio has a significant impact on WFH policies *only* for firms with higher financial constraints, irrespectively on how the constraints are measured (see columns 1 to 8). Hence, we find quite strong evidence to conclude that the association between lower-B/M-ratio and WFH policies exist only for firms with higher financial constraints, plausibly for cost-saving purposes.

Next, we look at the moderating role of innovation: we test whether the association between WFH and lower B/M-ratio is stronger for more or less innovative firms. On the one side, WFH is a way to encourage innovation and firm growth (James, 2014) because it helps to provide some ‘mental space’ and ‘human resource diversity’ which are needed for knowledge creation, sharing, and exploitation (Greenhaus and Singh, 2003; Azeem and Kotey, 2021). WFH policies are themselves innovative human-resources policies (Leonardi, 2021; Teevan et al., 2021; Cutter, 2021) that may be more likely implemented by managers in more innovative firms. These policies can also be an attractive project to garner public attention (Farrell et al., 2014) and their announcement (even before their formal adoption) can enhance employees’ satisfaction and productivity and contribute to the firm’s positive growth and stock price valuation (Dong et al., 2021). On the other hand, lower B/M-ratio firms that are better at innovating and/or operate in knowledge-intensive industries may also require more in-person exchanges and collaborations (Chen, Frey, and Presidente, 2022) and may be less prone to allow generous WFH policies.

We first evaluate the digital preparedness of the firm to WFH, looking at firms above and below the median value in the same SIC 2-digit industry of the digital resilience measure of Bai et al. (2021) in 2020. Second, we differentiate firms by the relevance of human capital in their processes. It is highly plausible that firms where human capital is more relevant are those where talent-retention presents itself more as an opportunity and a competitive advantage; hence, WFH policies may be more likely used with the objective of retaining the best employees. Human capital is generally expected to be more significant in firms that possess a higher proportion of intangible assets and investing more in innovation. Hence, we divide firms also along this dimension measured in 2021 and define intangible assets as firm’s R&D investments plus 30% of the SG&A expenses (as in Hulten and Hao, 2008; and Einfeldt and Papanikolaou, 2013). Third, to identify more innovative firms, we divide them by firms operating in knowledge-based industries vs. other industries. As in Edmans (2011) and Shan and Tang (2023), we define the knowledge-based industry as the pharmaceuticals and software sectors.<sup>33</sup> Finally, we use the number of patents as innovation outputs (retrieved from the KPSS database) to split the firms between those above and those below the median value of patents per firm in

---

<sup>33</sup> We classify a firm as a knowledge-based industry if its SIC code starts with 73 and falls within the range of 2833-2836 or it is specifically classified as 8731. If any of these conditions are met, a dummy variable “knowledge-based industry” is assigned a value of 1; otherwise, it is assigned a value of 0.

2021. We perform the baseline regression of Table 4.2 separately over the sub-samples based on different measures of innovation and report the results in Table 4.9.

We observe that the book-to-market ratio has a statistically significant impact on WFH *only* for firms with higher value of digital resilience (columns 1 and 2). Its impact is also stronger and more significant for firms with a higher amount of intangible assets (columns 2 to 3). For knowledge-based industries and firms with higher number of patents, the level of significance of the B/M ratio coefficient is similar to other firms, but the economic impact, measured by standard-deviations, is higher (columns 5 to 8). For instance, a one-standard deviation reduction in the B/M ratio increases the Flex Index Score by 0.10 standard deviations if the firm operates in a knowledge-based industry, and by 0.05 for other firms (halved impact). Overall, the results indicate that the positive association between higher firm's equity valuation and generosity of WFH policies is stronger and more statistically significant for firms that rely more on digital labour and human capital and operate in more innovative sectors.

#### 4.6 Conclusions

The practice of work from home represents a pivotal shift in work dynamics. The phenomenon is however nuanced, shaped by industry, location, company culture, and other firm characteristics, mainly financials. This study is the first to shed some light on the which firms' characteristics are positively associated with WFH policies at the firm level, in the period soon after the COVID-19 pandemic, by taking advantage of a novel comprehensive database of firms' WFH policies (the Flex Index).

Our findings reveal that cultural factors exert substantial influence. Firms with an innovation-focused culture and located in states with higher 'social capital' and collective sense of trust are more inclined towards WFH practices, whereas those emphasizing more end-users' satisfaction, quality, and managerial control tend to discourage WFH. This delineation highlights the role of social and organizational culture in shaping work practices, consistently with the legitimacy theory of firms.

Our findings also highlight that having sufficient cash reserves positively influences a firm's implementation of WFH policies, which is consistent with resource-based theory. We also observe a strong positive association between higher equity capital valuation (lower book-to-market ratio) and WFH policies. These relationships persist across

different regression models and survive robustness checks and controls for sample selection bias.

Interestingly, when investigating the moderating factors of the relationship between WFH policies and book-to-market ratio, our analysis reveals a dual mechanism. On the one hand, financial constraints emerge as a catalyst, prompting growth-driven companies with tighter financial resources to favour WFH solutions, plausibly for cost-saving purposes. On the other hand, we find that lower book-to-market ratios (equity overvaluation) support WFH arrangements in firms with higher reliance on digital labour and human capital and operating in knowledge-intensive sectors. In these firms, talent-retention presents itself more as an opportunity and a competitive advantage; hence, WFH policies may be more likely used by growth firms with the objective of retaining the best employees.

One limitation of our study is that it relies on firms' WFH information from the period October 2022 to April 2023: so, we cannot observe how many firms have adopted, changed, or even reverted their work-from-home policies afterwards, and why. This will be an interesting extension of our work for future research.

In summary, our present research provides crucial insights into the interplay of financial structures, cultural orientations, and strategic motivations shaping firms' decisions regarding work from home. Understanding these dynamics offers valuable guidance for future work-policy frameworks in the new and rapidly evolving world of work.

**Figures and Tables for Chapter 4**

**Figure 4.1**

**Firm's Information on Flex Index Website (Example: Zoom)**

The image shows a screenshot of the Zoom company profile on the Flex Index website. The profile header includes the Zoom logo, the company name "Zoom", and a red box highlighting the location "San Jose, CA", employee count "6,750", industry "Technology", and website "zoom.us". A red arrow points from the company name to the text "Unknown name". Below this is the "Office requirements" section, which includes a sub-section "Office Requirements" with a description: "Most Corporate employees are expected to come to the office a minimum number of days each week." Underneath is a "Minimum days a week" section with a calendar icon and the text "2 days". A red box highlights "2 days", and a red arrow points from it to the text "Known characteristics". At the bottom of the section is "Who sets office requirements?" with the answer "Unknown".

**Table 4.1**

**Descriptive Statistics**

This table presents summary descriptive statistics for all variables used. The reference sample consists of 366 firms with available Flex Index data and financial information. The variation in the number of observations for CEO characteristics, corporate governance, and other variables, falling below 366, is due to occasional data unavailability for some firms. *Flex Index Score*, *Min Office Days per Week*, and *Knowledge Industry Dummy* are measured in 2022. All other data are measured in 2021 except for the *Digital Resilience* statistics that refer instead to the period 2010-2020 (for which these data are available). Control variables are winsorized at the 1st and 99th percentiles.

| Variables                                      | N      | Mean   | S.D.   | 0.25   | Median | 0.75   |
|--|--------|--------|--------|--------|--------|--------|
| <u>Work from Home Measurements:</u>            |        |        |        |        |        |        |
| Flex Index Score                               | 366    | 0.504  | 0.326  | 0.500  | 0.500  | 0.500  |
| Min Office Days per Week                       | 320    | 2.503  | 1.825  | 1.000  | 3.000  | 4.000  |
| <u>Firm Financials:</u>                        |        |        |        |        |        |        |
| Size (Log Mkt Cap)                             | 366    | 9.491  | 1.432  | 8.560  | 9.677  | 10.775 |
| Leverage                                       | 366    | 0.347  | 0.200  | 0.216  | 0.332  | 0.442  |
| B/M Ratio                                      | 366    | 0.271  | 0.300  | 0.077  | 0.212  | 0.414  |
| ROA  | 366    | 0.062  | 0.092  | 0.022  | 0.061  | 0.101  |
| Cash ratio                                     | 366    | 0.138  | 0.135  | 0.038  | 0.099  | 0.182  |
| Sales Growth                                   | 366    | 0.226  | 0.289  | 0.066  | 0.153  | 0.299  |
| <u>Cultural controls:</u>                      |        |        |        |        |        |        |
| Putnam State Trust                             | 354    | 0.421  | 0.068  | 0.381  | 0.432  | 0.441  |
| Integrity                                      | 345    | 2.272  | 0.953  | 1.655  | 2.104  | 2.636  |
| Teamwork                                       | 345    | 2.565  | 1.400  | 1.536  | 2.279  | 3.240  |
| Quality  | 345    | 3.056  | 1.944  | 1.763  | 2.572  | 3.784  |
| Respect  | 345    | 3.782  | 2.479  | 2.204  | 3.127  | 4.718  |
| Innovation                                     | 345    | 8.123  | 3.919  | 5.406  | 7.222  | 10.182 |
| <u>Variables used in the Channels Testing:</u> |        |        |        |        |        |        |
| Knowledge Industry Dummy                       | 366    | 0.224  | 0.418  | 0.000  | 0.000  | 0.000  |
| Num. Patents                                   | 124    | 40.597 | 81.212 | 3.000  | 13.000 | 41.000 |
| Net Investment rate                            | 366    | 0.070  | 0.285  | -0.005 | 0.035  | 0.091  |
| KZ Index                                       | 333    | -7.400 | 19.630 | -8.070 | -1.756 | 0.920  |
| Z-Score  | 350    | 4.071  | 4.723  | 2.051  | 3.035  | 4.522  |
| <u>Alternative Work from Home Measurement:</u> |        |        |        |        |        |        |
| Digital Resilience                             | 12,116 | 0.602  | 0.315  | 0.373  | 0.635  | 0.892  |
| <u>CEO's Characteristics:</u>                  |        |        |        |        |        |        |
| Log CEO Age                                    | 285    | 4.050  | 0.105  | 3.989  | 4.060  | 4.111  |
| Woman CEO                                      | 285    | 0.070  | 0.256  | 0.000  | 0.000  | 0.000  |
| Log CEO Tenure                                 | 284    | 4.025  | 0.947  | 3.434  | 4.135  | 4.687  |
| CEO General Ability Index                      | 284    | 0.439  | 1.072  | -0.352 | 0.202  | 1.037  |
| CEO Compensation                               | 278    | 10.703 | 6.826  | 5.682  | 9.658  | 14.514 |
| CEO Delta                                      | 278    | 1.481  | 2.691  | 0.153  | 0.461  | 1.392  |
| CEO Vega                                       | 278    | 0.227  | 0.313  | 0.000  | 0.095  | 0.332  |
| <u>Corporate Governance Controls:</u>          |        |        |        |        |        |        |
| Pct NED Board                                  | 363    | 0.720  | 0.142  | 0.600  | 0.667  | 0.889  |
| CEO Duality Dummy                              | 257    | 0.218  | 0.414  | 0.000  | 0.000  | 0.000  |
| Pct Women Board                                | 363    | 0.304  | 0.104  | 0.250  | 0.300  | 0.364  |

**Table 4.2****Regressions with Financial Controls: Testing Hypotheses 4.1 and 4.2**

Panel A presents Ordered Probit and OLS regression estimates of the Flex Index Score on firm financial variables. *Flex Index Score* is measured as a rank-indicator with value of 1, 0.5 and 0, representing respectively Fully Flexible, Structured Hybrid and Full Time in Office. Columns (1) and (2) represent our baseline regression using the sample of firms covered by the Flex Index dataset. Columns (3) and (4) re-run the baseline regression excluding firms in the technology and ICT-related industries. Columns (5) to (8) present the regression results using Propensity Score Matching. The matched control firms (i.e. firms that are not in Compustat but not in the Flex Index dataset) are from the same industry (4 digit SIC) and state as the treated firms (i.e. firms that are in the Flex Index dataset). The PSM is based on the one-closest neighbour criterion, and it is performed without replacement. In Columns (5) and (6) all matched controls firms are assigned a Flex Index Score of 0. In Columns (7) and (8) matched control firms are randomly assigned Flex Index Scores of 0 and 0.5. Panel B presents Ordered Probit and OLS regression estimates of the minimum number of days per week required in the office on firm financial variables. *Min Office Days per Week* represents the minimum number of days that companies require employees to work from the office each week. Panel B Columns (1) and (2) represent our baseline regression using the sample of firms covered by the Flex Index dataset. Columns (3) and (4) re-run the baseline regression excluding firms in the technology and ICT-related industries. Columns (5) to (8) presents the regression results using the Propensity Score Matching sample used in Panel A. In Columns (5) and (6) all matched controls firms are assigned *Min Office Days per Week* value of 5. In Columns (7) and (8) the control firms that were randomly assigned a Flex Index Scores of 0 receive a *Min Office Days per Week* value of 5; control firms that were randomly assigned a Flex Index Scores of 0.5 receive a *Min Office Days per Week* value of 2.5. All variables are defined in Appendix Table D. The diagnostic tests on PSM (univariate comparisons between the treatment and control firms' characteristics, the corresponding t-statistics for the mean differences, and the bias changes) are reported in Appendix Table H. In all regressions standard errors are corrected for heteroscedasticity. t-statistics are reported in brackets. \*\*\*, \*\*, \* indicate that the parameter estimate is significantly different from zero at the 1%, 5%, or 10% level, respectively.

**Panel A – Regressions for Flex Index Score**

| <i>Est. Methodology</i>   | Ordered Probit             | OLS                        | Ordered Probit                          | OLS                                     | Ordered Probit               | OLS                          | Ordered Probit                | OLS                           |
|---------------------------|----------------------------|----------------------------|---|---|------------------------------|------------------------------|-------------------------------|-------------------------------|
| <i>Sample</i>             | Firms in Flex Index Sample | Firms in Flex Index Sample | Firms in Flex Index Sample; No Tech/ICT | Firms in Flex Index Sample; No Tech/ICT | PSM; All Control-Firms FSI=0 | PSM; All Control-Firms FSI=0 | PSM; Control-Firms Random FSI | PSM; Control-Firms Random FSI |
| <i>Dependent Variable</i> | Flex Index Score           | Flex Index Score           | Flex Index Score                        | Flex Index Score                        | Flex Index Score             | Flex Index Score             | Flex Index Score              | Flex Index Score              |
|                           | (1)                        | (2)                        | (3)                                     | (4)                                     | (5)                          | (6)                          | (7)                           | (8)                           |
| <i>Firms' financials:</i> |                            |                            |   |   |                              |                              |                               |                               |
| Size                      | -0.116*<br>(-1.665)        | -0.027<br>(-1.612)         | -0.096<br>(-1.250)                      | -0.023<br>(-1.217)                      | 0.066<br>(1.178)             | 0.012<br>(0.748)             | -0.028<br>(-0.559)            | -0.008<br>(-0.595)            |
| Leverage                  | -0.468<br>(-0.830)         | -0.099<br>(-0.735)         | -0.331<br>(-0.551)                      | -0.072<br>(-0.500)                      | -0.179<br>(-0.474)           | -0.034<br>(-0.316)           | -0.216<br>(-0.636)            | -0.055<br>(-0.589)            |
| B/M Ratio                 | -0.991***<br>(-3.453)      | -0.221***<br>(-3.341)      | -0.984***<br>(-3.018)                   | -0.220***<br>(-2.910)                   | -0.449*<br>(-1.823)          | -0.126*<br>(-1.779)          | -0.629***<br>(-2.682)         | -0.158**<br>(-2.525)          |
| ROA                       | -0.525<br>(-0.608)         | -0.077<br>(-0.380)         | -0.744<br>(-0.844)                      | -0.118<br>(-0.575)                      | -0.652<br>(-0.971)           | -0.158<br>(-0.753)           | -0.382<br>(-0.607)            | -0.094<br>(-0.546)            |
| Cash Ratio                | 2.307***<br>(2.961)        | 0.459***<br>(2.635)        | 2.372***<br>(2.853)                     | 0.469**<br>(2.474)                      | 0.425<br>(0.776)             | 0.098<br>(0.568)             | 1.054**<br>(2.205)            | 0.271**<br>(2.015)            |
| Sales Growth              | -0.214<br>(-0.643)         | -0.017<br>(-0.234)         | -0.174<br>(-0.515)                      | -0.009<br>(-0.126)                      | -0.528*<br>(-1.875)          | -0.064<br>(-1.107)           | -0.182<br>(-0.769)            | -0.040<br>(-0.666)            |
| Constant                  |                            | 0.108<br>(0.516)           |   | 0.006<br>(0.024)                        |                              | -0.121<br>(-0.614)           |                               | 0.080<br>(0.314)              |
| Observations              | 366                        | 366                        | 329                                     | 329                                     | 559                          | 559                          | 559                           | 559                           |
| Industry FE               | YES                        | YES                        | YES                                     | YES                                     | YES                          | YES                          | YES                           | YES                           |
| State FE                  | YES                        | YES                        | YES                                     | YES                                     | YES                          | YES                          | YES                           | YES                           |
| Adjusted R-squared        | 0.284                      | 0.216                      | 0.301                                   | 0.218                                   | 0.132                        | 0.205                        | 0.131                         | 0.058                         |

(Continued)

**Panel B – Regressions for Min Office Days per Week**

| <i>Est. Methodology</i>   | Ordered Probit             | OLS                        | Ordered Probit                          | OLS                                     | Ordered Probit           | OLS                      | Ordered Probit                | OLS                           |
|---------------------------|----------------------------|----------------------------|---|---|--------------------------|--------------------------|-------------------------------|-------------------------------|
| <i>Sample</i>             | Firms in Flex Index Sample | Firms in Flex Index Sample | Firms in Flex Index Sample; No Tech/ICT | Firms in Flex Index Sample; No Tech/ICT | PSM; Control-Firms FSI=0 | PSM; Control-Firms FSI=0 | PSM; Control-Firms Random FSI | PSM; Control-Firms Random FSI |
| <i>Dependent Variable</i> | Min Office Days per Week   | Min Office Days per Week   | Min Office Days per Week                | Min Office Days per Week                | Min Office Days per Week | Min Office Days per Week | Min Office Days per Week      | Min Office Days per Week      |
|                           | (1)                        | (2)                        | (3)                                     | (4)                                     | (5)                      | (6)                      | (7)                           | (8)                           |
| <i>Firms' financials:</i> |                            |                            |   |   |                          |                          |                               |                               |
| Size                      | 0.058<br>(0.824)           | 0.094<br>(0.941)           | 0.031<br>(0.397)                        | 0.064<br>(0.559)                        | -0.105*<br>(-1.743)      | -0.110<br>(-1.224)       | 0.004<br>(0.075)              | 0.012<br>(0.160)              |
| Leverage                  | 0.471<br>(0.871)           | 0.547<br>(0.734)           | 0.382<br>(0.649)                        | 0.394<br>(0.486)                        | 0.224<br>(0.585)         | 0.289<br>(0.528)         | 0.295<br>(0.913)              | 0.390<br>(0.790)              |
| B/M Ratio                 | 0.915***<br>(3.235)        | 1.175***<br>(3.159)        | 0.808***<br>(2.597)                     | 1.029**<br>(2.466)                      | 0.473*<br>(1.795)        | 0.658*<br>(1.704)        | 0.607***<br>(2.596)           | 0.830**<br>(2.418)            |
| ROA                       | 0.514<br>(0.618)           | 0.527<br>(0.450)           | 0.802<br>(0.942)                        | 0.984<br>(0.809)                        | 0.894<br>(1.270)         | 1.130<br>(0.987)         | 0.381<br>(0.628)              | 0.576<br>(0.611)              |
| Cash Ratio                | -1.971**<br>(-2.278)       | -2.306**<br>(-2.088)       | -2.184**<br>(-2.336)                    | -2.518**<br>(-2.067)                    | -0.299<br>(-0.534)       | -0.336<br>(-0.365)       | -0.766<br>(-1.631)            | -1.296*<br>(-1.740)           |
| Sales Growth              | 0.148<br>(0.461)           | -0.015<br>(-0.037)         | 0.185<br>(0.563)                        | -0.020<br>(-0.047)                      | 0.527*<br>(1.784)        | 0.264<br>(0.824)         | 0.104<br>(0.444)              | 0.137<br>(0.417)              |
| Constant                  |                            | 5.004***<br>(4.239)        |   | 5.748***<br>(4.153)                     |                          | 5.774***<br>(5.955)      |                               | 4.673***<br>(3.578)           |
| Observations              | 320                        | 320                        | 287                                     | 287                                     | 513                      | 513                      | 513                           | 559                           |
| Industry FE               | YES                        | YES                        | YES                                     | YES                                     | YES                      | YES                      | YES                           | YES                           |
| State FE                  | YES                        | YES                        | YES                                     | YES                                     | YES                      | YES                      | YES                           | YES                           |
| Adjusted R-squared        | 0.190                      | 0.204                      | 0.202                                   | 0.200                                   | 0.106                    | 0.225                    | 0.081                         | 0.055                         |

**Table 4.3**  
**Regressions with Financial Controls: Testing Hypotheses 4.1 and 4.2**

This table presents regression estimates of the Flex Index variables on financial variables and corporate and state cultural variables. Columns (1)-(4) present results using the *Flex Index Score* as the dependent variable, while columns (5)-(8) present results using the *Min Office Days per Week* as the dependent variable. The results are presented using Ordered Probit model (columns 1, 2, 5, and 6) and OLS model (columns 3, 4, 7, and 8). All regressions include industry fixed effects. All variables are defined in Appendix Table D. Standard errors are corrected for heteroscedasticity, and t-statistics are reported in brackets. \*\*\*, \*\*, \* indicate that the parameter estimate is significantly different from zero at the 1%, 5%, or 10% level, respectively.

|                           | Flex Index Score      |                       |                       |                       | Min Office Days per Week |                       |                       |                       |
|---------------------------|-----------------------|-----------------------|-----------------------|-----------------------|--------------------------|-----------------------|-----------------------|-----------------------|
|                           | Ordered Probit<br>(1) | Ordered Probit<br>(2) | OLS<br>(3)            | OLS<br>(4)            | Ordered Probit<br>(5)    | Ordered Probit<br>(6) | OLS<br>(7)            | OLS<br>(8)            |
| <i>Firms' financials:</i> |                       |                       |                       |                       |                          |                       |                       |                       |
| Size                      | -0.043<br>(-0.672)    | -0.056<br>(-0.847)    | -0.011<br>(-0.688)    | -0.013<br>(-0.813)    | -0.003<br>(-0.042)       | 0.002<br>(0.028)      | 0.007<br>(0.071)      | 0.007<br>(0.064)      |
| Leverage                  | 0.003<br>(0.004)      | 0.112<br>(0.200)      | -0.002<br>(-0.012)    | 0.020<br>(0.140)      | 0.042<br>(0.077)         | -0.064<br>(-0.119)    | -0.022<br>(-0.027)    | -0.173<br>(-0.219)    |
| B/M Ratio                 | -0.799***<br>(-2.823) | -0.799***<br>(-2.796) | -0.190***<br>(-2.758) | -0.179***<br>(-2.601) | 0.684**<br>(2.369)       | 0.623**<br>(2.137)    | 0.906**<br>(2.208)    | 0.809**<br>(1.980)    |
| ROA                       | -0.490<br>(-0.606)    | -0.942<br>(-1.061)    | -0.097<br>(-0.504)    | -0.201<br>(-0.978)    | 0.493<br>(0.632)         | 0.901<br>(1.024)      | 0.606<br>(0.554)      | 1.191<br>(0.993)      |
| Cash Ratio                | 2.160***<br>(3.359)   | 1.886***<br>(2.890)   | 0.495***<br>(3.226)   | 0.410***<br>(2.653)   | -2.051***<br>(-2.877)    | -1.685**<br>(-2.339)  | -2.740***<br>(-2.879) | -2.142**<br>(-2.225)  |
| Sales Growth              | -0.247<br>(-0.806)    | -0.168<br>(-0.521)    | -0.051<br>(-0.780)    | -0.040<br>(-0.518)    | 0.259<br>(0.870)         | 0.155<br>(0.505)      | 0.267<br>(0.731)      | 0.159<br>(0.371)      |
| <i>Cultural controls:</i> |                       |                       |                       |                       |                          |                       |                       |                       |
| Putnam State Trust        | 2.722***<br>(2.606)   | 2.549**<br>(2.251)    | 0.624**<br>(2.410)    | 0.577**<br>(2.115)    | -1.508<br>(-1.351)       | -1.153<br>(-0.957)    | -2.160<br>(-1.289)    | -1.726<br>(-0.963)    |
| Innovation                |                       | 0.081***<br>(3.243)   |                       | 0.018***<br>(3.027)   |                          | -0.079***<br>(-3.019) |                       | -0.102***<br>(-2.976) |
| Quality                   |                       | -0.117**<br>(-2.546)  |                       | -0.026**<br>(-2.307)  |                          | 0.106**<br>(2.363)    |                       | 0.139**<br>(2.169)    |
| Teamwork                  |                       | 0.079<br>(1.191)      |                       | 0.017<br>(1.099)      |                          | -0.089<br>(-1.284)    |                       | -0.109<br>(-1.114)    |
| Integrity                 |                       | -0.101<br>(-1.246)    |                       | -0.021<br>(-1.056)    |                          | 0.144*<br>(1.735)     |                       | 0.183<br>(1.507)      |
| Respect                   |                       | -0.068*<br>(-1.775)   |                       | -0.015<br>(-1.593)    |                          | 0.068<br>(1.482)      |                       | 0.095<br>(1.406)      |
| Constant                  |                       |                       | -0.039<br>(-0.189)    | 0.038<br>(0.175)      |                          |                       | 5.195***<br>(4.123)   | 4.729***<br>(3.454)   |
| Observations              | 354                   | 340                   | 354                   | 340                   | 308                      | 296                   | 308                   | 296                   |
| Industry FE               | YES                   | YES                   | YES                   | YES                   | YES                      | YES                   | YES                   | YES                   |
| Adjusted R-squared        | 0.192                 | 0.217                 | 0.178                 | 0.196                 | 0.132                    | 0.196                 | 0.179                 | 0.203                 |

**Table 4.4****Digital Resilience as Alternative Measurement for Work-From-Home**

This table shows panel regressions of digital resilience (Work-from-Home – WFH Index) on financial variables and additional controls. The WFH index is constructed by Bai et al. (2021). Data for this variable are available from 2010 to 2020. The variations in the number of observations in each regression are due to additional controls' availability. We control for state, industry, and year fixed effects. All variables are defined in Appendix Table D. Standard errors are clustered at the firm level, and t-statistics are reported in brackets. \*\*\*, \*\*, \* indicate that the parameter estimate is significantly different from zero at the 1%, 5%, or 10% level, respectively.

| <i>Dependent Variable</i> | Panel Data (All Firms, 2010-2020) |                      |                     |
|---------------------------|-----------------------------------|----------------------|---------------------|
|                           | Digital resilience (WFH Index)    |                      |                     |
|                           | (1)                               | (2)                  | (3)                 |
| <i>Firms' financials:</i> |                                   |                      |                     |
| Size                      | 0.005**<br>(2.024)                | 0.006**<br>(2.380)   | 0.004<br>(1.201)    |
| Leverage                  | -0.043*<br>(-1.895)               | -0.051**<br>(-2.123) | -0.049*<br>(-1.955) |
| B/M Ratio                 | -0.011***<br>(-2.784)             | -0.012**<br>(-2.565) | -0.008<br>(-1.639)  |
| ROA                       | 0.002<br>(0.190)                  | 0.001<br>(0.073)     | -0.023<br>(-0.684)  |
| Cash Ratio                | 0.179***<br>(5.202)               | 0.213***<br>(6.299)  | 0.185***<br>(5.378) |
| Sales Growth              | 0.011**<br>(2.237)                | 0.011**<br>(2.056)   | 0.004<br>(0.550)    |
| <i>Cultural controls:</i> |                                   |                      |                     |
| Putnam State Trust        |                                   | 0.028<br>(0.388)     | 0.039<br>(0.517)    |
| Innovation                |                                   |                      | 0.006***<br>(2.719) |
| Quality                   |                                   |                      | -0.005<br>(-1.595)  |
| Teamwork                  |                                   |                      | 0.020***<br>(5.738) |
| Integrity                 |                                   |                      | -0.001<br>(-0.133)  |
| Respect                   |                                   |                      | 0.001<br>(0.349)    |
| Constant                  | 0.454***<br>(3.753)               | 0.477***<br>(4.445)  | 0.382***<br>(2.896) |
| Observations              | 12,116                            | 11,509               | 9,939               |
| Industry FE               | YES                               | YES                  | YES                 |
| Year FE                   | YES                               | YES                  | YES                 |
| State FE                  | YES                               | NO                   | NO                  |
| Number of firms           | 1,425                             | 1,346                | 1,235               |
| Adjusted R-squared        | 0.270                             | 0.266                | 0.293               |

**Table 4.5**

**Heckman Test**

This table presents estimates of the Heckman selection model for the Flex Index measurements that correct for the sample selection bias. The dependent variable is the *Flex Index Score* or the *Min Office Days per week*. All regressions include industry and state fixed effects as in Table 4.2 and 4.3. All variables are defined in Appendix Table D. Standard errors are corrected for heteroscedasticity, and t-statistics are reported in brackets. \*\*\*, \*\*, \* indicate that the parameter estimate is significantly different from zero at the 1%, 5%, or 10% level, respectively.

| <i>Dependent Variables</i> | Flex Index Score     |                      |                       | Min Office Days per Week |                     |                       |
|----------------------------|----------------------|----------------------|-----------------------|--------------------------|---------------------|-----------------------|
|                            | (1)                  | (2)                  | (3)                   | (4)                      | (5)                 | (6)                   |
| <i>Firms' financials:</i>  |                      |                      |                       |                          |                     |                       |
| Size                       | 0.677**<br>(2.263)   | 0.175<br>(1.132)     | 0.080<br>(0.467)      | -0.867***<br>(-2.912)    | -0.257*<br>(-1.693) | -0.160<br>(-0.957)    |
| Leverage                   | 0.329<br>(0.526)     | 0.172<br>(0.301)     | 0.206<br>(0.367)      | -0.445<br>(-0.752)       | -0.171<br>(-0.310)  | -0.182<br>(-0.334)    |
| B/M Ratio                  | -0.653**<br>(-2.066) | -0.653**<br>(-2.185) | -0.710**<br>(-2.401)  | 0.522*<br>(1.657)        | 0.512*<br>(1.680)   | 0.518*<br>(1.726)     |
| ROA                        | -0.542<br>(-0.632)   | -0.438<br>(-0.548)   | -0.916<br>(-1.032)    | 0.466<br>(0.566)         | 0.380<br>(0.491)    | 0.828<br>(0.932)      |
| Cash Ratio                 | -0.059<br>(-0.050)   | 1.598**<br>(2.178)   | 1.543**<br>(2.006)    | 0.741<br>(0.620)         | -1.414*<br>(-1.794) | -1.303<br>(-1.607)    |
| Sales Growth               | -0.687*<br>(-1.727)  | -0.365<br>(-1.133)   | -0.242<br>(-0.706)    | 0.723*<br>(1.836)        | 0.385<br>(1.240)    | 0.236<br>(0.733)      |
| <i>Cultural controls:</i>  |                      |                      |                       |                          |                     |                       |
| Putnam State Trust         |                      | 2.973***<br>(2.860)  | 2.737**<br>(2.387)    |                          | -1.776<br>(-1.602)  | -1.344<br>(-1.098)    |
| Innovation                 |                      |                      | 0.082***<br>(3.305)   |                          |                     | -0.080***<br>(-3.063) |
| Quality                    |                      |                      | -0.118***<br>(-2.587) |                          |                     | 0.106**<br>(2.396)    |
| Teamwork                   |                      |                      | 0.073<br>(1.072)      |                          |                     | -0.080<br>(-1.134)    |
| Integrity                  |                      |                      | -0.101<br>(-1.243)    |                          |                     | 0.149*<br>(1.782)     |
| Respect                    |                      |                      | -0.070*<br>(-1.817)   |                          |                     | 0.071<br>(1.556)      |
| Inverse Mills Ratio        | 2.082***<br>(2.716)  | 0.582<br>(1.474)     | 0.372<br>(0.847)      | -2.449***<br>(-3.152)    | -0.678*<br>(-1.746) | -0.446<br>(-1.029)    |
| Observations               | 366                  | 354                  | 340                   | 320                      | 308                 | 296                   |
| Probit cut-off points      | YES                  | YES                  | YES                   | YES                      | YES                 | YES                   |
| Industry FE                | YES                  | YES                  | YES                   | YES                      | YES                 | YES                   |
| State FE                   | YES                  | NO                   | NO                    | YES                      | NO                  | NO                    |
| Adjusted R-squared         | 0.293                | 0.196                | 0.218                 | 0.199                    | 0.136               | 0.150                 |

**Table 4.6**

**Robustness Check: Baseline Regression with Additional Controls for CEO-Leadership and Corporate Governance**

This table presents regression estimates of the Flex Index variables on financial variables and CEO's and corporate governance's characteristics. Columns (1) and (2) present results using the *Flex Index Score* as the dependent variable, while columns (3)-(4) present results using the *Min Office Days per Week* as the dependent variable. Results are provided using the ordered probit model (in columns 1 and 3) and the OLS model (in columns 2 and 4). All regressions include industry and state fixed effects. All variables are defined in Appendix Table D. Standard errors are corrected for heteroscedasticity, and t-statistics are reported in brackets. \*\*\*, \*\*, \* indicate that the parameter estimate is significantly different from zero at the 1%, 5%, or 10% level, respectively.

|                                       | Flex Index Score      |                       | Min Office Days per Week |                     |
|---------------------------------------|-----------------------|-----------------------|--------------------------|---------------------|
|                                       | Ordered Probit<br>(1) | OLS<br>(2)            | Ordered Probit<br>(3)    | OLS<br>(4)          |
| <i>Firms' financials:</i>             |                       |                       |                          |                     |
| Size                                  | -0.387***<br>(-3.021) | -0.070**<br>(-2.499)  | 0.276**<br>(2.257)       | 0.309*<br>(1.770)   |
| Leverage                              | -1.479*<br>(-1.891)   | -0.260<br>(-1.442)    | 1.176<br>(1.533)         | 1.374<br>(1.236)    |
| B/M Ratio                             | -1.564***<br>(-3.813) | -0.278***<br>(-3.251) | 1.584***<br>(3.534)      | 1.700***<br>(3.062) |
| ROA                                   | 0.013<br>(0.011)      | 0.027<br>(0.100)      | -0.457<br>(-0.384)       | -0.371<br>(-0.206)  |
| Cash Ratio                            | 2.485**<br>(2.230)    | 0.429*<br>(1.690)     | -2.093*<br>(-1.712)      | -2.484<br>(-1.372)  |
| Sales Growth                          | -0.440<br>(-0.937)    | -0.078<br>(-0.738)    | 0.668<br>(1.583)         | 0.621<br>(0.988)    |
| <i>CEO's characteristics:</i>         |                       |                       |                          |                     |
| Log CEO Age                           | 1.352<br>(1.246)      | 0.213<br>(0.848)      | 0.088<br>(0.076)         | 0.179<br>(0.105)    |
| Woman CEO                             | 0.235<br>(0.540)      | 0.046<br>(0.455)      | -0.114<br>(-0.274)       | -0.149<br>(-0.232)  |
| Log CEO Tenure                        | -0.241*<br>(-1.799)   | -0.043<br>(-1.395)    | 0.039<br>(0.270)         | 0.062<br>(0.281)    |
| CEO General Ability Index             | -0.013<br>(-0.122)    | -0.002<br>(-0.100)    | -0.032<br>(-0.337)       | -0.034<br>(-0.237)  |
| CEO Compensation                      | 0.005<br>(0.239)      | 0.000<br>(0.109)      | -0.010<br>(-0.538)       | -0.011<br>(-0.415)  |
| CEO Delta                             | 0.018<br>(0.403)      | 0.003<br>(0.327)      | 0.011<br>(0.244)         | 0.006<br>(0.099)    |
| CEO Vega                              | 0.014<br>(0.034)      | 0.012<br>(0.121)      | -0.092<br>(-0.239)       | -0.019<br>(-0.034)  |
| <i>Corporate governance controls:</i> |                       |                       |                          |                     |
| Pct Board NED                         | -2.766***<br>(-2.625) | -0.491**<br>(-2.049)  | 1.950*<br>(1.789)        | 2.303<br>(1.388)    |
| CEO Duality Dummy                     | -0.125<br>(-0.539)    | -0.013<br>(-0.245)    | -0.288<br>(-1.157)       | -0.296<br>(-0.785)  |
| Pct Women Board                       | -0.743<br>(-0.622)    | -0.142<br>(-0.514)    | 2.184*<br>(1.733)        | 2.215<br>(1.184)    |
| Constant                              |                       | 0.998<br>(0.933)      |                          | -4.135<br>(-0.538)  |
| Observations                          | 251                   | 251                   | 216                      | 216                 |
| Industry FE                           | YES                   | YES                   | YES                      | YES                 |
| State FE                              | YES                   | YES                   | YES                      | YES                 |
| Adjusted R-squared                    | 0.333                 | 0.15                  | 0.203                    | 0.114               |

**Table 4.7**

**Panel Regression: Firms' Financials determining the B/M Ratio**

This table shows the results of panel regressions of the B/M ratio on lagged firm financials. The dependent variable is the *B/M ratio*, and the independent variables are lagged *Size*, *Leverage*, *ROA*, *Cash Ratio*, *Sales Growth*, *Net Investment Rate*, *R&D Investment*, *Log Firm Age*, and *Intangible Asset*. These regressions use all available U.S. firms in the Compustat database. We control for state, industry, and year fixed effects in columns (1) and (3). In columns (2) and (4), we control for year and firm fixed effects. All variables are defined in Appendix Table D. Standard errors are clustered at the firm level, and t-statistics are reported in brackets. \*\*\*, \*\*, \* indicate that the parameter estimate is significantly different from zero at the 1%, 5%, or 10% level, respectively.

| <i>Dependent Variable</i>       | B/M Ratio              |                        |
|---------------------------------|------------------------|------------------------|
|                                 | (1)                    | (2)                    |
| Size                            | 0.035***<br>(6.030)    | 0.108***<br>(13.749)   |
| Leverage                        | -1.373***<br>(-22.852) | -1.066***<br>(-19.421) |
| ROA                             | 0.226***<br>(19.277)   | 0.160***<br>(14.425)   |
| Cash Ratio                      | -0.110***<br>(-3.074)  | -0.163***<br>(-5.162)  |
| Sales Growth                    | -0.020***<br>(-4.691)  | -0.014***<br>(-3.496)  |
| Net Investment Rate             | 0.016**<br>(2.303)     | 0.012*<br>(1.822)      |
| R&D Investment                  | -0.193***<br>(-3.140)  | -0.092<br>(-1.602)     |
| Log Firm Age                    | -0.021**<br>(-2.064)   | -0.039***<br>(-3.740)  |
| Constant                        | 1.032**<br>(2.434)     | 0.433***<br>(11.599)   |
| Observations                    | 124,713                | 139,754                |
| Year Fixed Effect               | YES                    | YES                    |
| Industry and State Fixed Effect | YES                    | NO                     |
| Firm Fixed effect               | NO                     | YES                    |
| Adjusted R-squared              | 0.111                  | 0.0740                 |
| Number of firms                 | 15,583                 | 15,583                 |

**Table 4.8****The B/M Ratio Effect on WFH Policies: Moderating Role of Financial Constraints**

This table examines the B/M ratio's effect on the Flex Index Score using sub-samples of firms by various measures of financial constraints: *Cash Ratio*, *KZ score*, *Z score*, and *Leverage*. Firms are divided into subsamples based on their values for these variables being above or below the respective median values for firms in the same industry (SIC 2 digit) and in each year. At the bottom of the table, the economic impact of the B/M ratio, measured by standard deviations, is also reported. All regressions include the same control variables, industry, and state fixed effects as in Table 4.2 Panel A. All variables are defined in Appendix Table D. Standard errors are corrected for heteroscedasticity, and t-statistics are reported in brackets. \*\*\*, \*\*, \* indicate that the parameter estimate is significantly different from zero at the 1%, 5%, or 10% level, respectively.

| <i>Dependent Variable</i>    | Flex Index Score - OLS Regressions |                     |                      |                     |                       |                     |                      |                     |
|------------------------------|------------------------------------|---------------------|----------------------|---------------------|-----------------------|---------------------|----------------------|---------------------|
|                              | (1)                                | (2)                 | (3)                  | (4)                 | (5)                   | (6)                 | (7)                  | (8)                 |
|                              | High Fin Constraints               | Low Fin Constraints | High Fin Constraints | Low Fin Constraints | High Fin Constraints  | Low Fin Constraints | High Fin Constraints | Low Fin Constraints |
| <i>Subsampling based on:</i> | Low Cash Ratio                     | High Cash Ratio     | High KZ score        | Lower KZ score      | Lower Z score         | Higher Z score      | High Leverage        | Low Leverage        |
| B/M Ratio                    | -0.275***<br>(-3.309)              | -0.022<br>(-0.138)  | -0.240**<br>(-2.458) | -0.146<br>(-0.883)  | -0.232***<br>(-3.058) | -0.157<br>(-0.762)  | -0.220**<br>(-2.005) | -0.118<br>(-1.006)  |
| Constant                     | 0.506**<br>(2.220)                 | 0.158<br>(0.364)    | 0.883**<br>(2.390)   | -0.073<br>(-0.180)  | 1.028***<br>(2.985)   | -0.307<br>(-0.705)  | -0.016<br>(-0.037)   | -0.127<br>(-0.334)  |
| Firm Characteristics         | YES                                | YES                 | YES                  | YES                 | YES                   | YES                 | YES                  | YES                 |
| Observations                 | 199                                | 167                 | 152                  | 181                 | 159                   | 191                 | 167                  | 199                 |
| Industry FE                  | YES                                | YES                 | YES                  | YES                 | YES                   | YES                 | YES                  | YES                 |
| State FE                     | YES                                | YES                 | YES                  | YES                 | YES                   | YES                 | YES                  | YES                 |
| Adjusted R-squared           | 0.355                              | 0.102               | 0.237                | 0.167               | 0.280                 | 0.167               | 0.176                | 0.234               |
| <i>Economic impact B/M</i>   |                                    |                     |                      |                     |                       |                     |                      |                     |
| Coefficients B/M             | -0.275                             | -0.022              | -0.240               | -0.146              | -0.232                | -0.157              | -0.220               | -0.118              |
| SD (B/M)                     | 0.30                               | 0.27                | 0.35                 | 0.25                | 0.36                  | 0.23                | 0.31                 | 0.29                |
| SD (Dependent Var)           | 0.31                               | 0.34                | 0.33                 | 0.32                | 0.32                  | 0.32                | 0.32                 | 0.33                |
| SD-impact (B/M)              | -0.27                              | -0.02               | -0.25                | -0.11               | -0.26                 | -0.11               | -0.21                | -0.10               |

**Table 4.9**

**The B/M Ratio Effect on WFH Policies: Moderating Role of Innovation**

This table examines the B/M ratio’s effect on the Flex Index Score using sub-samples of firms by innovation and digitalization factors. In columns (1) and (2) the firms are split into two subsamples based on the level of digital resilience from previous years. In columns (3) and (4) firms are split into two subsamples based on the previous year’s intangible capital. In columns (5) and (6) firms are split into two subsamples based on whether the firm is in a knowledge-based industry or not. In columns (7) and (8) firms are split into two subsamples based on the previous year’s number of patents. *Digital resilience* is taken from Bai et al. (2021) work-from-home index. *Intangible capital* is defined as the sum of R&D investment and 30% SG&A expenses. *Knowledge-based industries* include pharmaceuticals and software sectors, classified based on SIC codes starting with 73, falling within the range of 2833-2836, or specifically classified as 8731. The number of patents (*Num Patents*) is obtained from the KPSS database. Apart from the knowledge-based industries split, in all other subsamples firms are divided into high and low groups, i.e. above and below median values of the variable of interest for the same industry (SIC 2 digit) and in each year. At the bottom of the table, the economic impact of the B/M ratio, measured by standard deviations, is also reported. All regressions include the same control variables, industry, and state fixed effects as in Table 4.2 Panel A. All variables are defined in Appendix Table D. Standard errors are corrected for heteroscedasticity, and t-statistics are reported in brackets. \*\*\*, \*\*, \* indicate that the parameter estimate is significantly different from zero at the 1%, 5%, or 10% level, respectively.

| <i>Dependent Variable</i>        | Flex Index Score - OLS Regressions |                         |                        |                         |                            |                      |                      |                      |
|----------------------------------|------------------------------------|-------------------------|------------------------|-------------------------|----------------------------|----------------------|----------------------|----------------------|
|                                  | (1)                                | (2)                     | (3)                    | (4)                     | (5)                        | (6)                  | (7)                  | (8)                  |
| <i>Subsampling based on:</i>     | Low Digital Resilience             | High Digital Resilience | Low Intangible Capital | High Intangible Capital | Knowledge-based industries | Other industries     | High Num Patents     | Low Num Patents      |
| B/M Ratio                        | -0.196<br>(-1.623)                 | -0.354*<br>(-1.801)     | -0.203*<br>(-1.906)    | -0.345***<br>(-2.848)   | -0.356**<br>(-2.102)       | -0.185**<br>(-2.219) | -0.251**<br>(-2.076) | -0.215**<br>(-2.403) |
| Constant                         | 0.040<br>(0.133)                   | 0.796<br>(1.227)        | -0.588<br>(-1.367)     | 0.788**<br>(2.172)      | 0.821*<br>(1.806)          | -0.003<br>(-0.012)   | 0.253<br>(0.675)     | 0.001<br>(0.005)     |
| Firm Characteristics             | YES                                | YES                     | YES                    | YES                     | YES                        | YES                  | YES                  | YES                  |
| Observations                     | 154                                | 120                     | 193                    | 165                     | 82                         | 284                  | 124                  | 242                  |
| Industry FE                      | YES                                | YES                     | YES                    | YES                     | YES                        | YES                  | YES                  | YES                  |
| State FE                         | YES                                | YES                     | YES                    | YES                     | YES                        | YES                  | YES                  | YES                  |
| Adjusted R-squared               | 0.353                              | 0.240                   | 0.281                  | 0.213                   | 0.215                      | 0.141                | 0.124                | 0.200                |
| <i>Economic impact B/M Ratio</i> |                                    |                         |                        |                         |                            |                      |                      |                      |
| Coefficients B/M Ratio           | -0.196                             | -0.354                  | -0.203                 | -0.345                  | -0.356                     | -0.185               | -0.251               | -0.215               |
| SD (B/M Ratio)                   | 0.30                               | 0.27                    | 0.32                   | 0.28                    | 0.27                       | 0.3                  | 0.28                 | 0.31                 |
| SD (Dependent Var)               | 0.32                               | 0.31                    | 0.30                   | 0.34                    | 0.30                       | 0.32                 | 0.29                 | 0.34                 |
| SD-impact (B/M Ratio)            | -0.18                              | -0.31                   | -0.22                  | -0.28                   | -0.32                      | -0.17                | -0.24                | -0.20                |

## Chapter 5

### Conclusions

#### 5.1 Summary of the Findings and Contributions of the Thesis

This thesis is composed of three research pieces. The study in Chapter 2 unveils that companies with higher CSR ratings exhibit superior stock returns compared to their counterparts during periods of higher political uncertainty connected to local electoral cycles. This observation aligns with the resilience perspective of CSR, asserting that investing in social capital can foster the development of robust relationships with stakeholders. Ultimately, such relationships can yield favourable outcomes in times of adversity and higher uncertainty. This result implies that participating and investing in CSR programs may be driven by an objective of enhancing corporate stability, viewed through the lens of a resilient corporate performance.

The study in Chapter 3 establishes that the culture of the target firm can influence the culture of the merged firm. If the M&A event results in a change in shareholder structure or in retainment of valuable employees from the target firm, the merged firm will converge more towards the target firm's culture. This result highlights an important aspect of corporate culture, that it is not solely determined by corporate executives, but also influenced by shareholders and stakeholders.

In Chapter 4 we study how the adoption of work-from-home arrangements is influenced by firm characteristics, including cultural attributes of the firm and the state where it is headquartered. We find that firms with a lower book-to-market ratio (possibly overvalued) and those with a more prominent innovative culture show a greater inclination towards implementing WFH, in particular under more stringent financial constraints. From a

corporate strategy perspective, WFH allows overvalued firms, often on a high-growth trajectory, to reduce fixed costs, thereby gaining increased financial flexibility. Innovative firms are also more likely to incorporate innovative human resource policies, such as adoption of WFH.

Notably, all three empirical studies underscore the significance of employees' roles. Chapter 2 reveals that the higher returns in time of electoral uncertainty can be attributed to the enhanced relationship between firms and their internal stakeholders, particularly in terms of employee relations and diversity. Chapter 3 establishes that robust employee relations in the target firm are more likely to prompt the acquirer firm to change its culture and converge towards the target's culture. Chapter 4 unveils some important mechanisms behind firms' decision to adopt WFH for employees soon after the COVID-19 pandemic period.

Table 5.1 summarises the sample periods, main variables, alternative measurements, databases, endogeneity tests, and additional tests across the three studies in chapters 2, 3, and 4. All studies are based on sample of US firms. For Chapters 2 and 3 the sample period spans from 1992-2019 and from 2003-2016, respectively. Chapter 4 focuses only on the post-COVID period, looking at a sample of US firms' WFH policies in 2022. To address endogeneity concerns, we employ various techniques: instrumental variables, event studies, propensity score matching (PSM), and Heckman tests. In each study additional tests are conducted to rule out alternative explanations or to explore affine research questions to the main one. For example, in Chapter 2, we eliminate the possibility that CSR's influence on returns is due to post-election outcomes or firms' political donations. In Chapter 3, we show that wider cultural differences (hence cultural diversity) between acquirer and target firms increases the longer-term operative returns of the combined firm after merger. In Chapter 4, beyond the influence of financial characteristics, such as the B/M ratio, and corporate culture on WFH we rule out any significant impact of CEO characteristics and corporate governance variables.

Taken together, the results presented in this thesis make several important contributions to the literature on CSR, corporate culture, employees' role, and working policies. Both Chapters 2 and 3 affirm the value of investing in CSR and the importance of adjustments in the corporate culture for maximization of shareholder value. In particular, Chapter 3 also contributes to the M&A literature, showing that wider cultural distance between the

acquirer and target can induce synergy gains in the long run, rather than being a negative sign of integration cost loss. Our findings provide further evidence on the value-enhancing perspective of investing in CSR performance and of cultural diversity. Additionally, the thesis contributes towards the idea that good employee relations can enhance firm stability and are highly valued by firms and that employees, among all stakeholders, can influencing corporate decisions. Chapter 4 contributes to understanding some key features of the world of work today and the reasons for firms to choose work-from-home after the COVID-19 pandemic. It confirms that beyond the industry-specific attributes, work-from-home and work-from-office requirements are influenced by firm's financial characteristics and cultural environment.

## 5.2 Research Impact

The findings of this thesis also have important implications for employees, firms, policymakers and regulators.

First, by emphasizing the favourable impact of CSR in alleviating the adverse effects of political uncertainty on stock returns, our research can motivate firms to invest more substantially in CSR initiatives. This can result in positive social and environmental outcomes, while assisting firms to develop more resilience to external shocks. It can also heighten awareness among policymakers and regulators on the significance of CSR and its potential to bolster economic and social stability. Armed with this knowledge, policymakers can devise policies that incentivize firms to participate in socially responsible practices and promote sustainable economic growth. In summary, our research can contribute to fostering a more sustainable and stable business environment, ultimately benefiting both companies and the society at large.

Secondly, by showing an acquirer's culture convergence to the target following a merger, our research can motivate firms to be more strategic in terms of selecting the target firm and managing the post-merger influences. This insight also provides valuable knowledge for executives, policymakers, and regulators, helping them understand the benefits of cultural diversity and the formulation of purposeful strategies and policies to foster a conducive environment for successful mergers.

Third, by showing how novel employee's flexible working policies are linked to the firms' financial status and cultural environment, our research offers guidance for current and

potential employees and competing employers to comprehend the ongoing changes in corporate WFH policies. By emphasizing that corporate WFH may be driven by firm interests (innovation, mitigation of financial constraints, beyond the strengthening of employee relations), this research can also inspire regulators and policymakers to monitor the relative changes and be ready to intervene to ensure labour rights protection.

#### 5.3 Suggestions for Future Research

The study around corporate culture has still much room left for further empirical research, thanks also to increasing availability of corporate cultural data. For example, it would be important to explore further: i) the corporate cultural influence of various types of institutional and individual investors; ii) the impact of firms' political positions on the development of cultural values, such as hierarchy, quality, flexibility, safety, etc.; iii) in an M&A context, the possibility of cultural exchanges, cultural learning, and convergence in announced bids followed by unsuccessful mergers.

Regarding the study of CSR impact on corporate performance, we believe that it would be interesting to analyse whether, when, and under which circumstances firms with higher CSR investments and performance may perform worse than competitors. In this way, the wider influence of CSR on returns could be more comprehensively understood.

Finally, with respect to quantitative research on work-from-home, we believe we are just at the starting point in this area. In this thesis we use for the first time a database of firms' choices around work-from-home, the Flex Index, which is now undertaking expansions over more years (it started in 2022, the year we use) and across countries. This will offer great opportunities to researchers to study the various impacts of work-from-home policies, and not just the determinants of their adoption.

**Tables for Chapter 5**

**Table 5.1**

**Overview of the Thesis by Chapter**

This table provides an overview of the three main empirical studies that constitute this thesis, including the sample time period, market, main variable, alternative measurement, database, alternative database, endogeneity issue solutions, sub-sample analysis and additional tests.

|                             | <b>Chapter 2</b>  | <b>Chapter 3</b>  | <b>Chapter 4</b>  |
|-----------------------------|---|---|---|
| Time Period/Market          | 1992-2019 in the US   | 2003-2016 in the US   | Post Covid-19 Period: 2022 in the US                                  |
| Main variable               | CSR (Cumulative across 5 categories)  | Culture gap between acquirer and target                     | Flexible Index Score  |
| Alternative measurement     | CSR (Cumulative across 6 or 7 categories)                                   | Euclidean distance between acquirer and target's culture    | Minimum office Days per Week  |
| Database                    | MSCI ESG  | Corporate cultural scores by Li, Mai, Shen, Yan (RFS, 2021) | Flex Index  |
| Alternative database        | Bloomberg ESG   | N/A   | WFH index based on digital reliability                                |
| Endogeneity issue solutions | Pre-set political elections as a series of exogenous event studies; IV Test | M&A as an exogenous event                                   | PSM;<br>Heckman test  |
| Sub-sample analysis by      | Close elections;<br>Stakeholder relations' scores;<br>Systematic risk       | Stock Swap deals;<br>Employee relations' scores             | Financial Constraints;<br>Innovation;<br>Digitalisation               |
| Additional tests            | Election results;<br>Political connection                                   | Short-term and long-term returns                            | CEO's characteristics;<br>Corporate governance;<br>Corporate cultures |

# Appendix

**Table A Variable Definitions for Chapter 2**

This table reports variable definitions and corresponding data sources. CRSP refers to the Centre for Research in Security Prices, BEA refers to the Bureau of Economic Analysis (bea.gov), BLS refers to the Bureau of Labor Statistics (bls.gov) and FEC refers to the U.S. Federal Election Commission.

| Variable                       | Definition   | Source    |
|--------------------------------|--|-----------|
| <b>Independent variables</b>   |  |           |
| Pre-election Returns (60 days) | Raw stock returns computed over 60 days before an election   | CRSP      |
| Pre-election Returns (90 days) | Raw stock returns computed over 90 days before an election   | CRSP      |
| <b>Dependent variables</b>     |  |           |
| CSR Score                      | CSR Score, which is the total net (strengths minus concerns) CSR score, is computed using six main categories (environment, employees, human rights, community and diversity, and product). To compute the total net CSR measure, we first compute the net CSR index within each of the categories. The net CSR index for each category is computed by taking the number of strengths identified for a given firm and dividing this by the maximum possible strengths in that category, and then subtracting the number of concerns identified for the firm divided by the maximum possible concerns; the net CSR score for each category ranges from -1 to +1. The total net CSR measure, CSR, is then computed as the sum of the net CSR indices for the six categories; it ranges from -6 to +6. CSR ratings are measured in the year before an election (Lins et al., 2017). | MSCI ESG  |
| <b>Control variables</b>       |  |           |
| Market Capitalization          | Total assets (\$ million) (Brogaard et al., 2020)  | Compustat |
| Market Cap                     | Logarithmic value of total assets (Brogaard et al., 2020)  | Compustat |
| Long-Term Debt                 | Long-term debt divided by assets (Brogaard et al., 2020)   | Compustat |

## Appendix

|  |   |  |
|--|---|--|
| Return on Assets                         | Net income scaled by total assets (Brogaard et al., 2020)   | Compustat  |
| Book-to-Market                           | Book to Market ratio of equity value (Brogaard et al., 2020)  | Compustat  |
| Volatility                               | Annual volatility of the firm's monthly stock returns (Brogaard et al., 2020)   | CRSP   |
| GDP                                      | Annual percentage change in state gross domestic product (Jens, 2017)   | BEA  |
| Unemployment Rate                        | Quarterly state unemployment rate (Jens, 2017)  | BLS  |
| <b>Other variables</b>                   |   |  |
| Average CSR of geographically near firms | The average CSR of geographically near firms to a given firm is calculated as the mean value of all qualified firms headquartered in the same Metropolitan Statistical Area (MSA) excluding that firm. To select qualified firms, we first eliminate all firms that are in the same Fama–French 12 industry classification to remove direct broad horizontal links. We also eliminate all firms that are vertically related to the given firm based on the input–output tables obtained from the Bureau of Economic Analysis (BEA) and the customer segment files from Compustat. Lastly, to remove indirect links occurring through agglomeration economies in that firm's MSA (Bustamante and Frésard 2021), we eliminate neighbouring firms when they and the focal firm have the same product market peers. Product market peers are identified by TNIC code. | US Census & BEA & Compustat & Hoberg and Phillips (2016) |
| CSR score (5 elements)                   | CSR Score, which is the total net (strengths minus concerns) CSR score, is computed using five main categories (environment, employees, human rights, community, and diversity). This variable is measured in the one year before an election (Lins et al., 2017).  | MSCI ESG   |
| CSR score (7 elements)                   | CSR Score, which is the total net (strengths minus concerns) CSR score, is computed using five main categories (environment, employees, human rights, community, and diversity) plus product and corporate governance categories. This variable is measured in the year before an election (Lins et al., 2017).   | MSCI ESG   |
| Bloomberg_ESG                            | Bloomberg ESG disclosure score  | Bloomberg  |
| Gubernatorial election                   | Binary variable equal to one if a gubernatorial election occurred in a given state in a given year (Jens, 2017).  | Congressional Quarterly (CQ) Press                       |
| Termlim                                  | Binary variable equal to one if the incumbent governor is prevented from seeking re-election by term limits (Jens, 2017)  | Hand collect   |
| Votediff                                 | Difference between the percentage of votes obtained by the first- and second-place candidates (Jens, 2017)  | CQ Press   |

|  |  |                                   |
|--|--|-----------------------------------|
| Close_5%                               | Binary variable equal to one if the vote difference is below 5%, and zero otherwise  | CQ Press                          |
| Predictable_5%                         | Binary variable equal to one if the vote difference is above 5%, and zero otherwise  | CQ Press                          |
| Close_Quartile                         | Binary variable equal to one if the vote differential for an election is in the lowest sample quartile of vote differentials, and zero otherwise   | Julio and Yook (2012)             |
| Predictable_Quartile                   | Binary variable equal to one if the vote differential for an election is not in the lowest sample quartile of vote differentials, and zero otherwise   | Julio and Yook (2012)             |
| Rep win                                | Binary variable equal to one if the Republican party wins the election, and zero otherwise   | CQ Press                          |
| Dem win                                | Binary variable equal to one if the Democratic party wins the election, and zero otherwise   | CQ Press                          |
| Donors                                 | Binary variable equal to one if the Political Action Committees (PAC) of a firm donated money to support a candidate or a party during the four years prior to a gubernatorial election, and zero otherwise  | Federal Election Commission (FEC) |
| Non-donors                             | Binary variable equal to one if the Political Action Committee (PAC) of a firm did not donate money to support a candidate or a party during the four years prior to a gubernatorial election, and zero otherwise  | FEC                               |
| Total donation amount (\$ten million)  | The amount that the PAC of a firm donated to support a candidate or a party during the four years prior to a gubernatorial election  | FEC                               |
| Pre-election volatility *100 (60 days) | The volatility of firm's 60 days stock returns before an election multiplied by100   | CRSP                              |
| Pre-election volatility *100 (90 days) | The volatility of firm's 90 days stock returns before an election multiplied by100   | CRSP                              |
| Assets                                 | Natural log of total assets (\$ million), lagged by one year (Becchetti et al., 2015 and Harjoto et al., 2015)   | Compustat                         |
| Capital Expenditure                    | Capital expenditure expense divided by total net sales, lagged by one year (Harjoto et al., 2015)  | Compustat                         |
| Growth Rate                            | Total net sales growth rate, lagged by one year (Harjoto et al., 2015)   | Compustat                         |
| Stakeholder Strength                   | Stakeholder Strength = - Stakeholder risk  | MSCI ESG                          |
| Stakeholder Risk                       | Stakeholder risk as measured by Becchetti et al. (2015) in 2010 as a relative sum of the following MSCI ESG items: COM-con-A, COM-con-B, COM-con-C, COM-con-D, COM-con-X, DIV-con-A, DIV-con-X, EMP-con-B, EMP-con-X, ENV-con-X, HUM-con-D, HUM-con-F, HUM-con-G, HUM-con-X, PRO-con-A, PRO-con-D, and PRO-con-E, PRO-con-X. The relative sum is computed as the sum of each of the above concerns reported by a company in each domain divided by the total number of concerns. As some new items were added to the KLD database after the year 2010, we also add some of them to measure Stakeholder risk: EMP_con_F (Supply chain concerns), EMP_con_G (Child labour), EMP_con_H (Labour management relations), HUM-con-K | MSCI ESG                          |

Appendix

---

|   |  |                            |
|---|--|----------------------------|
|   | (Human rights violations), and PRO-con-F (Customer relations) and removed COM-con-C as it has been combined with HUM-con-F.  |                            |
| Other Items (from Stakeholder Strength) | A relative sum of the elements of concerns excluded in <i>Stakeholder Risk*-1</i> . The relative sum is computed as the sum of each of the above concerns reported by a company in each domain divided by the total number of the above concerns.                      | MSCI ESG                   |
| External stakeholders                   | External stakeholders is the total net (strengths minus concerns) CSR score computed using only external stakeholder-related categories (environment, community, and humanity). This variable is measured the one year before an election (Lins et al., 2017).         | MSCI ESG                   |
| Internal stakeholders                   | External stakeholders is the total net (strengths minus concerns) CSR score computed using only internal stakeholder-related categories (employees and diversity) plus product category. This variable is measured in the year before an election (Lins et al., 2017). | MSCI ESG                   |
| Firm age                                | Number of years the firm appears in Compustat.   | Compustat                  |
| Competition                             | Herfindahl/concentration measure, as calculated in Hoberg and Phillips (2016)  | Hoberg and Phillips (2016) |
| Beta (systematic risk)                  | The <i>beta</i> coefficient of the market model using monthly stock returns of the previous twenty-four months.  | CRSP                       |

---

**Table B.1****Pre-Election Returns and CSR Using Double-Cluster Standard Errors by State and Year**

This table presents OLS regression estimates of pre-election returns on the CSR score and additional control variables. This table presents in brackets t-statistics based on double-clustered standard errors by state and year, instead of only by firm as in the baseline regression. *Pre-election returns* are measured as 60 days of accumulated raw returns (column 1) and 90 days accumulated raw returns (column 2) before a gubernatorial election. *CSR score*, which is the net (strengths minus concerns) CSR score, is computed using six main categories, measured at the end of the year before a gubernatorial election. The control variables and returns are winsorized at the 1<sup>st</sup> and 99<sup>th</sup> percentiles. Industry (two-digit SIC code) and year fixed effects are controlled in all regressions. All analysis variables are defined in Appendix table A. t-statistics are reported in brackets. \*\*\*, \*\*, \* indicate that the parameter estimate is significantly different from zero at the 1%, 5%, or 10% level, respectively.

|                                 | Return (Pre-gubernatorial election) |                       |
|---------------------------------|-------------------------------------|-----------------------|
|                                 | (1)<br>60 days                      | (2)<br>90 days        |
| CSR score                       | 0.009***<br>(2.774)                 | 0.010**<br>(2.421)    |
| Market Cap                      | -0.002<br>(-1.555)                  | -0.005***<br>(-2.999) |
| Long-Term Debt                  | -0.012<br>(-1.228)                  | -0.012<br>(-1.027)    |
| Book to Market                  | -0.003<br>(-0.476)                  | -0.014*<br>(-1.889)   |
| Return on Assets                | 0.060***<br>(3.867)                 | 0.029<br>(1.617)      |
| Volatility                      | 0.195***<br>(6.014)                 | 0.073*<br>(1.932)     |
| GDP                             | -0.180<br>(-1.357)                  | -0.362**<br>(-2.353)  |
| Unemployment rate               | 0.357<br>(1.379)                    | 0.185<br>(0.618)      |
| Constant                        | 0.017<br>(0.356)                    | 0.095*<br>(1.747)     |
| Observations                    | 6,779                               | 6,779                 |
| Year and Industry Fixed Effects | Yes                                 | Yes                   |
| Adjusted R-squared              | 0.274                               | 0.190                 |

**Table B.2****Pre-Election Returns and CSR with Extra Control of Political Donation**

This table presents OLS regression estimates of pre-election returns on the CSR score and additional control variables. Unlike the baseline regression in Table 2.2, this regression also includes a control for the *Total Donation Amount*, which is the amount that a firm's PAC donated to support a candidate or party during the four years preceding a gubernatorial election. This table presents in brackets t-statistics based on double-clustered standard errors by state and year, instead of only by firm as in the baseline regression. *Pre-election returns* are measured as 60 days of accumulated raw returns (column 1) and 90 days accumulated raw returns (column 2) before a gubernatorial election. *CSR score*, which is the net (strengths minus concerns) CSR score, is computed using six main categories, measured at the end of the year before a gubernatorial election. The control variables and returns are winsorized at the 1<sup>st</sup> and 99<sup>th</sup> percentiles. Industry (two-digit SIC code) and year fixed effects are controlled in all regressions. All analysis variables are defined in Appendix Table A.

t-statistics are reported in brackets. \*\*\*, \*\*, \* indicate that the parameter estimate is significantly different from zero at the 1%, 5%, or 10% level, respectively.

|                                       | Return (Pre-gubernatorial election) |                       |
|---------------------------------------|-------------------------------------|-----------------------|
|                                       | (1)                                 | (2)                   |
|                                       | 60 days                             | 90 days               |
| CSR score                             | 0.009***<br>[2.830]                 | 0.010***<br>[2.622]   |
| Total Donation Amount (\$ten million) | -0.003**<br>[-2.014]                | -0.006***<br>[-3.557] |
| Constant                              | 0.071*<br>[1.803]                   | 0.106**<br>[2.323]    |
| Observations                          | 6,781                               | 6,781                 |
| Firm Characteristic Controls          | Yes                                 | Yes                   |
| Economic Controls                     | Yes                                 | Yes                   |
| Year and Industry Fixed Effects       | Yes                                 | Yes                   |
| Adjusted R-squared                    | 0.274                               | 0.188                 |

**Table C Variable Definitions for Chapter 3**

This table reports variable definitions and corresponding data sources. CRSP refers to the Centre for Research in Security Prices, BEA refers to the Bureau of Economic Analysis (bea.gov), BLS refers to the Bureau of Labor Statistics (bls.gov) and FEC refers to the U.S. Federal Election Commission.

| Variable   | Definition   | Source                    |
|--|--|---------------------------|
| <b>Independent variables</b>                             |  |                           |
| $\Delta$ Cultural Change [-1 to +j]                      | The change in the acquirer's cultural score from one year before the deal's announcement to +j years following completion (j = 1, 2, 3).   | Li, Mai, Shen, Yan (2021) |
| $\Delta$ Cultural Distance [-1 to +j]                    | The distance in acquirer's cultural score from one year before the deal's announcement to +j years following completion (j = 1, 2, 3).   | Li, Mai, Shen, Yan (2021) |
| <b>Dependent variables</b>                               |  |                           |
| Cultural gap   | Difference between the pre-merger corporate cultural score of the target and the pre-merger cultural score of the acquirer. Corporate culture is computed using the cultural score of each firm during the year prior to the announcement of the deal. | Li, Mai, Shen, Yan (2021) |
| <b>Control variables</b>                                 |  |                           |
| Size (Acq.); Size (Tar.)                                 | All the control variables are lagged (e.g., Golubov et al., 2020)<br>Acquirer (Target) logarithmic value of total assets (\$ million)  | Compustat                 |
| Leverage (Acq.); Leverage (Tar.)                         | Acquirer (Target) total financial debt (long-term debt plus debt in current liabilities) divided by the book value of total assets for the fiscal year   | Compustat                 |
| Market to book (Acq.); Market to book (Tar.)             | Acquirer (Target) market capitalization divided by the book value of equity  | Compustat                 |
| Profit (Acq.); Profit (Tar.)                             | Acquirer (Target) income before extraordinary items divided by total assets  | Compustat                 |
| Sales growth (Acq.); Sales growth (Tar.)                 | Acquirer (Target) % change in sales  | Compustat                 |
| Cash flows-to-equity (Acq.); Cash flows-to-equity (Tar.) | Acquirer (Target) Income before extraordinary items plus depreciation minus dividends on common and preferred stock divided by the number of shares outstanding times the closing stock price  | Compustat                 |
| $\Delta$ Earnings (-1 to +j)                             | Change in acquirer's earnings per share from one year before the deal's announcement to j years following completion (j = 1, 2, 3), scaled by book value per share year before the deal's announcement   | Compustat                 |

---

|  |   |                           |
|--|---|---------------------------|
| $\Delta$ Growth opportunities (-1 to +j) | Change in the acquirer's market-to-book ratio one year before the deal's announcement to j years following completion (j = 1, 2, 3)   | Compustat                 |
| <b>Other variables</b>                   |   |                           |
| Integrity gap                            | Difference between the pre-merger cultural score for integrity of the target and the pre-merger cultural score for integrity of the acquirer. The cultural score for integrity is computed one year before the announcement of the deal.    | Li, Mai, Shen, Yan (2021) |
| Teamwork gap                             | Difference between the pre-merger cultural for teamwork of the target and the pre-merger cultural score for teamwork of the acquirer. The cultural score for teamwork is computed one year before the announcement of the deal.             | Li, Mai, Shen, Yan (2021) |
| Innovation gap                           | Difference between the pre-merger cultural score for innovation of the target and the pre-merger cultural score for innovation of the acquirer. The cultural score for innovation is computed one year before the announcement of the deal. | Li, Mai, Shen, Yan (2021) |
| Respect gap                              | Difference between the pre-merger cultural score for respect of the target and the pre-merger cultural score for respect of the acquirer. The cultural score for respect is computed one year before the announcement of the deal.          | Li, Mai, Shen, Yan (2021) |
| Quality gap                              | Difference between the pre-merger cultural score for quality of the target and the pre-merger cultural score for quality of the acquirer. The cultural score for quality is computed one year before the announcement of the deal.          | Li, Mai, Shen, Yan (2021) |
| $\Delta$ Integrity [-1 to +3]            | Difference in acquirer's cultural score for integrity from one year before the deal's announcement to three years following completion.   | Li, Mai, Shen, Yan (2021) |
| $\Delta$ Teamwork [-1 to +3]             | Difference in acquirer's cultural score for teamwork from one year before the deal's announcement to three years following completion.  | Li, Mai, Shen, Yan (2021) |
| $\Delta$ Innovation [-1 to +3]           | Difference in acquirer's cultural score for innovation from one year before the deal's announcement to three years following completion.  | Li, Mai, Shen, Yan (2021) |
| $\Delta$ Respect [-1 to +3]              | Difference in acquirer's cultural score for respect from one year before the deal's announcement to three years following completion.   | Li, Mai, Shen, Yan (2021) |
| $\Delta$ Quality [-1 to +3]              | Difference in acquirer's cultural score for quality from one year before the deal's announcement to three years following completion.   | Li, Mai, Shen, Yan (2021) |

---

|                                |   |                     |
|--------------------------------|---|---------------------|
| All stock Dummy                | Indicator variable taking the value of one for pure stock swaps and zero otherwise.   | Thomson Reuters SDC |
| Percentage of Stock            | Percentage of deal value paid for with acquirer's stock.  | Thomson Reuters SDC |
| Employee Relation Score (Tar.) | In the "Employee Relations" dimension, we calculate the sum of the number of strengths the target has achieved divided by the total number of available strengths each year. We use the same method to calculate the weaknesses. Then, use se the net score, which is equal to strengths minus weaknesses.  | MSCI ESG            |
| Relative size                  | Ratio of the target firm's market value of equity to the sum of acquirer's and target's market value of equity one year prior to the acquisition  | Compustat           |
| CAR (-1, +1) Acq.              | Cumulative abnormal returns of the bidding firm's stock in the 3-day event window (-1, +1) where 0 is the announcement day. The returns are calculated using the market model with the market model parameters estimated over the period starting 240 days and ending 41 days prior to the announcement. The Market Index is calculated by using all stocks in each country for all firms in the Compustat universe.    | Compustat           |
| CAR (-3, +3) Acq               | Cumulative abnormal returns of the bidding firm's stock in the 7-day event window (-3, +3) where 0 is the announcement day. The returns are calculated using the market model with the market model parameters estimated over the period starting 240 days and ending 41 days prior to the announcement. The Market Index is calculated by using all stocks in each country for all firms in the Compustat universe.    | Compustat           |
| CAR (-1, +1) Tar.              | Cumulative abnormal return of the target firm's stock in the 3-day event window (-1, +1) where 0 is the deal announcement day. The returns are calculated using the market model with the market model parameters estimated over the period starting 240 days and ending 41 days prior to the announcement. The Market Index is calculated by using all stocks in each country for all firms in the Compustat universe. | Compustat           |
| CAR (-3, +3) Tar.              | Cumulative abnormal return of the target firm's stock in the 7-day event window (-3, +3) where 0 is the announcement day. The returns are calculated using the market model with the market model parameters estimated over the period starting 240 days and ending 41 days prior to the announcement. The Market Index is calculated by using all stocks in each country for all firms the Compustat universe.         | Compustat           |

---

|   |  |           |
|---|--|-----------|
| $\Delta$ Industry-adjusted ROA [-1 to +1] | The change in the acquirer's return on assets, which has been adjusted for industry-specific factors, from one year before the deal's announcement to one year following deal completion.        | Compustat |
| $\Delta$ Industry-adjusted ROA [-1 to +3] | The change in the acquirer's return on assets, which has been adjusted for industry-specific factors, from one year before the deal's announcement to three years following the deal completion. | Compustat |

---

## Table D Variable Definitions for Chapter 4

This table reports variable definitions and corresponding data sources.

| <i>Dependent Variables</i> | Definition   | Source     |
|----------------------------|--|------------|
| Flex Index Score           | <p>Flex Index Score is a ranking indicator of workplace flexibility. It assesses a firm's approach to workplace flexibility with the following values:</p> <ul style="list-style-type: none"> <li>- Fully Flexible (Value = 1): Firms categorized as "Fully Flexible" can fall into one of two situations:<br/>Fully Remote: Companies in this category do not maintain physical office spaces, and all employees work remotely.<br/>Employee's Choice: Employees have the autonomy to decide when or if they work from an office.</li> <li>- Structured Hybrid (Value = 0.5): Firms classified as "Structured Hybrid" have specific expectations and guidelines regarding when employees are required to work from an office. This may include minimum days, specific days, or a minimum percentage of time spent in the office.</li> <li>- Full Time in Office (Value = 0): Companies categorized as "Full Time in Office" mandate that employees work exclusively from the office without the option of remote work.</li> </ul> | Flex index |
| Min Office Days per Week   | Min Office Days per Week represents the minimum number of days that companies require employees to work from the office each week. For example, this might be specified as "two days per week."  | Flex Index |
| <i>Firm's financials</i>   |  |            |
| Size                       | Calculated the value by multiplying the number of outstanding shares with the closing price on the transaction date, and then take the natural logarithm.  | Compustat  |
| Leverage                   | Long-term debt divided by assets.  | Compustat  |
| B/M Ratio                  | Net income scaled by total assets.   | Compustat  |
| ROA                        | Net income scaled by total assets.   | Compustat  |
| Cash Ratio                 | Cash balances scaled by total assets.  | Compustat  |
| Sales Growth               | Percentage change in fiscal year-end sales.  | Compustat  |

---

*CEO's characteristics controls:*

---

|                           |   |                                 |
|---------------------------|---|---------------------------------|
| Log CEO Age               | The natural log of CEO age.   | ExecuComp                       |
| Woman CEO                 | Dummy variable that equals one if the CEO is female, and zero otherwise.  | ExecuComp                       |
| Log CEO Tenure            | The natural log of CEO tenure in months.  | ExecuComp                       |
| CEO General Ability Index | First factor of applying principal components analysis to five proxies of general managerial ability: past Number of Positions, Number of Firms, Number of Industries, CEO Experience Dummy, and Conglomerate Experience Dummy. | Custódio et al. (2013) &BoardEx |
| CEO Compensation          | CEO Compensation is the sum of the following components: Salary, Bonus, Other Annual Benefits, Restricted Stock Grants, LTIP Payouts, All Other Compensation, and the Value of Option Grants                                    | ExecuComp                       |
| CEO Delta                 | The dollar change in the CEO's wealth for a 1% change in stock price.   | ExecuComp                       |
| CEO Vega                  | The dollar change in the executive's wealth for a 0.01 change in standard deviation of returns.   | ExecuComp                       |

---

*Corporate governance controls:*

---

|                   |  |         |
|-------------------|--|---------|
| Pct Board NED     | The proportion of non-executive directors among all the directors selected at the Annual Report Date.  | BoardEx |
| CEO Duality Dummy | A dummy variable that is equal to one if the CEO is also the Chairman and zero otherwise               | BoardEx |
| Pct Women Board   | The proportion of female directors among all the directors selected at the Annual Report Date selected | BoardEx |

---

*Cultural controls:*

---

|              |  |   |
|--------------|--|---|
| Putnam Trust | State-level score based on the survey question in Putnam (2000), "Agree that 'Most people can be trusted." | <a href="http://www.bowlingalone.com">http://www.bowlingalone.com</a> |
| Integrity    | Weighted-frequency count of integrity-related words in the QA section of earnings calls                    | Li, Mai, Shen, and Yan (2021)   |
| Teamwork     | Weighted-frequency count of teamwork-related words in the QA section of earnings calls                     | Li, Mai, Shen, and Yan (2021)   |
| Quality      | Weighted-frequency count of quality-related words in the QA section of earnings calls                      | Li, Mai, Shen, and Yan (2021)   |
| Respect      | Weighted-frequency count of respect-related words in the QA section of earnings calls                      | Li, Mai, Shen, and Yan (2021)   |
| Innovation   | Weighted-frequency count of innovation-related words in the QA section of earnings calls                   | Li, Mai, Shen, and Yan (2021)   |

---

---

*Alternative Measurement of Work from Home:*

|                    |   |                  |
|--------------------|---|------------------|
| Digital resilience | Firm-level work-from-home index, based on merging job postings data from Burning Glass Technologies (BGT) with the data of Dingel and Neiman (2020) | Bai et al (2021) |
|--------------------|---|------------------|

*Variables used in the channel testing:*

|                    |  |           |
|--------------------|--|-----------|
| Intangible capital | =R&D + (0.3 × SG&A).   | Compustat |
| R&D investment     | Research & development expense scaled by total assets. Missing values are set to zero.   | Compustat |
| Num. Patents       | The number of patents a firm has filed   | KPSS      |
| KZ index           | The Kaplan and Zingales (1997) financial constraint index, calculated as $-1.00 \times \text{CashFlowK} [(\text{IB} + \text{DP})/\text{lag}(\text{PPENT})] + 0.28 \times \text{Q} [(\text{AT} + \text{PRCC\_F} \times \text{CSHO} - \text{CEQ} - \text{TXDB})/\text{AT}] + 3.13 \times \text{DebtTotalCapital} [(\text{DLTT} + \text{DLC})/(\text{DLTT} + \text{DLC} + \text{SEQ})] - 39.36 \times \text{DividendsK} [(\text{DVC} + \text{DVP})/\text{lag}(\text{PPENT})] - 1.31 \times \text{CashK} [\text{CHE}/\text{lag}(\text{PPENT})]$ ; variables defined as in Compustat. | Compustat |
| Z-Score            | Altman (1968) Z-score, calculated as $\{3.3 \times [(\text{PI} + \text{XINT})/\text{AT}] + 1.2 \times (\text{WCAP}/\text{AT}) + (\text{SALE}/\text{AT}) + 1.4 \times (\text{RE}/\text{AT}) + 0.6 \times [(\text{CHSO} \times \text{PRCC\_F})/\text{LT}]\}$ ; variables defined as in Compustat.  | Compustat |
| Knowledge industry | According to Edmans (2011) and Shan and Tang (2023), the knowledge-based industry is defined as comprising the pharmaceuticals and software sectors. In this study, we classify a firm as a knowledge-based industry if its SIC code starts with 73, falls within the range of 2833-2836, or is specifically classified as 8731. If any of these conditions are met, the variable "knowledge-based industry" is assigned a value of 1; otherwise, it is assigned a value of 0.   | Compustat |

---

**Table E Correlation Matrix**

|                                | (1)      | (2)      | (3)      | (4)      | (5)      | (6)      | (7)      | (8)      | (9)      | (10)     |
|--------------------------------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|
| (1) Flex Level                 | 1        |          |          |          |          |          |          |          |          |          |
| (2) Min Office Days per Week   | -0.9552* | 1        |          |          |          |          |          |          |          |          |
| (3) Size                       | 0.0635   | -0.0773  | 1        |          |          |          |          |          |          |          |
| (4) Leverage                   | -0.1014  | 0.1148   | -0.1514* | 1        |          |          |          |          |          |          |
| (5) B/M Ratio                  | -0.2009* | 0.1897*  | -0.3379* | -0.2514* | 1        |          |          |          |          |          |
| (6) ROA                        | -0.0643  | 0.056    | 0.2783*  | -0.0531  | -0.1071  | 1        |          |          |          |          |
| (7) Cash Ratio                 | 0.2829*  | -0.2804* | 0.1532*  | -0.1900* | -0.2828* | -0.0949  | 1        |          |          |          |
| (8) Sales Growth               | -0.1232  | 0.1094   | 0.0428   | -0.0605  | -0.044   | -0.0048  | 0.1811*  | 1        |          |          |
| (9) Log CEO Age                | 0.0292   | -0.0182  | 0.0472   | -0.0578  | 0.0475   | 0.097    | -0.0198  | 0.0712   | 1        |          |
| (10) Woman CEO                 | -0.0129  | 0.0347   | -0.0706  | 0.0608   | -0.016   | 0.0051   | -0.078   | -0.0311  | -0.1509  | 1        |
| (11) Log CEO Tenure            | -0.0255  | -0.0147  | 0.1073   | -0.1749* | -0.1089  | 0.1044   | 0.1379   | 0.1977*  | 0.3752*  | -0.1251  |
| (12) CEO General Ability Index | -0.017   | 0.031    | 0.071    | 0.0889   | -0.084   | 0.0061   | 0.0265   | -0.002   | 0.0329   | -0.0282  |
| (13) CEO compensation          | -0.0059  | -0.0095  | 0.5300*  | -0.125   | -0.0191  | 0.0888   | 0.0551   | -0.0974  | -0.0031  | -0.0157  |
| (14) CEO Delta                 | 0.0005   | -0.0009  | 0.2889*  | -0.0127  | -0.1517  | 0.1436   | 0.2082*  | 0.0984   | 0.1417   | 0.0017   |
| (15) CEO Vega                  | -0.0088  | 0.0235   | 0.3735*  | 0.0528   | -0.0642  | 0.1187   | -0.0319  | 0.1031   | 0.1648*  | 0.0507   |
| (16) Pct Board NED             | -0.0736  | 0.0745   | -0.5998* | 0.1284   | 0.1367*  | -0.2490* | -0.0569  | 0.0872   | -0.0918  | 0.048    |
| (17) CEO Duality Dummy         | -0.0436  | -0.0048  | 0.1498   | -0.1006  | 0.0527   | -0.0559  | -0.0106  | 0.0021   | 0.1784*  | -0.0777  |
| (18) Pct Women Board           | 0.0243   | 0.0048   | 0.1286   | 0.0149   | -0.0016  | 0.073    | -0.0269  | -0.1453* | -0.064   | 0.2328*  |
| (19) Putnam State Trust        | 0.0938   | -0.0569  | -0.0024  | -0.0682  | 0.0112   | -0.0266  | 0.0002   | -0.0999  | -0.0678  | -0.004   |
| (20) Num. Patents              | 0.0427   | -0.015   | 0.2031   | -0.0072  | 0.0919   | 0.1067   | 0.0962   | -0.082   | 0.0804   | -0.0467  |
| (21) KZ Index                  | -0.1659* | 0.1609*  | -0.2353* | 0.0891   | 0.1677*  | -0.1746* | -0.1651* | 0.0675   | 0.0459   | 0.0319   |
| (22) Z-Score                   | 0.1291   | -0.1352  | 0.2909*  | -0.3251* | -0.2101* | 0.2992*  | 0.4088*  | 0.1455*  | -0.0329  | -0.066   |
| (23) Knowledge Industry Dummy  | 0.2450*  | -0.2585* | 0.1805*  | -0.2228* | -0.1408* | -0.0665  | 0.2701*  | -0.0293  | 0.0624   | -0.1313  |
| (24) Integrity                 | 0.0281   | -0.0107  | 0.1266   | -0.0347  | -0.0186  | -0.0962  | 0.1192   | -0.003   | 0.0109   | -0.0508  |
| (25) Teamwork                  | 0.2821*  | -0.2856* | 0.1239   | -0.1281  | -0.1313  | -0.1359  | 0.3988*  | 0.048    | -0.0244  | -0.0275  |
| (26) Quality                   | 0.0802   | -0.0883  | 0.0684   | -0.0216  | -0.1522* | -0.1685* | 0.2826*  | -0.0706  | -0.0775  | 0.0709   |
| (27) Respect                   | 0.0874   | -0.0544  | -0.1172  | 0.0665   | -0.0865  | -0.1705* | 0.1856*  | 0.0128   | -0.0346  | 0.0457   |
| (28) Innovation                | 0.2849*  | -0.2892* | 0.1804*  | -0.0885  | -0.1585* | -0.0331  | 0.3902*  | 0.0028   | -0.131   | 0.0753   |
| (29) Digital Resilience        | 0.2599*  | 0.2580*  | -0.0082  | -0.1018* | -0.0487* | -0.0151  | 0.2294*  | 0.0390*  | -0.0791* | -0.0369* |

|                                | (11)    | (12)    | (13)     | (14)     | (15)     | (16)     | (17)     | (18)     | (19)    | (20)    |
|--------------------------------|---------|---------|----------|----------|----------|----------|----------|----------|---------|---------|
| (11) Log CEO Tenure            | 1       |         |          |          |          |          |          |          |         |         |
| (12) CEO General Ability Index | -0.0861 | 1       |          |          |          |          |          |          |         |         |
| (13) CEO compensation          | -0.005  | 0.2296* | 1        |          |          |          |          |          |         |         |
| (14) CEO Delta                 | 0.3403* | -0.0225 | 0.0871   | 1        |          |          |          |          |         |         |
| (15) CEO Vega                  | 0.086   | 0.0119  | 0.2206*  | 0.3965*  | 1        |          |          |          |         |         |
| (16) Pct Board NED             | -0.0676 | -0.0083 | -0.4108* | -0.2280* | -0.2403* | 1        |          |          |         |         |
| (17) CEO Duality Dummy         | 0.0987  | -0.1023 | 0.1514   | 0.1313   | 0.2091*  | -0.0655  | 1        |          |         |         |
| (18) Pct Women Board           | -0.0718 | -0.1361 | 0.1583*  | -0.1157  | 0.0228   | -0.1701* | 0.018    | 1        |         |         |
| (19) Putnam State Trust        | -0.041  | -0.0802 | 0.0033   | -0.0211  | 0.0174   | 0.0606   | -0.0843  | 0.0864   | 1       |         |
| (20) Num. Patents              | -0.0583 | 0.0398  | 0.2552*  | 0.0776   | -0.0955  | -0.2381* | -0.0051  | 0.1488   | -0.0088 | 1       |
| (21) KZ Index                  | -0.0401 | -0.0078 | -0.0798  | 0.0276   | -0.0515  | 0.0323   | -0.1134  | 0.016    | -0.0475 | -0.1185 |
| (22) Z-Score                   | 0.1809* | 0.026   | -0.0169  | 0.2270*  | -0.0392  | -0.1517* | -0.0058  | 0.0265   | 0.0151  | -0.0336 |
| (23) Knowledge Industry Dummy  | 0.1063  | -0.0035 | 0.2731*  | 0.1315   | 0.0069   | -0.06    | 0.1098   | -0.0301  | 0.0177  | -0.1223 |
| (24) Integrity                 | -0.0799 | 0.086   | 0.1708*  | 0.1483   | 0.0582   | -0.0771  | 0.1433   | 0.0031   | -0.0734 | -0.0317 |
| (25) Teamwork                  | -0.0255 | 0.1777* | 0.2432*  | 0.0866   | -0.0813  | 0.0098   | -0.0045  | -0.0507  | 0.0078  | -0.0833 |
| (26) Quality                   | 0.0658  | 0.0853  | -0.0881  | 0.14     | -0.0565  | 0.0224   | -0.0836  | -0.1400* | -0.0036 | 0.2054  |
| (27) Respect                   | -0.0202 | 0.0228  | 0.0023   | 0.1586*  | -0.0835  | 0.1087   | -0.0766  | 0.0298   | 0.1046  | -0.1008 |
| (28) Innovation                | 0.0098  | 0.1912* | 0.2464*  | 0.1848*  | -0.0614  | -0.0784  | -0.0802  | 0.1284   | 0.0396  | -0.0056 |
| (29) Digital Resilience        | 0.0196  | 0.0322* | 0.0519*  | 0.0384*  | 0.0470*  | -0.0485* | -0.0398* | -0.0601* | 0.0570* | 0.0681* |

|                               | (21)     | (22)    | (23)    | (24)    | (25)    | (26)    | (27)    | (28)    | (29) |
|-------------------------------|----------|---------|---------|---------|---------|---------|---------|---------|------|
| (21) KZ Index                 | 1        |         |         |         |         |         |         |         |      |
| (22) Z-Score                  | -0.1467* | 1       |         |         |         |         |         |         |      |
| (23) Knowledge Industry Dummy | -0.2064* | 0.1602* | 1       |         |         |         |         |         |      |
| (24) Integrity                | -0.1299  | 0.069   | 0.1942* | 1       |         |         |         |         |      |
| (25) Teamwork                 | -0.2921* | 0.1677* | 0.4456* | 0.3381* | 1       |         |         |         |      |
| (26) Quality                  | -0.2228* | 0.073   | 0.0445  | 0.1059  | 0.1823* | 1       |         |         |      |
| (27) Respect                  | -0.0071  | 0.062   | 0.2192* | 0.2394* | 0.3810* | -0.0309 | 1       |         |      |
| (28) Innovation               | -0.2321* | 0.2696* | 0.2668* | 0.1434* | 0.5415* | 0.2606* | 0.3199* | 1       |      |
| (29) Digital Resilience       | -0.0899* | -0.0081 | 0.2918* | 0.0651* | 0.2473* | 0.0757* | 0.1232* | 0.1601* | 1    |

---

**Table F Firms' distribution by state and industry.**

This table presents the distribution of firms in our sample. Panel A shows the number and percentage of firms headquartered in each state out of the total 336 firms. Panel B displays the number and percentage of firms by industry (SIC 2-digit code)

**Panel I. Distribution by states**

| State (in Canada and U.S.) | Freq. | Percent |
|----------------------------|-------|---------|
| Alberta                    | 1     | 0.27    |
| Alabama                    | 1     | 0.27    |
| Alaska                     | 4     | 1.09    |
| Arizona                    | 4     | 1.09    |
| Arkansas                   | 2     | 0.55    |
| California                 | 69    | 18.85   |
| Colorado                   | 9     | 2.46    |
| Connecticut                | 10    | 2.73    |
| Delaware                   | 1     | 0.27    |
| Florida                    | 12    | 3.28    |
| Georgia                    | 12    | 3.28    |
| Iowa                       | 1     | 0.27    |
| Idaho                      | 1     | 0.27    |
| Illinois                   | 19    | 5.19    |
| Indiana                    | 5     | 1.37    |
| Kansas                     | 1     | 0.27    |
| Kentucky                   | 2     | 0.55    |
| Louisiana                  | 1     | 0.27    |
| Massachusetts              | 11    | 3.01    |
| Maryland                   | 3     | 0.82    |
| Michigan                   | 12    | 3.28    |
| Minnesota                  | 11    | 3.01    |
| Missouri                   | 7     | 1.91    |
| North Carolina             | 7     | 1.91    |
| Nebraska                   | 1     | 0.27    |
| New Jersey                 | 9     | 2.46    |
| Nevada                     | 1     | 0.27    |
| New York                   | 36    | 9.84    |
| Ohio                       | 16    | 4.37    |
| Oklahoma                   | 1     | 0.27    |
| Ontario                    | 3     | 0.82    |
| Oregon                     | 2     | 0.55    |
| Pennsylvania               | 11    | 3.01    |
| Quebec                     | 2     | 0.55    |
| Rhode Island               | 2     | 0.55    |
| Tennessee                  | 7     | 1.91    |
| Texas                      | 34    | 9.29    |
| Utah                       | 2     | 0.55    |
| Virginia                   | 16    | 4.37    |
| Washington                 | 11    | 3.01    |
| Wisconsin                  | 6     | 1.64    |
| Total                      | 366   | 100     |

---

**Panel II. Distribution by industry**

| SIC 2-digit | Industry Description   | Freq. | Percent |
|-------------|--|-------|---------|
| 7           | Agricultural Services  | 1     | 0.27    |
| 10          | Metal Mining   | 1     | 0.27    |
| 13          | Oil and Gas Extraction                                       | 7     | 1.91    |
| 15          | Construction - General Contractors & Operative Builders      | 1     | 0.27    |
| 16          | Construction, Except Building Construction, Contractor       | 1     | 0.27    |
| 20          | Food and Kindred Products                                    | 17    | 4.64    |
| 21          | Tobacco Products   | 1     | 0.27    |
| 23          | Apparel, Finished Products from Fabrics & Similar Materials  | 7     | 1.91    |
| 24          | Lumber and Wood Products, Except Furniture                   | 2     | 0.55    |
| 25          | Furniture and Fixtures                                       | 4     | 1.09    |
| 26          | Paper and Allied Products                                    | 2     | 0.55    |
| 27          | Printing, Publishing and Allied Industries                   | 5     | 1.37    |
| 28          | Chemicals and Allied Products                                | 22    | 6.01    |
| 29          | Petroleum Refining and Related Industries                    | 4     | 1.09    |
| 30          | Rubber and Miscellaneous Plastic Products                    | 3     | 0.82    |
| 31          | Leather and Leather Products                                 | 1     | 0.27    |
| 32          | Stone, Clay, Glass, and Concrete Products                    | 1     | 0.27    |
| 33          | Primary Metal Industries                                     | 1     | 0.27    |
| 34          | Fabricated Metal Products                                    | 3     | 0.82    |
| 35          | Industrial and Commercial Machinery and Computer Equipment   | 23    | 6.28    |
| 36          | Electronic & Other Electrical Equipment & Components         | 15    | 4.1     |
| 37          | Transportation Equipment                                     | 12    | 3.28    |
| 38          | Measuring, Photographic, Medical, & Optical Goods, & Clocks  | 22    | 6.01    |
| 39          | Miscellaneous Manufacturing Industries                       | 3     | 0.82    |
| 40          | Railroad Transportation                                      | 1     | 0.27    |
| 41          | Local & Suburban Transit & Interurban Highway Transportation | 1     | 0.27    |
| 42          | Motor Freight Transportation                                 | 1     | 0.27    |
| 45          | Transportation by Air  | 5     | 1.37    |
| 47          | Transportation Services                                      | 2     | 0.55    |
| 48          | Communications   | 11    | 3.01    |
| 50          | Wholesale Trade - Durable Goods                              | 7     | 1.91    |
| 51          | Wholesale Trade - Nondurable Goods                           | 3     | 0.82    |
| 52          | Building Materials, Hardware, Garden Supplies & Mobile Homes | 3     | 0.82    |
| 53          | General Merchandise Stores                                   | 10    | 2.73    |
| 54          | Food Stores  | 3     | 0.82    |
| 55          | Automotive Dealers and Gasoline Service Stations             | 4     | 1.09    |
| 56          | Apparel and Accessory Stores                                 | 10    | 2.73    |
| 57          | Home Furniture, Furnishings and Equipment Stores             | 3     | 0.82    |
| 58          | Eating and Drinking Places                                   | 12    | 3.28    |
| 59          | Miscellaneous Retail   | 14    | 3.83    |
| 70          | Hotels, Rooming Houses, Camps, and Other Lodging Places      | 5     | 1.37    |
| 72          | Personal Services  | 2     | 0.55    |
| 73          | Business Services  | 83    | 22.68   |
| 75          | Automotive Repair, Services and Parking                      | 2     | 0.55    |
| 78          | Motion Pictures  | 1     | 0.27    |
| 79          | Amusement and Recreation Services                            | 3     | 0.82    |
| 80          | Health Services  | 8     | 2.19    |
| 82          | Educational Services   | 2     | 0.55    |
| 87          | Engineering, Accounting, Research, and Management Services   | 9     | 2.46    |
| 99          | Non-classifiable Establishments                              | 2     | 0.55    |
| Total       |  | 366   | 100     |

**Table G Baseline Regressions of Table 4.2 with Standard Errors Clustered at the Industry Level**

This table presents Ordered Probit and OLS regression estimates of Flex Index measurements on financial variables. All variables are defined in Appendix Table D. Standard errors are clustered at the industry level (SIC 2 digit); t-statistics are reported in brackets. \*\*\*, \*\*, \* indicate that the parameter estimate is significantly different from zero at the 1%, 5%, or 10% level, respectively.

| Dependent Variables       | Ordered Probit          |                                    | OLS                     |                                    |
|---------------------------|-------------------------|------------------------------------|-------------------------|------------------------------------|
|                           | (1)<br>Flex Index Score | (2)<br>Min Office Days<br>per Week | (3)<br>Flex Index Score | (4)<br>Min Office Days<br>per Week |
| <i>Firms' financials:</i> |                         |                                    |                         |                                    |
| Size                      | -0.116*<br>(-1.677)     | 0.058<br>(0.863)                   | -0.027<br>(-1.622)      | 0.094<br>(0.900)                   |
| Leverage                  | -0.468<br>(-0.690)      | 0.471<br>(0.775)                   | -0.099<br>(-0.618)      | 0.547<br>(0.656)                   |
| B/M Ratio                 | -0.991***<br>(-3.632)   | 0.915***<br>(3.723)                | -0.221***<br>(-3.536)   | 1.175***<br>(3.861)                |
| ROA                       | -0.525<br>(-0.479)      | 0.514<br>(0.673)                   | -0.077<br>(-0.290)      | 0.527<br>(0.458)                   |
| Cash Ratio                | 2.308***<br>(2.707)     | -1.971**<br>(-2.095)               | 0.459**<br>(2.258)      | -2.306*<br>(-1.701)                |
| Sales Growth              | -0.214<br>(-0.637)      | 0.148<br>(0.442)                   | -0.017<br>(-0.217)      | -0.015<br>(-0.033)                 |
| Constant                  |                         |                                    | 0.108<br>(0.714)        | 5.004***<br>(5.475)                |
| Observations              | 366                     | 320                                | 366                     | 320                                |
| Probit cut-off points     | YES                     | YES                                | YES                     | YES                                |
| Industry FE               | YES                     | YES                                | YES                     | YES                                |
| State FE                  | YES                     | YES                                | YES                     | YES                                |
| Adjusted R-squared        | 0.284                   | 0.190                              | 0.216                   | 0.204                              |

**Table H Propensity Score Matching used in analysis of Table 2: Post-matching diagnostics**

| Variable     | Unmatched (U)<br>Matched (M) | Mean    |          | % bias | %reduc-<br>tion<br>bias | t-Test<br>t | p>t   |
|--------------|------------------------------|---------|----------|--------|-------------------------|-------------|-------|
|              |                              | Treated | Control  |        |                         |             |       |
| Size         | U                            | 9.5063  | 6.3738   | 167.8  |                         | 25.81       | 0.000 |
|              | M                            | 8.9964  | 9.1565   | -8.6   | 94.9                    | -1.11       | 0.266 |
| Leverage     | U                            | 0.34816 | 0.23183  | 50.9   |                         | 8.29        | 0.000 |
|              | M                            | 0.35108 | 0.34466  | 2.8    | 94.5                    | 0.29        | 0.769 |
| B/M Ratio    | U                            | 0.26804 | 0.32746  | -7.8   |                         | -1.08       | 0.282 |
|              | M                            | 0.28425 | 0.27159  | 1.7    | 78.7                    | 0.4         | 0.686 |
| ROA          | U                            | 0.06262 | -0.21876 | 33.6   |                         | 4.51        | 0.000 |
|              | M                            | 0.04171 | 0.06338  | -2.6   | 92.3                    | -2.2        | 0.028 |
| Cash Ratio   | U                            | 0.13849 | 0.3211   | -79.9  |                         | -11.58      | 0.000 |
|              | M                            | 0.15622 | 0.14885  | 3.2    | 96                      | 0.46        | 0.646 |
| Sales Growth | U                            | 0.22772 | 0.63809  | -32.8  |                         | -4.44       | 0.000 |
|              | M                            | 0.28149 | 0.27293  | 0.7    | 97.9                    | 0.25        | 0.803 |

**Table I The Thirty Most Representative and Most Frequently Occurring Words in the Culture Dictionary of Li, Mai, Shen, and Yan (RFS, 2021).<sup>34</sup>**

Panel (I) lists the 30 most representative words in order of descending similarity to seed the words for each cultural value. Panel (II) lists the 30 most frequently occurring words for each cultural value, with the frequency (%) being the TF-IDF weighted word count, where TF (term frequency) represents the word frequency in the document, and IDF (inverse document frequency) denotes the inverse frequency of documents with the word in the corpus. The detailed methodology is explained in Li, Mai, Shen, and Yan (2021).

***Panel (I). The thirty most representative words for each cultural value in the culture dictionary***

| <b>Innovation</b>      | <b>Integrity</b>     | <b>Quality</b>        | <b>Respect</b>  | <b>Teamwork</b>    |
|------------------------|----------------------|-----------------------|-----------------|--------------------|
| Creativity             | Accountability       | Dedicated             | Talented        | Collaborate        |
| Innovative             | Ethic                | Quality               | Talent          | Cooperation        |
| Innovate               | Integrity            | Dedication            | Empower         | Collaboration      |
| Innovation             | Responsibility       | Customer service      | Team member     | Collaborative      |
| Creative               | Transparency         | Customer              | Employee        | Cooperative        |
| Excellence             | Accountable          | Dedicate              | Team            | Partnership        |
| Passion                | Governance           | Service level         | Leadership      | Cooperate          |
| World-class            | Ethical              | Mission               | Leadership team | Collaboratively    |
| Technology             | Transparent          | Service delivery      | Culture         | Partner            |
| Operational excellence | Trust                | Customer satisfaction | Teammate        | Co-operation       |
| Passionate             | Responsible          | Service               | Organization    | Coordination       |
| Product innovation     | Oversight            | Reliability           | Entrepreneurial | Engage             |
| Capability             | Independence         | Commitment            | Skill           | Jointly            |
| Customer experience    | Objectivity          | Customer need         | Executive       | Coordinate         |
| Thought leadership     | Moral                | Customer support      | Empowerment     | Teamwork           |
| Expertise              | Trustworthy          | High-quality          | Management team | Business partner   |
| Agility                | Fairness             | Ensure                | Best brightest  | Alliance           |
| Efficient              | Hold accountable     | Customer relationship | Professionalism | Team up            |
| Technology innovation  | Corporate governance | Quality service       | Staff           | Technology partner |
| Competency             | Autonomy             | Product quality       | Highly skilled  | Joint              |
| Know-how               | Core value           | Quality product       | Skillset        | Cooperatively      |

<sup>34</sup> Table I is equivalent to Table 4.2 of the paper published by Li, Mai, Shen, and Yan (2021) in The Review of Financial Studies, Volume 34, Issue 7, pages 3277-3278. We did not contribute to this work and the reason for presenting the table here is for demonstration purposes.

|                       |                          |                      |                        |                        |
|-----------------------|--------------------------|----------------------|------------------------|------------------------|
| Cutting-edge          | Assure                   | Capable              | Technologist           | Relationship           |
| Agile                 | Stakeholder              | Service quality      | Competent              | Collaborator           |
| Creatively            | Fiduciary responsibility | End-user             | Entrepreneur           | Interaction            |
| Customer-centric      | Continuity               | Quality level        | Experienced            | Working relationship   |
| Enable                | Credibility              | Customer expectation | Energize               | Co-operate             |
| Value proposition     | Honesty                  | Service capability   | Entrepreneurial spirit | Technology partnership |
| Reinvent              | Privacy                  | Client               | High-calibre           | Association            |
| Focus                 | Fiduciary duty           | Customer requirement | Manager                | Dialogue               |
| Innovation capability | Rigor                    | Slack                | Leadership skill       | Dialog                 |

*Panel (II). The thirty most frequently-occurring words for each cultural value in the culture dictionary.*

| Innovation |      |        | Integrity   |      |        | Quality        |      |        | Respect         |      |        | Teamwork     |      |        |
|------------|------|--------|-------------|------|--------|----------------|------|--------|-----------------|------|--------|--------------|------|--------|
| Word       | %    | Cum. % | Word        | %    | Cum. % | Word           | %    | Cum. % | Word            | %    | Cum. % | Word         | %    | Cum. % |
| Brand      | 4.24 | 4.24   | Control     | 5.81 | 5.81   | Customer       | 9.22 | 9.22   | People          | 5.91 | 5.91   | Partner      | 6.01 | 9.22   |
| Technology | 3.08 | 7.32   | Management  | 4.93 | 10.74  | Product        | 8.09 | 17.31  | Team            | 5.10 | 11.00  | Relationship | 5.36 | 17.31  |
| Focus      | 3.02 | 10.34  | Careful     | 3.46 | 14.19  | Client         | 5.99 | 23.30  | Company         | 5.00 | 16.00  | Discussion   | 5.22 | 23.30  |
| Great      | 2.73 | 13.08  | Honestly    | 2.71 | 16.90  | Service        | 4.72 | 28.02  | Hire            | 3.78 | 19.78  | Together     | 4.61 | 28.02  |
| Platform   | 2.53 | 15.61  | Regulator   | 2.68 | 19.58  | Build          | 4.09 | 32.11  | Folk            | 3.61 | 23.39  | Integrate    | 4.07 | 32.11  |
| Ability    | 2.41 | 18.02  | Honest      | 2.43 | 22.01  | Deliver        | 3.42 | 35.54  | Organization    | 3.39 | 26.78  | Involve      | 3.77 | 35.54  |
| Best       | 2.37 | 20.39  | Safety      | 2.09 | 24.10  | Network        | 3.30 | 38.84  | Resource        | 3.11 | 29.89  | Conversation | 3.73 | 38.84  |
| Design     | 2.19 | 22.58  | Assure      | 2.01 | 26.11  | Support        | 3.12 | 41.96  | Employee        | 2.96 | 32.86  | Integration  | 3.24 | 41.96  |
| Create     | 2.18 | 24.76  | Compliance  | 1.88 | 27.98  | Quality        | 2.40 | 44.36  | Management team | 1.91 | 34.77  | Partnership  | 3.17 | 44.36  |
| Solution   | 2.16 | 26.92  | Trust       | 1.87 | 29.86  | Salesforce     | 2.31 | 46.68  | Train           | 1.88 | 36.65  | Engage       | 2.65 | 46.68  |
| Develop    | 2.12 | 29.04  | Disciplined | 1.82 | 31.68  | Infrastructure | 2.27 | 48.94  | Training        | 1.81 | 38.46  | Align        | 2.07 | 48.94  |
| Success    | 2.00 | 31.04  | Responsible | 1.71 | 33.39  | Supplier       | 2.21 | 51.16  | Senior          | 1.80 | 40.26  | Explore      | 1.79 | 51.16  |

---

|                |      |       |                |      |       |                  |      |       |                    |      |       |               |      |       |
|----------------|------|-------|----------------|------|-------|------------------|------|-------|--------------------|------|-------|---------------|------|-------|
| Content        | 1.99 | 33.03 | Proper         | 1.62 | 35.01 | Serve            | 2.15 | 53.31 | Staff              | 1.80 | 42.06 | Communication | 1.77 | 53.31 |
| Capability     | 1.97 | 35.00 | Responsibility | 1.61 | 36.62 | Commit           | 2.10 | 55.41 | Member             | 1.79 | 43.85 | Dialogue      | 1.67 | 55.41 |
| Effort         | 1.92 | 36.92 | Thoughtful     | 1.55 | 38.17 | Field            | 2.09 | 57.51 | Leader             | 1.63 | 45.48 | Engagement    | 1.61 | 57.51 |
| Successful     | 1.80 | 38.72 | Convince       | 1.50 | 39.67 | Commitment       | 1.95 | 59.46 | Person             | 1.53 | 47.01 | Contact       | 1.49 | 59.46 |
| Efficiency     | 1.67 | 40.39 | Seriously      | 1.48 | 41.15 | Delivery         | 1.90 | 61.36 | Proud              | 1.44 | 48.45 | Conduct       | 1.41 | 61.36 |
| Productivity   | 1.64 | 42.03 | Transparent    | 1.48 | 42.63 | Vendor           | 1.85 | 63.21 | Talent             | 1.41 | 49.86 | On behalf of  | 1.38 | 63.21 |
| Learn          | 1.56 | 43.59 | Expert         | 1.45 | 44.08 | Customer base    | 1.80 | 65.01 | Leadership         | 1.38 | 51.24 | Joint         | 1.16 | 65.01 |
| Unique         | 1.49 | 45.08 | Consistency    | 1.41 | 45.50 | Supply chain     | 1.65 | 66.66 | Manager            | 1.34 | 52.58 | Collaboration | 1.12 | 66.66 |
| Tool           | 1.42 | 46.50 | Candidly       | 1.40 | 46.90 | Critical         | 1.47 | 68.13 | CEO                | 1.31 | 53.89 | Sponsor       | 1.09 | 68.13 |
| Innovation     | 1.42 | 47.92 | Transparency   | 1.39 | 48.29 | Requirement      | 1.46 | 69.59 | Knowledge          | 1.28 | 55.17 | Conjunction   | 1.01 | 69.59 |
| Efficient      | 1.39 | 49.31 | Authority      | 1.17 | 49.46 | Ensure           | 1.37 | 70.96 | Engineer           | 1.23 | 56.41 | Supportive    | 1.00 | 70.96 |
| Terrific       | 1.35 | 50.66 | Responsive     | 1.12 | 50.57 | Speed            | 1.30 | 72.26 | Recruit            | 1.20 | 57.61 | Alliance      | 0.96 | 72.26 |
| Execution      | 1.30 | 51.96 | Truth          | 1.10 | 51.68 | Desire           | 1.07 | 73.33 | Salespeople        | 1.16 | 58.76 | Merge         | 0.91 | 73.33 |
| Exciting       | 1.29 | 53.24 | Principle      | 1.06 | 52.74 | Productive       | 1.06 | 74.39 | Sales team         | 1.11 | 59.87 | Interaction   | 0.90 | 74.39 |
| Enhance        | 1.24 | 54.48 | Comply         | 1.00 | 53.74 | Guest            | 0.92 | 75.31 | Consultant         | 1.00 | 60.87 | Put together  | 0.86 | 75.31 |
| Business model | 1.18 | 55.66 | Board director | 0.95 | 54.69 | Service provider | 0.88 | 76.19 | Culture            | 0.93 | 61.80 | Organize      | 0.85 | 76.19 |
| Enable         | 1.13 | 56.79 | Thorough       | 0.92 | 55.61 | Capable          | 0.81 | 77.00 | Sales organization | 0.89 | 62.69 | Embrace       | 0.84 | 77.00 |
| Discipline     | 1.12 | 57.91 | Conflict       | 0.86 | 56.47 | Functionality    | 0.80 | 77.80 | Advisor            | 0.88 | 63.57 | Assist        | 0.83 | 77.8  |

---

---

## References

- Abowd, J. 1989. The effect of wage bargains on the stock market value of the firm. *American Economic Review*, 79, pp. 774-800.
- Adams, R. B. and Ferreira, D., 2009. Women in the boardroom and their impact on governance and performance, *Journal of Financial Economics*, 94(2), pp. 291-309.
- Ahern, K.R., Daminelli, D., and Fracassi, C., 2015. Lost in translation? The effect of cultural values on mergers around the world. *Journal of Financial Economics*, 117(1), pp. 165-189.
- Ahmad, M.F., Aziz, S., and Dowling, M.M., 2022. Does target country cultural orientation influence M&A? *British Journal of Management*, 33(2), pp. 906-938.
- Akey, P. and Lewellen, S., 2017. Policy uncertainty, political capital, and firm risk-taking. SSRN Working Paper.
- Aksoy, C. G., Barrero, J. M., Bloom, N., Davis, S. J., Dolls, M., and Zarate, P. 2022. Working from home around the world. NBER Working Paper 30446.
- Aktas, N., De Bodt, E. and Cousin, J.G., 2011. Do financial markets care about SRI? Evidence from mergers and acquisitions. *Journal of Banking & Finance*, 35(7), pp.1753-1761.
- Albitar, K., Meftah Gerged, A., Kikhia, H., and Hussainey, K. 2020. Auditing in times of social distancing: The effect of COVID-19 on auditing quality. *International Journal of Accounting & Information Management*, 29, pp. 169-78.
- Albuquerque, R., Koskinen, Y., and Zhang, C., 2019. Corporate social responsibility and firm risk: Theory and empirical evidence. *Management Science*, 65(10), pp. 4451–4469.

## References

---

- Albuquerque, R., Koskinen, Y., Yang, S., and Zhang, C., 2020. Resiliency of environmental and social stocks: An analysis of the exogenous COVID-19 market crash. *The Review of Corporate Finance Studies*, 9(3), pp. 593-621.
- Alexandridis, G., Hoepner, A.G., Huang, Z., and Oikonomou, I., 2022. Corporate social responsibility culture and international M&As. *The British Accounting Review*, 54(1), p.101035.
- Alok, S. and Ayyagari, M., 2020. Politics, state ownership, and corporate investments. *Review of Financial Studies*, 33(7), pp. 3031–3087.
- Angelici, M. and Profeta, P., 2020. Smart-working: Work flexibility without constraints. CESifo Working Paper No. 8165.
- Ansolabehere, S., De Figueiredo, J.M., and Snyder Jr, J.M., 2003. Why is there so little money in US politics?. *Journal of Economic perspectives*, 17(1), pp. 105-130.
- Arouri, M., Gomes, M., and Pukthuanthong, K., 2019. Corporate social responsibility and M&A uncertainty. *Journal of Corporate Finance*, 56, pp.176-198.
- Azeem, M. M., and Kotey, B., 2023. Innovation in SMEs: the role of flexible work arrangements and market competition. *The International Journal of Human Resource Management*, 34(1), pp. 92-127.
- Badertscher, B.A., 2011. Overvaluation and the choice of alternative earnings management mechanisms. *The Accounting Review*, 86(5), pp. 1491-1518.
- Bae, K.-H., El Ghouli, S., Guedhami, O., Kwok, C. C., and Zheng, Y., 2019. Does corporate social responsibility reduce the costs of high leverage? Evidence from capital structure and product market interactions. *Journal of Banking & Finance*, 100, pp. 135-150
- Bai, J.J., Brynjolfsson, E., Jin, W., Steffen, S., and Wan, C., 2021. Digital resilience: How work-from-home feasibility affects firm performance. NBER Working Paper 28588.
- Baker, A., Larcker, D.F., McClure, C., Saraph, D., and Watts, E.M., 2023. Diversity washing. Chicago Booth Research Paper (22-18).
- Baker, M. and Wurgler, J., 2004. A catering theory of dividends. *Journal of Finance*, 59(3), pp. 1125-1165.

- 
- Baker, M., Coval, J., and Stein, J.C., 2007. Corporate financing decisions when investors take the path of least resistance. *Journal of Financial Economics*, 84(2), pp. 266-298.
- Baker, S.R., Bloom, N., and Davis, S.J., 2016. Measuring economic policy uncertainty. *Quarterly Journal of Economics* 131, pp. 1593–1636.
- Bali, T.G., Brown, S.J., and Tang, Y., 2017. Is economic uncertainty priced in the cross-section of stock returns?. *Journal of Financial Economics*, 126(3), pp. 471-489.
- Baltes, B.B., Briggs, T.E., Huff, J.W., Wright, J.A., and Neuman, G.A., 1999. Flexible and compressed workweek schedules: A meta-analysis of their effects on work-related criteria. *Journal of Applied Psychology*, 84(4), pp. 496-513.
- Bamiatzi, V., Dowling, M., Gogolin, F., Kearney, F., and Vigne, S., 2023. Are the good spared? Corporate social responsibility as insurance against cyber security incidents. *Risk Analysis*.
- Bardos, K.S., Ertugrul, M., and Gao, L.S., 2020. Corporate social responsibility, product market perception, and firm value. *Journal of Corporate Finance*, 62, p.101588.
- Barnea, A. and Rubin, A., 2010. Corporate social responsibility as a conflict between shareholders. *Journal of Business Ethics*, 97(1), pp. 71–86.
- Barrero, J. M., Bloom, N., and Davis, S. J., 2023. The evolution of working from home. NBER Working Paper 31686.
- Barrero, J. M., Bloom, N., Buckman, S., and Davis, S. J., 2023. Benchmarking SWAA estimates of the prevalence of working from home, SWAA February 2023 Updates. Available at: [https://wfhresearch.com/wp-content/uploads/2023/02/Benchmarking\\_SWAA-1-February-2023.pdf](https://wfhresearch.com/wp-content/uploads/2023/02/Benchmarking_SWAA-1-February-2023.pdf)
- Barrero, J.M., Bloom, N., and Davis, S.J., 2021. Why working from home will stick. NBER Working Paper 28731.
- Barney, J., 1991. Firm resources and sustained competitive advantage. *Journal of Management*, 17(1), 99–120.
- Barth, M.E., and Kasznik, R., 1999. Share repurchases and intangible assets. *Journal of Accounting and Economics*, 28(2), pp. 211-241.

- Bauer, F. and Matzler, K., 2014. Antecedents of M&A success: The role of strategic complementarity, cultural fit, and degree and speed of integration. *Strategic Management Journal*, 35(2), pp. 269-291.
- Becchetti, L., Ciciretti, R., and Hasan, I., 2015. Corporate social responsibility, stakeholder risk, and idiosyncratic volatility. *Journal of Corporate Finance*, 35, pp. 297–309.
- Behrens, K., Kichko, S., and Thisse, J.F., 2021. Working from home: Too much of a good thing? CESifo Working Paper No. 8831.
- Bélanger, F., 1999. Workers' propensity to telecommute: An empirical study. *Information & Management*, 35(3), pp. 139-153.
- Bellet, C.S., De Neve, J.E., and Ward, G., 2023. Does employee happiness have an impact on productivity? *Management Science*, In Press.
- Ben-Nasr, H. and Ghouma, H., 2018. Employee welfare and stock price crash risk. *Journal of Corporate Finance*, 48, pp. 700-725.
- Bereskin, F., Byun, S.K., Officer, M.S., and Oh, J.M., 2018. The effect of cultural similarity on mergers and acquisitions: Evidence from corporate social responsibility. *Journal of Financial and Quantitative Analysis*, 53(5), pp. 1995-2039.
- Berman, S.L., Wicks, A.C., Kotha, S., and Jones, T.M., 1999. Does stakeholder orientation matter? The relationship between stakeholder management models and firm financial performance. *Academy of Management Journal*, 42(5), pp. 88506.
- Bertrand, M., and Mullainathan, S., 2003. Enjoying the quiet life? Corporate governance and managerial preferences. *Journal of Political Economy*, 111, pp. 1043-1075.
- Bertrand, M., Bombardini, M., Fisman, R., and Trebbi, F., 2020. Tax-exempt lobbying: Corporate philanthropy as a tool for political influence. *American Economic Review*, 110(7), pp. 2065–2102.
- Bethlehem, J., 2010. Selection bias in web surveys. *International Statistical Review*, 78(2), pp. 161-188.

- 
- Bhandari, A. and Javakhadze, D., 2017. Corporate social responsibility and capital allocation efficiency. *Journal of Corporate Finance*, 43, pp. 354-377.
- Białkowski, J., Gottschalk, K., and Wisniewski, T.P., 2008. Stock market volatility around national elections. *Journal of Banking & Finance*, 32(9), pp. 1941-1953.
- Biggerstaff, L., Cicero, D. C., and Puckett, A., 2015. Suspect CEOs, unethical culture, and corporate misbehaviour. *Journal of Financial Economics* 117, pp. 98-121.
- Bittlingmayer, G., 1998. Output, stock volatility, and political uncertainty in a natural experiment: Germany, 1880–1940. *Journal of Finance*, 53(6), pp.2243-2257.
- Bird, A., Karolyi, S.A., and Ruchti, T., 2017. Political uncertainty and corporate transparency. SSRN Working Paper 2986678.
- Bharadwaj, A.S., 2000. A resource-based perspective on information technology capability and firm performance: an empirical investigation. *MIS quarterly*, pp.169-196.
- Björkman, I., Stahl, G.K., and Vaara, E., 2007. Cultural differences and capability transfer in cross-border acquisitions: The mediating roles of capability complementarity, absorptive capacity, and social integration. *Journal of International Business Studies*, 38(4), pp. 658-672.
- Bloom, N., Han, R., and Liang, J., 2022. How hybrid working from home works out. NBER Working Paper 30292.
- Bloom, N., Liang, J., Roberts, J., and Ying, Z. J., 2015. Does working from home work? Evidence from a Chinese experiment. *The Quarterly Journal of Economics*, 130(1), pp. 165–218.
- Boeker, W., 1991. Organizational strategy: An ecological perspective. *Academy of Management Journal*, 34(3), pp. 613-635.
- Bonaime, A., Gulen, H., and Ion, M., 2018. Does policy uncertainty affect mergers and acquisitions? *Journal of Financial Economics*, 129(3), pp. 531-558.
- Bouslah, K., Kryzanowski, L., and M'zali, B., 2013. The impact of the dimensions of social performance on firm risk. *Journal of Banking & Finance*, 37(4), pp. 1258-1273.

- Boutchkova, M., Doshi, H., Durnev, A., and Molchanov, A., 2012. Precarious politics and return volatility. *Review of Financial Studies*, 25(4), pp. 1111-1154.
- Brammer, S., Brooks, C., and Pavelin, S., 2006. Corporate social performance and stock returns: UK evidence from disaggregate measures. *Financial Management*, 35(3), pp. 97-116.
- Bris, A. and Cabolis, C., 2008. The value of investor protection: Firm evidence from cross-border mergers. *Review of Financial Studies*, 21(2), pp. 605-648.
- Brogaard, J. and Detzel, A., 2015. The asset-pricing implications of government economic policy uncertainty. *Management Science*, 61(1), pp. 3–18.
- Brogaard, J., Dai, L., Ngo, P.T., and Zhang, B., 2020. Global political uncertainty and asset prices. *Review of Financial Studies*, 33(4), pp. 1737-1780.
- Brooks, C. and Oikonomou, I., 2018. The effects of environmental, social and governance disclosures and performance on firm value: A review of the literature in accounting and finance. *The British Accounting Review*, 50(1), pp. 1-15.
- Brouthers, K.D. and Brouthers, L.E., 2001. Explaining the national cultural distance paradox. *Journal of International Business Studies*, 32, pp. 177-189.
- Buono, A.F. and Bowditch, J.L., 2003. The Human Side of Mergers and Acquisitions: Managing Collisions Between People, Cultures, and Organizations. *Beard Books*
- Bursztyn, L., Cantoni, D., Funk, P., and Yuchtman, N., 2017. Polls, the press, and political participation: The effects of anticipated election closeness on voter turnout. SSRN Working Paper.
- Büschgens, T., Bausch, A., and Balkin, D.B., 2013. Organizational culture and innovation: A meta-analytic review. *Journal of Product Innovation Management*, 30(4), pp. 763-781.
- Bustamante, M.C. and Frésard, L., 2021. Does firm investment respond to peers' investment?. *Management Science*, 67(8), pp. 4703–4724.
- Cai, X., Gao, N., Garrett, I., and Xu, Y., 2020. Are CEOs judged on their companies' social reputation?. *Journal of Corporate Finance*, 64, p.101621.

- 
- Caligiuri, P., De Cieri, H., Minbaeva, D., Verbeke, A., and Zimmermann, A. 2020. International HRM insights for navigating the COVID-19 pandemic: Implications for future research and practice. *Journal of International Business Studies*, 51, pp. 697-713.
- Calton, J. and Payne, S., 2003. Coping with paradox, *Business and Society*, 42, pp. 7-42.
- Cameron, K. S., Quinn, R. E., DeGraff, J., and Thakor, A. V., 2006. *Competing values leadership: Creating value in organizations*. Northampton, MA: Elgar.
- Campbell, B.A., Coff, R., and Kruscynski, D., 2012. Rethinking sustained competitive advantage from human capital. *Academy of Management Review*, 37(3), pp. 376-395.
- Cannella Jr, A.A. and Hambrick, D.C., 1993. Effects of executive departures on the performance of acquired firms. *Strategic Management Journal*, 14(S1), pp. 137-152.
- Cao, Z. and Rees, W., 2020. Do employee-friendly firms invest more efficiently? Evidence from labor investment efficiency. *Journal of Corporate Finance*, 65, p.101744.
- Carroll, A.B., 1999. Corporate social responsibility: Evolution of a definitional construct. *Business & Society*, 38(3), pp.268-295.
- Cartwright, S. and Schoenberg, R. 2006. Thirty years of mergers and acquisitions research: recent advances and future opportunities. *British Journal of Management* 17(S1), pp. S1–S5.
- Cartwright, S. and Cooper, C.L., 1993. The role of culture compatibility in successful organizational marriage. *Academy of Management Perspectives*, 7(2), pp. 57-70.
- Category: Gubernatorial elections in the United States by year (2022). *Wikipedia* Available at: [https://en.wikipedia.org/wiki/Category:Gubernatorial\\_elections\\_in\\_the\\_United\\_States\\_by\\_year](https://en.wikipedia.org/wiki/Category:Gubernatorial_elections_in_the_United_States_by_year) [Accessed 22 Oct. 2022].
- C  lerier, C. and Vall  e, B., 2017. Catering to investors through security design: Headline rate and complexity. *Quarterly Journal of Economics*, 132(3), pp. 1469-1508

## References

---

- Cespa, G. and Cestone, G., 2007. Corporate social responsibility and managerial entrenchment. *Journal of Economics & Management Strategy*, 16(3), pp. 741–71.
- Chakrabarti, R., Gupta-Mukherjee, S., and Jayaraman, N., 2009. Mars–Venus marriages: Culture and cross-border M&A. *Journal of International Business Studies*, 40, pp. 216-236.
- Chang, C.H., Chen, S.S., Chen, Y.S., and Peng, S.C., 2019. Commitment to build trust by socially responsible firms: Evidence from cash holdings. *Journal of Corporate Finance*, 56, pp. 364-387.
- Chang S, and Jo H., 2019. Employee-friendly practices, product market competition and firm value. *Journal of Business Finance & Accounting*, 46, 200–224.
- Chatjuthamard, P., Treepongkaruna, S., Jiraporn, P. and Jiraporn, N., 2021. Does firm-level political risk influence corporate social responsibility (CSR)? Evidence from earnings conference calls. *Financial Review*, 56(4), pp.721-741.
- Charbonneau, E., and Doberstein, C., 2020. An empirical assessment of the intrusiveness and reasonableness of emerging work surveillance technologies in the public sector. *Public Administration Review*, 80, pp. 780-91.
- Chatterjee, A. and Hambrick, D.C., 2007. It's all about me: Narcissistic chief executive officers and their effects on company strategy and performance. *Administrative Science Quarterly*, 52(3), pp. 351-386.
- Cheah, E.T., Jamali, D., Johnson, J.E., and Sung, M.C., 2011. Drivers of corporate social responsibility attitudes: The demography of socially responsible investors. *British Journal of Management*, 22(2), pp. 305-323.
- Chen, C., Frey, C. B., and Presidente, G., 2022. Disrupting science. The Oxford Martin Working Paper Series on Technological and Economic Change Working Paper No. 2022-4.
- Chen, G., Kirkman, B.L., Kanfer, R., Allen, D., and Rosen, B., 2007. A multilevel study of leadership, empowerment, and performance in teams. *Journal of Applied Psychology*, 92(2), p.331.

- 
- Chen, J., Leung, W.S., and Evans, K.P., 2016. Are employee-friendly workplaces conducive to innovation? *Journal of Corporate Finance*, 40, pp. 61-79.
- Chen, T., Dong, H., and Lin, C., 2020. Institutional shareholders and corporate social responsibility. *Journal of Financial Economics*, 135(2), pp. 483-504.
- Chen, Y.S. and Chang, C.H., 2013. Greenwash and green trust: The mediation effects of green consumer confusion and green perceived risk. *Journal of Business Ethics*, 114, pp. 489-500.
- Cheng, C.H.J., Chiu, C.W.J., Hankins, W.B., and Stone, A.L., 2018. Partisan conflict, policy uncertainty and aggregate corporate cash holdings. *Journal of Macroeconomics*, 58, pp. 78-90.
- Cheung, A., 2016. Corporate social responsibility and corporate cash holdings. *Journal of Corporate Finance*, 37, pp. 412–430.
- Chi, J.D., and Gupta, M., 2009. Overvaluation and earnings management. *Journal of Banking & Finance*, 33(9), pp. 1652-1663.
- Child, T.B., Massoud, N., Schabus, M., and Zhou, Y., 2021. Surprise election for Trump connections. *Journal of Financial Economics*, 140(2), pp. 676–697.
- Choudhury, P., Foroughi, C., and Larson, B., 2021. Work-from-anywhere: The productivity effects of geographic flexibility. *Strategic Management Journal*, 42(4), pp. 655-683.
- Choudhury, P., Khanna, T., Makridis, C., and Schirmann, K., 2022. Is hybrid work the best of both worlds? Evidence from a field experiment. Harvard Business School Working Paper No. 22-063.
- Coff, R. and Kryscynski, D., 2011. Invited editorial: Drilling for micro-foundations of human capital-based competitive advantages. *Journal of Management*, 37(5), pp. 1429-1443.
- Çolak, G., Durnev, A., and Qian, Y., 2017. Political uncertainty and IPO activity: Evidence from US gubernatorial elections. *Journal of Financial and Quantitative Analysis*, 52(6), pp. 2523-2564.
- Coleman, J. S., 1990. *Foundations of social theory*. Harvard University Press.

- Connor, K., 1991. A historical comparison of resource-based theory and five schools of thought within industrial organization economics: Do we have a new theory of the firm?, *Journal of Management*, 17, 121–154.
- Couper, M.P., 2017. New developments in survey data collection. *Annual Review of Sociology*, 43, pp. 121-145.
- Crème, J., 1993. Corporate culture and shared knowledge. *Industrial and Corporate Change*, 2, pp. 351-386.
- Croce, M.M., Nguyen, T.T., and Schmid, L., 2012. The market price of fiscal uncertainty. *Journal of Monetary Economics*, 59(5), pp. 401-416.
- Cronqvist, H. and Fahlenbrach, R., 2008. Large shareholders and corporate policies. *Review of Financial Studies*, 22(10), pp. 3941-3976.
- Cronqvist, H., Heyman, F., Nilsson, M., Svaleryd, H., and Vlachos, J., 2009. Do entrenched managers pay their workers more? *Journal of Finance*, 64(1), pp. 309-339.
- Cumming, D.J., Meles, A., Sampagnaro, G., and Verdoliva, V., 2023. Corporate culture and IPOs. *European Financial Management*, In Press.
- Curti, F., Fauver, L., and Mihov, A., 2023. Workforce policies and operational risk: Evidence from US bank holding companies. *Journal of Financial and Quantitative Analysis*, 58(7), pp. 3085-3120.
- Cutter, C. (2021). Remote work may now last for two years, worrying some bosses. *Wall Street Journal*.
- Dalton, M., and Groen, J.A., 2022. Telework during the COVID-19 pandemic: estimates using the 2021 Business Response Survey. *Monthly Labor Review*, pp. 1-15.
- Datta, D.K., 1991. Organizational fit and acquisition performance: Effects of post-acquisition integration. *Strategic management journal*, 12(4), pp.281-297.
- Davis, S.J., Liu, D., and Sheng, X. S., 2021. Stock prices and economic activity in the time of coronavirus. *IMF Economic Review*, pp. 1-36.

- 
- Delventhal, M. and Parkhomenko, A., 2020. Spatial implications of telecommuting. SSRN Working Paper 3746555.
- Delventhal, M.J., Kwon, E., and Parkhomenko, A., 2022. JUE Insight: How do cities change when we work from home? *Journal of Urban Economics*, 127, In Press.
- Den Dulk, L., Groeneveld, S., Ollier-Malaterre, A., and Valcour, M., 2013. National context in work-life research: A multi-level cross-national analysis of the adoption of workplace work-life arrangements in Europe. *European Management Journal*, 31(5), pp. 478-494.
- Deng, X., Kang, J.K., and Low, B.S., 2013. Corporate social responsibility and stakeholder value maximization: Evidence from mergers. *Journal of Financial Economics*, 110(1), pp. 87-109.
- DesJardine, M.R., Marti, E., and Durand, R., 2021. Why activist hedge funds target socially responsible firms: The reaction costs of signaling corporate social responsibility. *Academy of Management Journal*, 64(3), pp. 851-872.
- Dettling, L. J., 2017. Broadband in the labor market: The impact of residential high-speed internet on married women's labor force participation. *ILR Review*, 70(2), pp. 451-482.
- Di Giuli, A. and Kostovetsky, L., 2014. Are red or blue companies more likely to go green? Politics and corporate social responsibility. *Journal of Financial Economics*, 111(1), pp. 158-180.
- DiMaggio, P.J., and Powell, W.W., 1983. The iron cage revisited: Institutional isomorphism and collective rationality in organizational fields. *American Sociological Review*, 48(2), 147-160.
- Dikova, D., Sahib, P.R., and Van Witteloostuijn, A., 2010. Cross-border acquisition abandonment and completion: The effect of institutional differences and organizational learning in the international business service industry, 1981-2001. *Journal of International Business Studies*, 41, pp. 223-245.
- Dingel, J., and Neiman, B., 2020. How many jobs can be done at home, *Journal of Public Economics*, 189, In Press.

- Doidge, C., Karolyi, G.A., and Stulz, R.M., 2007. Why do countries matter so much for corporate governance? *Journal of Financial Economics*, 86(1), pp. 1-39.
- Donaldson, T. and Preston, L.E., 1995. The stakeholder theory of the corporation: Concepts, evidence, and implications. *Academy of Management Review*, 20(1), pp. 65-91.
- Dong, M., Hirshleifer, D., and Teoh, S. H., 2021. Misvaluation and corporate inventiveness. *Journal of Financial and Quantitative Analysis*, 56(8), pp. 2605-2633.
- Doukas, J.A. and Zhang, R., 2021. Managerial ability, corporate social culture, and M&As. *Journal of Corporate Finance*, 68, p.101942.
- Duong, H.N., Nguyen, J.H., Nguyen, M., and Rhee, S.G., 2020. Navigating through economic policy uncertainty: The role of corporate cash holdings. *Journal of Corporate Finance*, 62, p.101607.
- Edmans, A, 2011, Does the stock market fully value intangibles? Employee satisfaction and equity prices, *Journal of Financial Economics* 101(3), pp. 621-640.
- Eisfeldt, A. L., and Papanikolaou, D., 2013. Organization capital and the cross-section of expected returns. *The Journal of Finance*, 68(4), pp. 1365-1406.
- Ellis, J.A., Moeller, S.B., Schlingemann, F.P., and Stulz, R.M., 2017. Portable country governance and cross-border acquisitions. *Journal of International Business Studies*, 48, pp. 148-173.
- Emanuel, N. and Harrington, E., 2023. Working remotely? Selection, treatment, and the market for remote work. Selection, Treatment, and the Market for Remote Work. Federal Reserve Bank of New York Staff Report 1061.
- Erel, I., Liao, R.C., and Weisbach, M.S., 2012. Determinants of cross-border mergers and acquisitions. *Journal of Finance*, 67(3), pp. 1045-1082.
- Etheridge, B., Wang, Y., and Tang, L., 2020. Worker productivity during lockdown and working from home: Evidence from self-reports. ISER Working Paper Series No. 2020-12.

- 
- Fama, E.F. and French, K.R., 2007. Disagreement, tastes, and asset prices. *Journal of Financial Economics*, 83(3), pp. 667-689.
- Farrell, K., Unlu, E., and Yu, J., 2014. Stock repurchases as an earnings management mechanism: The impact of financing constraints. *Journal of Corporate Finance*, 25, pp. 1-15.
- Fauver, L., McDonald, M.B., and Taboada, A.G., 2018. Does it pay to treat employees well? International evidence on the value of employee-friendly culture. *Journal of Corporate Finance*, 50, pp. 84-108.
- Favilukis, J. Y., Lin, X., Sharifkhani, A., and Zhao, X., 2020. Labor force telework flexibility and asset prices: evidence from the COVID-19 pandemic. Georgetown McDonough School of Business Research Paper 3693239.
- Ferrell, A., Liang, H., and Renneboog, L., 2016. Socially responsible firms. *Journal of Financial Economics*, 122(3), pp. 585-606.
- Fiegenbaum, A., and Thomas, H. 1986. Dynamic and risk measurement perspectives on Bowman's risk-return paradox for strategic management: An empirical study. *Strategic Management Journal*, 7: 395–407.
- Finkelstein, S., 1992. Power in top management teams: dimensions, measurement, and validation. *Academy of Management Journal*, 35, pp. 505-538.
- Flamholtz, E., 1971. A model for human resource valuation: A stochastic process with service rewards. *The Accounting Review*, 46(2), pp. 253-267.
- Flammer, C. and Luo, J., 2017. Corporate social responsibility as an employee governance tool: Evidence from a quasi-experiment. *Strategic Management Journal*, 38(2), pp. 163-183.
- Flammer, C., 2013. Corporate social responsibility and shareholder reaction: The environmental awareness of investors. *Academy of Management Journal*, 56(3), pp. 758-781.
- Flammer, C., 2015. Does corporate social responsibility lead to superior financial performance? A regression discontinuity approach. *Management Science*, 61(11), pp. 2549-2568.

Flex Index (2023), 2023 Methodology Report. Accessible at:

<https://www.flex.scoopforwork.com/reports/flex-index-methodology>

- Folkestad, J., and Gonzalez, R. 2010. Teamwork for innovation: A content analysis of the highly read and highly cited literature on innovation. *Advances in Developing Human Resources*, 12(1), 115–136.
- Fong, W.M., Lam, K.C., Wong, P.W., and Yao, Y., 2019. Mergers & acquisitions and the acquirer-target cultural differences. *Review of Quantitative Finance and Accounting*, 53, pp. 633-661.
- Ford, D., Storey, M. A., Zimmermann, T., Bird, C., Jaffe, S., Maddila, C., Butler, J. L., Houck, B., and Nagappan, N., 2021. A tale of two cities: Software developers working from home during the Covid-19 pandemic. *ACM Transactions on Software Engineering and Methodology (TOSEM)*, 31(2), pp. 1-37.
- Formica, S. and Sfodera, F., 2022. The Great Resignation and Quiet Quitting paradigm shifts: An overview of current situation and future research directions. *Journal of Hospitality Marketing & Management*, 31(8), pp. 899-907.
- Frazzini, A. and Pedersen, L.H., 2014. Betting against beta. *Journal of Financial Economics*, 111(1), pp. 1-25.
- Freeman, R.E. and Reed, D.L., 1983. Stockholders and stakeholders: A new perspective on corporate governance. *California Management Review*, 25(3), pp. 88-106.
- Freeman, R.E., 1984. *Strategic Management: a Stakeholder Approach*. Boston MA: Pitman.
- Friedman, M., 2007. The social responsibility of business is to increase its profits. *In Corporate Ethics and Corporate Governance* (pp. 173-178). Berlin, Heidelberg: springer berlin heidelberg.
- Frynas, J.G., Child, J., and Tarba, S.Y., 2017. Non-market social and political strategies—new integrative approaches and interdisciplinary borrowings. *British Journal of Management*, 28(4), pp. 559-574.
- Galbreath, J., 2010. Drivers of corporate social responsibility: The role of formal strategic planning and firm culture. *British Journal of Management*, 21(2), pp. 511-525.

- 
- Gao, F., Lisic, L.L., and Zhang, I.X., 2014. Commitment to social good and insider trading. *Journal of Accounting and Economics*, 57(2-3), pp. 149-175.
- Gardberg, N.A. and Fombrun, C., 2006. Corporate citizenship: creating intangible assets across institutional environment, *Academy of Management Review*, 31, pp. 329-346.
- Garfinkel, M.R. and Glazer, A., 1994. Does electoral uncertainty cause economic fluctuations? *American Economic Review*, 84(2), pp. 169–173.
- Gemmill, G., 1992. Political risk and market efficiency: tests based in British stock and options markets in the 1987 election. *Journal of Banking & Finance*, 16(1), pp. 211–231.
- Giambona, E., Graham, J.R., and Harvey, C.R., 2017. The management of political risk. *Journal of International Business Studies*, 48(4), pp. 523–533.
- Gibbs, M., Mengel, F., and Siemroth, C., 2021. Work from home & productivity: Evidence from personnel & analytics data on IT professionals. University of Chicago Becker Friedman Institute for Economics Working Paper 2021-56.
- Gillan, S.L., Koch, A., and Starks, L.T., 2021. Firms and social responsibility: A review of ESG and CSR research in corporate finance. *Journal of Corporate Finance*, 66, p.101889.
- Godfrey, P.C., 2005. The relationship between corporate philanthropy and shareholder wealth: a risk management perspective. *Academy of Management Review*, 30, pp. 777-798.
- Godfrey, P.C., Merrill, C.B., and Hansen, J.M., 2009. The relationship between corporate social responsibility and shareholder value: an empirical test of the risk management hypothesis. *Strategic Management Journal*, Vol. 30, pp. 425-445.
- Golubov, A., Lasfer, M., and Vitkova, V., 2020. Active catering to dividend clienteles: Evidence from takeovers. *Journal of Financial Economics*, 137(3), pp. 815-836.
- Gomes, E., Weber, Y., Brown, C., and Tarba, S.Y., 2011. *Mergers, acquisitions and strategic alliances: Understanding the process*. USA and UK: Palgrave Macmillan.
- Gomez-Mejia, L.R. and Palich, L.E., 1997. Cultural diversity and the performance of multinational firms. *Journal of International Business Studies*, 28, pp. 309-335.

- Goodpaster, K. E., 1983, 'The Concept of Corporate Social Responsibility', *Journal of Business Ethics*, 2, pp. 1-22.
- Governance & Accountability Institute (G&A) 2012, *2012 Corporate ESG / Sustainability / Responsibility Reporting -- Does It Matter?* Report.
- Governance & Accountability Institute (G&A) 2020, *2020 flash report S&P 500 – Trends on the sustainability reporting practices of S&P index companies*.
- Goyal, Amit, and Pedro Santa-Clara, 2003, Idiosyncratic risk matters! *Journal of Finance*, 58, pp. 975-1008.
- Grabke-Rundell, A. and Gomez-Mejia, L. R., 2002. Power as a determinant of executive compensation, *Human Resource Management Review*, 12, pp. 3-23.
- Graham, J.R., Grennan, J., Harvey, C.R., and Rajgopal, S., 2022a Corporate culture: Evidence from the field. *Journal of Financial Economics*, 146(2), pp. 552-593.
- Graham, J.R., Grennan, J.A., Harvey, C.R. and Rajgopal, S., 2022b. Corporate culture: The interview evidence. *Journal of Applied Corporate Finance*, 34(4), pp. 22-41.
- Greenhaus, J. H. and Singh, R., 2003. Work-family linkages, a sloan work and family encyclopedia entry. *Chestnut Hill, MA: Boston College*.
- Gregory, A., Whittaker, J. and Yan, X., 2016. Corporate social performance, competitive advantage, earnings persistence and firm value. *Journal of Business Finance & Accounting*, 43(1-2), pp.3-30.
- Grennan, J. and Li, K., 2023. Corporate culture: A review and directions for future research. *Handbook of Financial Decision Making*, pp. 112-132.
- Guiso, L., P. Sapienza, and L. Zingales, 2015a. The value of corporate culture. *Journal of Financial Economics*, 117, pp. 60-76.
- Guiso, L., P. Sapienza, and L. Zingales, 2015b. Corporate culture, societal culture, and institutions. *American Economic Review Papers & Proceedings*, 105, pp. 336-339.
- Gupta, A., Mittal, V., Peeters, J., and Van Nieuwerburgh, S., 2022. Flattening the curve: pandemic-induced revaluation of urban real estate. *Journal of Financial Economics*, 146(2), pp. 594-636.

- 
- Gupta, A., Raman, K., and Shang, C., 2020. Do informal contracts matter for corporate innovation? Evidence from social capital. *Journal of Financial and Quantitative Analysis*, 55(5), pp. 1657-1684.
- Haga, J., Huhtamäki, F., Sundvik, D., and Thor, T., 2024. Nothing to fear: Strong corporate culture and workplace safety. *Review of Quantitative Finance and Accounting*, 63, 519–550.
- Hambrick, D.C. and Mason, P.A., 1984. Upper echelons: The organization as a reflection of its top managers. *Academy of Management Review*, 9(2), pp. 193-206.
- Hansen, S., Lambert, P.J., Bloom, N., Davis, S.J., Sadun, R., and Taska, B., 2023. Remote work across jobs, companies, and space. NBER Working Paper 31007.
- Harjoto, M.A. and Jo, H., 2015. Legal vs. normative CSR: Differential impact on analyst dispersion, stock return volatility, cost of capital, and firm value. *Journal of Business Ethics*, 128(1), pp. 1-20
- Hartnell, C.A., Ou, A.Y., and Kinicki, A., 2011. Organizational culture and organizational effectiveness: a meta-analytic investigation of the competing values framework's theoretical suppositions. *Journal of Applied Psychology*, 96(4), p.677.
- Hasan, M.M. and Jiang, H., 2023. Political sentiment and corporate social responsibility. *The British Accounting Review*, 55(1), p.101170.
- He, J., Mao, Y., Morrison, A. M., and Coca-Stefaniak, J. , 2021. On being warm and friendly: the effect of socially responsible human resource management on employee fears of the threats of COVID-19. *International Journal of Contemporary Hospitality Management*, 33, pp. 346-366.
- Herndon, N.C., Fraedrich, J.P., and Yeh, Q.J., 2001. An investigation of moral values and the ethical content of the corporate culture: Taiwanese versus US sales people. *Journal of Business Ethics*, 30, pp. 73-85.
- Hewett, K., Money, R.B., and Sharma, S., 2006. National culture and industrial buyer-seller relationships in the United States and Latin America. *Journal of the Academy of Marketing Science*, 34(3), pp. 386-402.

## References

---

- Hibbs, D.A., 1977. Political parties and macroeconomic policy. *American Political Science Review*, 71(4), pp. 1467-1487.
- Hilary, G. and Hui, K. W., 2009. Does religion matter in corporate decision making in America? *Journal of Financial Economics*, 93, pp. 455-473.
- Ho, T., Kim, K., Li, Y., and Xu, F., 2022. Does real flexibility help firms navigate the COVID-19 pandemic? *The British Accounting Review*, p.101148.
- Hoberg, G. and Phillips, G., 2010. Product market synergies and competition in mergers and acquisitions: A text-based analysis. *Review of Financial Studies*, 23(10), pp. 3773-3811.
- Hoberg, G. and Phillips, G., 2016. Text-based network industries and endogenous product differentiation. *Journal of Political Economy*, 124(5), pp. 1423-1465.
- Hoberg, G. and Phillips, G., 2010. Real and financial industry booms and busts. *Journal of Finance*, 65, pp. 45–86.
- Hofstede, G. 1980. *Culture's Consequences: International Differences in Work-Related Values*. Sage Publications, London, UK
- Hoi, C.K., Wu, Q., and Zhang, H., 2013. Is corporate social responsibility (CSR) associated with tax avoidance? Evidence from irresponsible CSR activities. *The Accounting Review*, 88(6), pp. 2025-2059.
- Holland, J. L., 1976. Vocational preferences. M. D. Dunnette (Ed.), *Handbook of Industrial and Organizational Psychology*, Wiley, New York (1976), pp. 521-570.
- Hou, J., Liang, C., Chen, P.Y., and Gu, B., 2022. Does telework reduce unequal impacts of the COVID-19 disaster on job losses across genders? Boston University Questrom School of Business Research Paper (4038594).
- Hou, K., Tang, K., and Zhang, B., 2017. Political uncertainty and commodity prices. Charles A. Dice Center Working Paper (2017–25).
- Huang, Z. and Wu, E., 2020. Learning by Acquiring: The Environmental and Social Impact of M&As, SSRN Working Paper.

- 
- Hulten, C. R. and Hao, X., 2008. What is a company really worth. Intangible capital and the ‘market to book value’ puzzles, NBER Working Paper Series 14548.
- Ishii, J. and Xuan, Y., 2014. Acquirer-target social ties and merger outcomes. *Journal of Financial Economics*, 112(3), pp. 344-363.
- James, A., 2014. Work-life ‘balance’, recession and the gendered limits to learning and innovation (or, why it pays employers to care). *Gender, Work & Organization*, 21(3), pp. 273-294.
- Jens, C.E., 2017. Political uncertainty and investment: Causal evidence from US gubernatorial elections. *Journal of Financial Economics*, 124(3), pp.563–579.
- Jensen, M.C., 2005. Agency costs of overvalued equity. *Financial management*, 34(1), pp.5-19.
- Jensen, M. C. and Meckling, W. H., 1976. Theory of the firm: Managerial behavior, agency costs and ownership structure. *Journal of Financial Economics*, 3(4), 305-360.
- Jeong, K.H., Jeong, S.W., Lee, W.J. and Bae, S.H., 2018. Permanency of CSR activities and firm value. *Journal of Business Ethics*, 152, pp.207-223.
- Jha, A. and Cox, J., 2015. Corporate social responsibility and social capital. *Journal of Banking & Finance*, 60, pp. 252-270.
- Jiao, A. and Ren, H., 2023. Political partisanship and firm value. Available at SSRN 4487999.
- Jiraporn, P., Jiraporn, N., Boeprasert, A., and Chang, K., 2014. Does corporate social responsibility (CSR) improve credit ratings? Evidence from geographic identification. *Financial Management*, 43, pp. 505–531.
- Jiskrova, G. K., 2022. Impact of COVID-19 pandemic on the workforce: from psychological distress to the Great Resignation. *Journal of Epidemiology and Community Health*, 76(6), pp. 525-526.
- Jo, H. and Na, H., 2012. Does CSR reduce firm risk? Evidence from controversial industry sectors. *Journal of Business Ethics*, 110(4), pp. 441-456.

## References

---

- Julio, B. and Yook, Y., 2012. Political uncertainty and corporate investment cycles. *Journal of Finance*, 67 (1), pp. 45-8.
- Keller, K.L., 1993. Conceptualizing, measuring, and managing customer-based brand equity. *Journal of Marketing*, 57(1), pp.1-22.
- Kelly, B., Pástor, L., and Veronesi, P., 2016. The price of political uncertainty: Theory and evidence from the option market, *Journal of Finance*, 71(5), pp. 2417-2480.
- Kent, D. and Titman, S., 1997. Evidence on the characteristics of cross-sectional variation in stock returns, *Journal of Finance* 52, pp. 1-33.
- Khan, Z., Soundararajan, V., Wood, G., and Ahammad, M.F., 2020. Employee emotional resilience during post-merger integration across national boundaries: Rewards and the mediating role of fairness norms. *Journal of World Business*, 55(2), p.100888.
- Kiessling, T. and Harvey, M., 2006. The human resource management issues during an acquisition: the target firm's top management team and key managers. *The International Journal of Human Resource Management*, 17(7), pp. 1307-1320.
- Kiessling, T., Harvey, M., and Moeller, M., 2012. Supply-chain corporate venturing through acquisition: Key management team retention. *Journal of World Business*, 47(1), pp. 81-92.
- Kim, C.F., Pantzalis, C. and Park, J.C., 2012. Political geography and stock returns: The value and risk implications of proximity to political power. *Journal of Financial Economics*, 106(1), pp.196-228.
- Kim, T., Mullins, L. B., and Yoon, T., 2021. Supervision of telework: A key to organizational performance. *The American Review of Public Administration*, 51(4), pp. 263-277.
- Kim, W. C., Hwang, P., & Burgers, W. P. 1993. 'Multinationals' diversification and the riskreturn trade-off'. *Strategic Management Journal*, 14: 275–286.
- Kogut, B. and Singh, H., 1988. The effect of national culture on the choice of entry mode. *Journal of international business studies*, 19, pp.411-432.

- 
- Kramer, M.R. and Porter, M.E., 2006. Strategy and society: The link between competitive advantage and corporate social responsibility. *Harvard Business Review*, 84(12), pp. 78-92.
- Krishnan, H.A., Hitt, M.A., and Park, D., 2007. Acquisition premiums, subsequent workforce reductions and post-acquisition performance. *Journal of Management Studies*, 44(5), pp. 709-732.
- Krug, J.A. and Nigh, D., 2001. Executive perceptions in foreign and domestic acquisitions: An analysis of foreign ownership and its effect on executive fate. *Journal of World Business*, 36(1), pp. 85-105.
- Krüger, P., 2015. Corporate goodness and shareholder wealth. *Journal of Financial Economics*. 115(2), pp. 304-329.
- Kuokkanen, H. and Sun, W., 2020. Companies, meet ethical consumers: Strategic CSR management to impact consumer choice. *Journal of Business Ethics*, 166, pp. 403-423.
- Kurnia, S., Choudrie, J., Mahbubur, R. M., and Alzougool, B., 2015. E-commerce technology adoption: A Malaysian grocery SME retail sector study. *Journal of Business Research*, 68(9), pp. 1906–1918.
- Kuvandikov, A., Pendleton, A., and Higgins, D., 2014. Employment change after takeovers: the role of executive ownership. *British Journal of Industrial Relations*, 52(2), pp. 191-236.
- Kuzmina, O., 2023. Employment flexibility and capital structure: Evidence from a natural experiment. *Management Science*, 69(9), pp. 4992–5017.
- Kwan, A. and Matthies, B., 2022. Measuring the impact of remote work across the United States. Working Paper.
- Lai, S., Ng L., and Zhang, B. 2014. Does PIN affect equity prices around the world? *Journal of Financial Economics*, 114, pp. 178-95.
- Larsson, R. and Lubatkin, M., 2001. Achieving acculturation in mergers and acquisitions: An international case survey. *Human Relations*, 54(12), pp. 1573-1607.

## References

---

- Lautsch, B.A., Kossek, E. E., and Eaton, S. C., 2009. Supervisory approaches and paradoxes in managing telecommuting implementation. *Human Relations*, 62(6), pp. 795-827.
- Lawrence, E.R., Raithatha, M., and Rodriguez, I., 2021. The effect of cultural and institutional factors on initiation, completion, and duration of cross-border acquisitions. *Journal of Corporate Finance*, 68, pp. 101950.
- Leonardi, P. M., 2021. COVID-19 and the new technologies of organizing: digital exhaust, digital footprints, and artificial intelligence in the wake of remote work. *Journal of Management Studies*, 58(1), pp. 249-253.
- Levi, M., K. Li, and Zhang, F., 2010. Deal or no deal: Hormones and the mergers and acquisitions game. *Management Science* 56, pp. 1462-1483.
- Li, J. and Born, J.A., 2006. Presidential election uncertainty and common stock returns in the United States. *Journal of Financial Research*, 29(4), pp. 609-622.
- Li, J. Y., Sun, R., Tao, W., and Lee, Y., 2021. Employee coping with organizational change in the face of a pandemic: The role of transparent internal communication. *Public Relations Review*, 47, In Press.
- Li, K., Liu, X., Mai, F., and Zhang, T., 2021. The role of corporate culture in bad times: Evidence from the COVID-19 pandemic. *Journal of Financial and Quantitative Analysis*, 56(7), pp. 2545-2583.
- Li, K., Mai, F., Shen, R., and Yan, X., 2021. Measuring corporate culture using machine learning. *Review of Financial Studies*, 34(7), pp. 3265-3315.
- Li, Q., Lin, C., and Xu, L., 2020. Political investment cycles of state-owned enterprises. *Review of Financial Studies*, 33(7), pp. 3088-3129.
- Li, T., Trinh, V.Q., and Elnahass, M., 2022. Drivers of global banking stability in times of crisis: the role of corporate social responsibility. *British Journal of Management*, Forthcoming.
- Li, X. and Vermeulen, F., 2021. High risk, low return (and vice versa): the effect of product innovation on firm performance in a transition economy. *Academy of Management Journal*, 64(5), pp.1383-1418.

- 
- Li, Y., Gong, M., Zhang, X.Y., and Koh, L., 2018. The impact of environmental, social, and governance disclosure on firm value: The role of CEO power. *The British Accounting Review*, 50(1), pp. 60-75.
- Li, Y., Zhang, Y.A., and Shi, W., 2020. Navigating geographic and cultural distances in international expansion: The paradoxical roles of firm size, age, and ownership. *Strategic Management Journal*, 41(5), pp. 921-949
- Liang, H. and Renneboog, L., 2017. On the foundations of corporate social responsibility. *Journal of Finance*, 72(2), pp. 853-910.
- Lin, K.J., Tan, J., Zhao, L. and Karim, K., 2015. In the name of charity: Political connections and strategic corporate social responsibility in a transition economy. *Journal of Corporate Finance*, 32, pp.327-346.
- Lim, J., Makhija, A.K., and Shenkar, O., 2016. The asymmetric relationship between national cultural distance and target premiums in cross-border M&A. *Journal of Corporate Finance*, 41, pp. 542-571.
- Lins, K.V., Servaes, H., and Tamayo, A., 2017. Social capital, trust, and firm performance: The value of corporate social responsibility during the financial crisis. *Journal of Finance*, 72(4), pp. 1785-1824.
- Lins, K.V., Volpin, P., and Wagner, H.F., 2013. Does family control matter? International evidence from the 2008–2009 financial crisis. *Review of Financial Studies*, 26(10), pp. 2583-2619.
- Liu, L.X., Shu, H., and Wei, K.J., 2017. The impacts of political uncertainty on asset prices: Evidence from the Bo scandal in China. *Journal of Financial Economics*, 125(2), pp. 286-310.
- Liu, S. and Su, Y., 2023. The effect of working from home on the agglomeration economies of cities: Evidence from advertised wages. SSRN Working Paper.
- Luo, X. and Bhattacharya, C.B., 2009. The debate over doing good: Corporate social performance, strategic marketing levers, and firm-idiosyncratic risk. *Journal of Marketing*, 73(6), pp. 198-213.
- Lyon, T.P. and Montgomery, A.W., 2015. The means and end of greenwash. *Organization & Environment*, 28(2), pp. 223-249.

- Ma, D. and Parish, W.L., 2006. Tocquevillian moments: Charitable contributions by Chinese private entrepreneurs. *Social Forces*, 85(2), pp. 943-964.
- Macias, A. and Pirinsky, C., 2015. Employees and the market for corporate control. *Journal of Corporate Finance*, 31, pp. 33-53.
- Maignan, I. and Ferrell, O.C., 2000. Measuring corporate citizenship in two countries: The case of the United States and France. *Journal of Business Ethics*, 23, pp. 283-297.
- Maignan, I., Ferrell, O.C., and Ferrell, L., 2005. A stakeholder model for implementing social responsibility in marketing. *European Journal of Marketing*, 39(9/10), pp. 956-977.
- Malik, M., 2015. Value-enhancing capabilities of CSR: A brief review of contemporary literature. *Journal of Business Ethics*, 127(2), pp. 419-438.
- Malmendier, U., Moretti, E., and Peters, F.S., 2018. Winning by losing: Evidence on the long-run effects of mergers. *Review of Financial Studies*, 31(8), pp. 3212-3264.
- Mao, C.X. and Weathers, J., 2019. Employee treatment and firm innovation. *Journal of Business Finance & Accounting*, 46(7-8), pp. 977-1002.
- Margolis, J.D. and Walsh, J.P., 2003. Misery loves companies: Rethinking social initiatives by business. *Administrative Science Quarterly*, 48(2), pp. 268-305.
- Makridis, C. and Schloetzer, J.D., 2022. Does working from home increase job satisfaction and retention? Evidence from the COVID-19 pandemic. *Evidence from the COVID-19 Pandemic (March 6, 2022)*. *Georgetown McDonough School of Business Research Paper*, (4016657).
- Marks, M.L. and Mirvis, P.H., 2011. Merge ahead: A research agenda to increase merger and acquisition success. *Journal of Business and Psychology*, 26, pp. 161-168.
- Mas, A. and Pallais, A., 2017. Valuing alternative work arrangements. *American Economic Review*, 107(12), pp. 3722-3759.
- McWilliams, A., Siegel, D.S., and Wright, P.M., 2006. Corporate social responsibility: Strategic implications. *Journal of Management Studies*, 43(1), pp. 1-18.

- 
- Messersmith, J.G., Patel, P.C., Lepak, D.P. and Gould-Williams, J.S., 2011. Unlocking the black box: exploring the link between high-performance work systems and performance. *Journal of Applied Psychology*, 96(6), p.1105.
- Moeller, S., Schlingeman, F., and Stulz, R., 2004. Firm size and the gains from acquisitions. *Journal of Financial Economics* 73(2), pp. 201-228.
- Morosini, P. S. and Singh, H., 1998. National Cultural Distance and Cross-Border Acquisition Performance. *Journal of International Business Studies*, 29(1), pp. 137-158.
- Mueller, H.M., Ouimet, P.P., and Simintzi, E., 2017. Within-firm pay inequality. *Review of Financial Studies*, 30(10), pp. 3605-3635.
- Muthuri, J.N., Matten, D., and Moon, J., 2009. Employee volunteering and social capital: Contributions to corporate social responsibility. *British Journal of Management*, 20(1), pp. 75-89.
- Nemanich, L.A. and Keller, R.T., 2007. Transformational leadership in an acquisition: A field study of employees. *The Leadership Quarterly*, 18(1), pp. 49-68.
- Newman, A., Mole, K.F., Ucbasaran, D., Subramanian, N., and Lockett, A., 2018. Can your network make you happy? Entrepreneurs' business network utilization and subjective well-being. *British Journal of Management*, 29(4), pp. 613-633.
- Ng, A.C. and Rezaee, Z., 2015. Business sustainability performance and cost of equity capital. *Journal of Corporate Finance*, 34, pp. 128-149.
- Ng, L., Yu, J., and Yu, L., 2021. Work from home, managerial sentiment, and corporate liquidity management under COVID-19. *SSRN*. Rochester, NY: Social Science Research Network, p.3837134.
- Nguyen, D. D., J. Hagendorff, and A. Eshraghi, 2018. Does a CEO's cultural heritage affect performance under competitive pressure? *Review of Financial Studies*, 31, pp. 97-141.
- Nguyen, P.A., Kecskés, A., and Mansi, S., 2020. Does corporate social responsibility create shareholder value? The importance of long-term investors. *Journal of Banking & Finance*, 112, p.105217.

- Nguyen, T., Nguyen, H.G.L., and Xiangkang, Y., 2015. Corporate governance and corporate financing and investment during the 2007–2008 financial crisis, *Financial Management* 44(1), pp. 115-146.
- Nowak, M. J. and McCabe, M., 2003. Information costs and the role of the independent corporate director. *Corporate Governance: An International Review*, 11, pp. 300-307.
- O'Reilly, C., and J. A. Chatman, 1996. Culture as social control: Corporations, cults, and commitment, in: Staw, B.M., and L.L. Cummings (eds.), *Research in Organizational Behaviour*, Vol. 18, Greenwich, CT: JAI Press, Inc., pp. 157-200.
- Ozkan, A., Temiz, H., and Yildiz, Y., 2022. Climate Risk, Corporate Social Responsibility, and Firm Performance. *British Journal of Management*.
- Pacelli, J., 2019. Corporate culture and analyst catering. *Journal of Accounting and Economics*, 67(1), pp. 120-143.
- Pagano, M., Wagner, C., and Zechner, J., 2023. Disaster resilience and asset prices. *Journal of Financial Economics*, 150(2), In Press.
- Papanikolaou, D. and Schmidt, L. D., 2022. Working remotely and the supply-side impact of Covid-19. *The Review of Asset Pricing Studies*, 12(1), pp. 53-111.
- Pastor, L., and P. Veronesi, 2012, Uncertainty about government policy and stock prices, *Journal of Finance*, 67, pp. 1219-1264.
- Pastor, L., and P. Veronesi, 2013, Political uncertainty and risk premia, *Journal of Financial Economics* 110, pp. 520-545.
- Pellegrino, B. and Zheng, G., 2024. Quantifying the impact of red tape on investment: A survey data approach. *Journal of Financial Economics*, 152, p.103763.
- Peretz, H. and Fried, Y., 2012. National cultures, performance appraisal practices, and organizational absenteeism and turnover: A study across 21 countries. *Journal of Applied Psychology*, 97(2), pp. 448-459.
- Peretz, H. and Rosenblatt, Z., 2011. The role of societal cultural practices in organizational investment in training: A comparative study in 21 countries. *Journal of Cross-Cultural Psychology*, 42(5), pp. 817-831.

- 
- Peretz, H., Fried, Y., and Levi, A., 2018. Flexible work arrangements, national culture, organisational characteristics, and organisational outcomes: A study across 21 countries. *Human Resource Management Journal*, 28(1), pp. 182-200.
- Peretz, H., Levi, A., and Fried, Y., 2015. Organizational diversity programs across cultures: effects on absenteeism, turnover, performance and innovation. *The International Journal of Human Resource Management*, 26(6), pp. 875-903.
- Peteraf, M. A., 1991. The cornerstones of competitive advantage: A resource-based view. *Strategic Management Journal*, 14(3), 179–191.
- Piercy, N. and Rich, N., 2009. Lean transformation in the pure service environment: the case of the call service centre. *International Journal of Operations & Production Management*, 29(1), pp. 54-76.
- Pindyck, R.S. and Solimano, A., 1993. Economic instability and aggregate investment. *NBER macroeconomics annual*, 8, pp.259-303.
- Piszczek, M. M. and Pimputkar, A. S., 2021. Flexible schedules across working lives: Age-specific effects on well-being and work. *Journal of Applied Psychology*, 106(12), pp. 1907-1920.
- Polk, C. and Sapienza, P., 2008. The stock market and corporate investment: A test of catering theory. *Review of Financial Studies*, 22(1), pp. 187-217.
- Polk, C. and Sapienza, P., 2008. The stock market and corporate investment: A test of catering theory. *The Review of Financial Studies*, 22(1), pp. 187-217.
- Porter, M. E. 1991. America's green strategy. *Scientific American*, 264, p.168.
- Porter, M.E., 1991. Towards a dynamic theory of strategy. *Strategic Management Journal*, 12(2), pp. 95-117.
- Putnam, R. D., 1993, *Making Democracy Work: Civic Traditions in Modern Italy* (Princeton University Press, Princeton, NJ).
- Putnam, R. D., 2000, *Bowling Alone: The Collapse and Revival of American Community* (Simon and Schuster, New York, NY).
- Putnam, R., 1993. The prosperous community: Social capital and public life. *American Prospect*, 13, pp. 35-42.

- Qian, W. and Chen, X., 2021. Corporate environmental disclosure and political connection in regulatory and leadership changes: The case of China. *The British Accounting Review*, 53(1), p.100935.
- Rabier, M.R., 2017. Acquisition motives and the distribution of acquisition performance. *Strategic Management Journal*, 38(13), pp. 2666-2681.
- Rabl, T., Jayasinghe, M., Gerhart, B., and Kühlmann, T. M., 2014. A meta-analysis of country differences in the high-performance work system–business performance relationship: The roles of national culture and managerial discretion. *Journal of Applied Psychology*, 99(6), pp. 1011-1041.
- Rajgopal, S., Shivakumar, L., and Simpson, A.V., 2007. A catering theory of earnings management. SSRN Working Paper 991138.
- Ramani, A. and Bloom, N., 2021. The Donut effect of COVID-19 on cities. NBER Working Paper 28876.
- Ranft, A.L. and Lord, M.D., 2002. Acquiring new technologies and capabilities: A grounded model of acquisition implementation. *Organization Science*, 13(4), pp. 420-441.
- Rangan, K., Chase, L., and Karim, S., 2015. The truth about CSR. *Harvard Business Review*, 93(1/2), pp. 40-49.
- Reus, T.H. and Lamont, B.T., 2009. The double-edged sword of cultural distance in international acquisitions. *Journal of International Business Studies*, 40, pp. 1298-1316.
- Riley, W.B. and Luksetich, W.A., 1980. The market prefers republicans: Myth or reality. *Journal of Financial and Quantitative Analysis*, 15(3), pp. 541-560.
- Rossi, S. and Volpin, P.F., 2004. Cross-country determinants of mergers and acquisitions. *Journal of Financial Economics*, 74(2), pp. 277-304.
- Rubin, A., 2008. Political views and corporate decision making: The case of corporate social responsibility. *Financial Review*, 43(3), pp. 337-360.
- Santa-Clara, P. and Valkanov, R., 2003. The presidential puzzle: Political cycles and the stock market. *Journal of Finance*, 58(5), pp. 1841-1872.

- 
- Schuler, R.S., 2000. The internationalization of human resource management. *Journal of International Management*, 6(3), pp. 239-260.
- Scott, W.R., 2008. *Institutions and organizations: Ideas and interests*. Sage.
- Servaes, H., and Tamayo, A., 2013, The impact of corporate social responsibility on the value of the firm: The role of customer awareness, *Management Science* 59, pp. 1045-1061.
- Shan, C. and Tang, D.Y., 2023. The value of employee satisfaction in disastrous times: Evidence from COVID-19. *Review of Finance*, 27(3), pp. 1027-1076.
- Shen, Y., Cheng, Y. and Yu, J., 2023. From recovery resilience to transformative resilience: How digital platforms reshape public service provision during and post COVID-19. *Public Management Review*, 25(4), pp.710-733.
- Siegel, J. I., Licht, A.N., and Schwartz, S.H., 2011. Egalitarianism and international investment. *Journal of Financial Economics* 102(3), pp. 621-642.
- Sørensen, J.B., 2002. The strength of corporate culture and the reliability of firm performance. *Administrative Science Quarterly*, 47(1), pp. 70-91.
- Spagnolo, G., 1999. Social relations and cooperation in organizations. *Journal of Economic Behaviour & Organization*, 38(1), pp. 1-25.
- Stirpe, L., Trullen, J. and Bonache, J., 2018. Retaining an ageing workforce: The effects of high-performance work systems and flexible work programmes. *Human Resource Management Journal*, 28(4), pp.585-604.
- Sudarsanam, S. and Mahate, A.A., 2003. Glamour acquirers, method of payment and post-acquisition performance: the UK evidence. *Journal of Business Finance & Accounting*, 30(1-2), pp. 299-342.
- Tang, Z., Hull, C.E. and Rothenberg, S., 2012. How corporate social responsibility engagement strategy moderates the CSR–financial performance relationship. *Journal of Management Studies*, 49(7), pp. 1274-1303.
- Taylor, F.W., 1911. *The principles of scientific management*. NuVision Publications, LLC.
- Teerikangas, S. and Very, P., 2006. The culture-performance relationship in M&A; From Yes/No to How. *British Journal of Management*, 17, pp. 31-48.

## References

---

- Teevan, J., Hecht, B., Jaffe, S., Baym, N., Bergmann, R., Brodsky, M., Buxton, B., Butler, J., Coleman, A., Czerwinski, M., Houck, B., Hudson, G., Iqbal, S., Maddila, C., Nowak, K., Peloquin, E., Fernandez, R. R., Rintel, S., Sellen, A., Smith, T., Storey, M. A., Suri, S., Wolf, H., and Yang, L., (2021). *The new future of work: Research from Microsoft into the pandemic's impact on work practices*, Microsoft.
- Tellis, G.J., Prabhu, J.C. and Chandy, R.K., 2009. Radical innovation across nations: The preeminence of corporate culture. *Journal of Marketing*, 73(1), pp. 3-23.
- Tobin, J., 1969. A general equilibrium approach to monetary theory. *Journal of Money, Credit and Banking*, 1(1), 15–29.
- Travlos, N. G., 1987. Corporate takeover bids, method of payment, and bidding firms' stock returns. *Journal of Finance*, 42(4), 943–963.
- Tsang, A., Frost, T., and Cao, H., 2023. Environmental, social, and governance (ESG) disclosure: A literature review. *The British Accounting Review*, p.101149.
- Vermeulen, F. and Barkema, H., 2001. Learning through acquisitions. *Academy of Management Journal*, 44(3), pp. 457-47
- Verwijmeren, P. and Derwall, J., 2010. Employee well-being, firm leverage, and bankruptcy risk. *Journal of Banking & Finance*, 34(5), pp. 956-964.
- United States Patent and Trademark Office. 2015. USPTO *Telework Annual Report 2015*. Retrieved November 25, 2019, from <https://www.uspto.gov/sites/default/files/documents/TeleworkAnnualReport2015-508.pdf>.
- Waddock, S., 2004. Creating corporate accountability: Foundational principles to make corporate citizenship real. *Journal of Business Ethics*, 50, pp. 313-327.
- Waddock, S.A. and Graves, S.B., 1997. The corporate social performance–financial performance link. *Strategic Management Journal*, 18(4), pp. 303-319.
- Waisman, M., P. Ye, and Y. Zhu, 2015, The effect of political uncertainty on the cost of corporate debt, *Journal of Financial Stability* 16, pp. 106-117.
- Wang, C., Xie, F., 2008. Corporate governance transfer and synergistic gains from mergers and acquisitions. *Review of Financial Studies* 22, pp. 829-858

- 
- Wang, G., Holmes Jr, R.M., Oh, I.S., and Zhu, W., 2016. Do CEOs matter to firm strategic actions and firm performance? A meta-analytic investigation based on upper echelons theory. *Personnel Psychology*, 69(4), pp. 775-862.
- Wang, H., Jia, M., Xiang, Y., and Lan, Y., 2022. Social performance feedback and firm communication strategy. *Journal of Management*, 48(8), pp. 2382-2420.
- Wang, Y., Farag, H., and Ahmad, W., 2021. Corporate culture and innovation: A tale from an emerging market. *British Journal of Management*, 32(4), pp. 1121-1140.
- Weitz, B.A. and Bradford, K.D., 1999. Personal selling and sales management: A relationship marketing perspective. *Journal of the Academy of Marketing Science*, 27, pp. 241-254.
- Wernerfelt, B., 1984. A resource-based view of the firm. *Strategic management journal*, 5(2), pp.171-180.
- Wulf, J. and Singh, H., 2011. How do acquirers retain successful target CEOs? The role of governance. *Management Science*, 57(12), pp. 2101-2114.
- Varaiya, N., Kerin, R.A. and Weeks, D., 1987. The relationship between growth, profitability, and firm value. *Strategic Management Journal*, 8(5), pp.487-497.
- Yarovaya, L., Mirza, N., Abaidi, J., and Hasnaoui, A., 2021. Human capital efficiency and equity funds' performance during the COVID-19 pandemic. *International Review of Economics & Finance*, 71, pp. 584-91.
- Zaman, R., 2024. When corporate culture matters: The case of stakeholder violations, *The British Accounting Review*, 56(1), 101188.
- Zhang, J., Kong, D., and Wu, J., 2018. Doing good business by hiring directors with foreign experience. *Journal of Business Ethics*, 153(3), pp. 859–876
- Zhang, T., Gerlowski, D. and Acs, Z., 2021. Working from home: small business performance and the COVID-19 pandemic. *Small business economics*, pp.1-26.
- Zhang, T., Zhang, Z., and Yang, J., 2022. When does corporate social responsibility backfire in acquisitions? Signal incongruence and acquirer returns. *Journal of Business Ethics*, 175, pp. 45-58.

## References

---

- Zhao, M., 2012. CSR-based political legitimacy strategy: Managing the state by doing good in China and Russia. *Journal of Business Ethics*, 111, pp. 439-460.
- Zheng, Q., Luo, Y., and Maksimov, V., 2015. Achieving legitimacy through corporate social responsibility: The case of emerging economy firms. *Journal of World Business*, 50(3), pp. 389-403.
- Zollo, M. and Singh, H., 2004. Deliberate learning in corporate acquisitions: post-acquisition strategies and integration capability in US bank mergers. *Strategic Management Journal*, 25(13), pp. 1233-1256.