

Set in Stone: The Persistence and Origins of Corporate Culture*

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Abstract

Using one of the largest panel datasets on corporate culture, we examine its evolution and origins, distinguishing between firm-level values and norms and corporate insiders' preferences. We find that corporate culture is highly persistent: firms with strong (or weak) cultures tend to remain so over the subsequent decade. The majority of the variation in culture is explained by firm fixed effects, reflecting initial cultural imprints around founding. Leveraging rich data on founder characteristics, we show that initial culture is shaped by founders' cultural heritage, the racial diversity of their birthplace, and the business environment at the start of their careers. We also provide suggestive evidence that firm-CEO (firm-employee) matching on values, as well as the influence of culture on CEOs, contribute to culture persistence. Overall, our findings suggest that a firm's founding imprint—reinforced through CEO/employee selection, attrition, and workplace norms—helps explain the enduring nature of corporate culture.

Keywords: Corporate Culture, Founders, CEOs, Cultural Heritage, Business Cycles, Racial Diversity, Earnings Calls, Employee Reviews.

JEL classification: *G30, G32, G34, G41, M14*

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*“Don’t Change Corporate Culture-Use It!...
Culture—no matter how defined—is singularly persistent.”
Peter Drucker, The Wall Street Journal, March 28, 1991*

1 Introduction

Graham et al. (2022a) report that 91% of the top executives surveyed consider culture highly important to their firms, with 79% ranking culture as a “top 5” factor affecting firm value.¹ Yet, questions remain about how culture is formed and evolves over time. In this paper, we address three questions: (1) Is corporate culture persistent, or is it subject to change? (2) If corporate culture is persistent, what mechanisms sustain it over time? and (3) who is responsible for a firm’s culture? Answers to these questions have direct implications for firm value and corporate risk management.

Corporate culture is “a system of shared values and norms that define appropriate attitudes and behaviors for organizational members” (O’Reilly and Chatman, 1996, p. 160). In the canonical view of the firm as a nexus of contracts, agency problems and incomplete contracts limit principals’ (the firm’s outside shareholders’) ability to specify and enforce every desired action of the agent they hire (an insider manager) (Meckling and Jensen, 1976; Demsetz, 1988). The same can be said between the firm’s manager and its employees. Kreps (1990) and Van den Steen (2010a) argue that because employees often face situations that cannot be fully specified in contracts *ex ante* (e.g., when their firm was hit by the COVID-19 pandemic), shared beliefs and values—i.e., a strong corporate culture—can lead to greater delegation, reduced monitoring, higher employee satisfaction, and increased effort, all of which have implications for firm performance (see empirical evidence in Li et al. (2021a)). Gorton et al. (2022) and Gorton and Zentefis (2024) propose a theory of the firm in which corporate culture serves as a form of informal institutions that complement formal contracting and governance systems, playing a central role in modern corporations.

¹A growing body of research has established that corporate culture explains mergers and acquisitions, corporate risk-taking, frauds, among other business outcomes, and correlates with firm value (e.g., Hilary and Hui, 2009; Fahlenbrach et al., 2012; Ahern et al., 2015; Biggerstaff et al., 2015; Guiso et al., 2015b; Pan et al., 2017, 2020; Li et al., 2021a,b; Graham et al., 2022a,b).

In this paper, we draw on one of the largest panel datasets on corporate culture to examine the evolution of firm culture over time. We further distinguish between the values and norms that prevail within a company and the individual preferences of corporate insiders to analyze the mechanisms underlying culture persistence. Our culture data are from Li et al. (2021b), who develop a semi-supervised machine learning approach to construct a dictionary of five cultural values—innovation, integrity, quality, respect, and teamwork—and apply it to earnings call transcripts, yielding firm-year scores for each value. We use the sum of these five values, referred to as the culture score, as our overall measure of firm culture. Our sample comprises 55,377 firm-year observations for 6,917 companies from 2002 to 2021.

We begin by examining the evolution of corporate culture. Each year, firms are sorted into quartiles based on their culture scores, and we track the average scores of these groups over the subsequent decade. We note that at formation, differences across quartiles are large. Although scores converge over time, convergence is incomplete, and substantial differences remain even after ten years.²

To quantify the persistence of corporate culture and identify its drivers, we conduct a variance decomposition that attributes variation in culture to firm-specific factors, CEO-specific factors, and year effects. Firm fixed effects account for 86% of the variation in culture, compared with 13% for CEO fixed effects and 1% for year effects. For comparison, firm fixed effects explain 63% of the variation in sales and 54% in capital expenditures. To disentangle firm and CEO contributions, we examine a sample of CEOs who transition across firms. In this mover sample, firm fixed effects explain up to 95% of the variation in culture, while CEO fixed effects account for only 1%. Taken together, these results indicate that the majority variation in corporate culture is time-invariant.

²The experience of Uber highlights the difficulty of altering deeply entrenched cultural traits. After founder Travis Kalanick stepped down and Dara Khosrowshahi became CEO, efforts to reshape the firm’s aggressive “macho” culture met resistance. By 2018—one year into his tenure—Khosrowshahi acknowledged that cultural transformation was proceeding far more slowly than he had hoped (<https://perma.cc/464R-VV74>). Uber’s pre-IPO SEC filings in 2019 reinforced this point, warning investors that its workplace culture had created “significant operational and cultural challenges” and remained an ongoing risk to the company’s performance and financial condition (Uber Technologies, Inc. 2019).

Building on the evidence of persistence in corporate culture, we examine the role of a firm’s initial culture in shaping its long-term trajectory. We proxy a firm’s initial culture with the culture score at the time of its initial public offering (IPO) and test its predictive power for subsequent culture scores. To capture potential decay, we interact initial culture with the number of years since IPO. We find that initial culture strongly predicts subsequent culture, controlling for a comprehensive set of firm characteristics and corporate events. In terms of economic significance, a one standard-deviation increase in a firm’s initial culture score corresponds to a 0.452 standard-deviation increase in its subsequent culture scores. By contrast, the interaction term is largely insignificant, suggesting that there is little decay in the influence of a firm’s initial culture over time.

One possible explanation for the strong influence of initial culture is founders’ ongoing involvement in their firms. To test this, we exclude firm-year observations in which founders remain as CEOs or board members. The effect of initial culture on subsequent culture persists, but in the absence of founder involvement, the effect exhibits some decay over time. These findings suggest that it is the culture established in a firm’s early years—rather than continued founder involvement—that shapes its culture today.

Next, we examine whether and how a firm’s founders shape its initial culture. We focus on three founder characteristics: cultural heritage, birthplace environment, and early career exposure to recessions. Since founders are not selected, any observed effects on a firm’s culture are likely to be causal.

We show that founders with cultural heritage from countries with high levels of uncertainty avoidance are more likely to establish strong corporate cultures, and founders who grew up in racially diverse communities also tend to foster stronger cultures. In contrast, founders who began their careers in a recession are less likely to develop strong cultures, possibly reflecting conservative risk preferences shaped by their formative experiences (Schoar and Zuo, 2017; Schoar et al., 2024). Interestingly, we find founder birthplace’s exposure to the frontier experience or high level of religiosity show little association with the initial culture of

the firms they establish.

We next examine the economic mechanisms underlying the persistence of corporate culture. We consider two possibilities. The first is a selection mechanism, whereby cultural alignment arises between a firm and the CEOs it hires (Schneider, 1987; Meglino et al., 1989; O’Reilly et al., 1991; Hilary and Hui, 2009; Liu, 2016). As Schoar et al. (2024) note, studying firm–CEO matching is generally challenging. Our culture dataset, which directly measures the values and norms prevailing within firms—distinct from CEOs’ personal preferences—offers a rare opportunity to analyze this mechanism in a way that was not possible before.

Using a sample of 2,942 CEO turnover events from 2002 to 2021, and inferring CEOs’ risk attitudes from their last names—our measure of their values and preferences—we find a positive and significant association between a firm’s culture score and the uncertainty avoidance index (UAI) of the incoming CEO, controlling for the UAI score of the departed CEO and firm characteristics. We further show that CEOs whose cultural profiles do not align with those of the firms they join are significantly more likely to be turned over within three years of appointment. To our knowledge, this provides the first clean evidence of firm–CEO matching on values as a mechanism underlying the persistence of corporate culture. In supplemental analysis, using LinkedIn employment histories from Revelio Labs to measure employee turnover and the World Values Survey to proxy immigrant employees’ values by country of origin, we show that employees whose values are less aligned with their employer’s are more likely to leave, suggesting assortative matching on values between firms and employees.

The second mechanism is a treatment effect, whereby corporate culture directly shapes individual behavior through organizational norms (Schein, 1985; O’Reilly et al., 1991; Hackman, 1992; Liu, 2016). To examine the direct influence of culture on individual behavior, we analyze a sample of mover CEOs. We require that a mover CEO have worked for at least three years at her former employer, ensuring sufficient exposure to that firm’s culture (Schoar and Zuo, 2017; Schoar et al., 2024), and at least three years at her new employer,

allowing us to capture the treatment effect of her prior employer’s culture through her new employer’s policies. We find a positive and significant association between a CEO’s treatment culture—shaped by her prior employer—and the policies at her new employer, where she serves as CEO. This evidence suggests a treatment effect of culture, contributing to culture persistence.

We conduct a number of additional analyses to confirm our main findings. First, to ensure that the documented persistence in culture is not an artifact of measurement, we employ two alternative measures of corporate culture based on employee reviews from Glassdoor and corporate insiders’ countries of origin, and find consistent results. Second, we show that persistence in culture is not driven by sample selection or survivorship bias, as our findings hold when using only delisted firms or firms outside the S&P 1500. Third, we examine the impact of major corporate events on firm culture, including CEO turnovers, large acquisitions, episodes of financial distress, and accounting frauds. We find that corporate culture remains relatively stable in the face of such shocks. Fourth, using the culture measure constructed from Glassdoor employee reviews and restricting the sample to private firms, we find that culture persists and that a firm’s initial culture significantly predicts its subsequent culture. Finally, using Glassdoor culture scores, we document little change in corporate culture around IPOs.

Our paper contributes to the growing finance literature on corporate culture (Cronqvist et al., 2009; Grullon et al., 2009; Hilary and Hui, 2009; Fahlenbrach et al., 2012; McGuire et al., 2012; Ahern et al., 2015; Biggerstaff et al., 2015; Braguinsky and Mityakov, 2015; Davidson et al., 2015; DeBacker et al., 2015; Guiso et al., 2015b; Liu, 2016; Pan et al., 2017; Bereskin et al., 2018; Grennan, 2019; Pan et al., 2020; Li et al., 2021a; Li et al., 2021b; Graham et al., 2022a,b; Li et al., 2025). Gorton et al. (2022) and Grennan and Li (2023) provide recent literature reviews. While prior studies such as Guiso et al. (2015b) and Graham et al. (2022a,b) show that corporate cultures strongly correlates with firm value, we know relatively little about how corporate culture is formed and evolves. Using a cross-validated measure

for corporate culture, our study is among the first to document the persistence of corporate culture over time and to systematically examine founder characteristics that shape a firm’s initial culture. By systematically analyzing the determinants of corporate culture, our study provides a framework for understanding how a firm’s initial culture is formed. These results suggest that corporate culture is not merely a byproduct of firm life cycles or market forces (Graham et al., 2022a,b; Grennan and Li, 2023); rather, it is rooted in the backgrounds and formative experiences of founders.

Our paper is closely related to two prior studies that rely on corporate insiders’ cultural heritage to proxy for culture and explore its consequences. Liu (2016) constructs a measure of corruption culture using insiders’ cultural backgrounds and finds that firms with stronger corruption cultures are more likely to engage in misconduct. She further provides evidence that corporate culture operates both through selection and through direct influence on individual behavior. Pan et al. (2017) study the formation and evolution of corporate risk culture, proxied by insiders’ preferences toward risk and uncertainty, and find persistent commonality in risk attitudes driven by founders’ risk preferences and the selection of executives with similar risk preferences. Our paper differs from these two studies along three dimensions. First, our culture measure allows us to distinguish between the values and norms embedded within a firm and the preferences of corporate insiders, enabling us to study firm–CEO matching as a mechanism for persistence. Second, we examine the determinants of a firm’s initial culture using a rich set of founder characteristics. Third, we are the first to show that firm fixed effects explain the majority of the variation in corporate culture.

Our paper also contributes to the literature on management style (e.g., Bertrand and Schoar, 2003; Malmendier and Tate, 2005; Cronqvist et al., 2012; Liu, 2016; Schoar and Zuo, 2017; Yonker, 2017; Pan et al., 2020; Schoar et al., 2024).³ Complementary to this literature, our analysis reveals that firm-specific factors, particularly those rooted in a firm’s

³Fee et al. (2013) distinguish between exogenous (e.g., death, health shocks) and endogenous (e.g., forced) CEO turnover events. They find little policy change following exogenous turnovers, but substantial change after endogenous turnovers, when boards are more likely to draw from a broader pool of CEO candidates. Their findings suggest that CEO “styles” in corporate policies reflect boards’ deliberate selection of CEOs.

founding conditions, explain the majority of the variation in corporate culture. We further uncover evidence of CEO-firm matching on values and of a firm’s culture influencing its CEO. Consequently, the limited role of CEO fixed effects in explaining cultural variation is consistent with the notion that CEOs matter for cultural persistence not by imposing a personal style, but by being selected for their alignment with a firm’s values and by upholding them. Thus, while affirming that CEOs play a role in sustaining culture, our findings highlight the lasting influence of a firm’s founding conditions on its culture, adding a new dimension to the prevailing view that CEOs are central to shaping organizational culture.

Finally, our paper contributes to the literature on how managers’ life and career experiences shape their style (Malmendier et al., 2011; Custódio et al., 2013; Benmelech and Frydman, 2015; Dittmar and Duchin, 2016; Bernile et al., 2017; Cronqvist and Yu, 2017; Lee et al., 2017; Schoar and Zuo, 2017; Sunder et al., 2017; Yonker, 2017; Islam and Zein, 2020; Pan et al., 2020; Duchin et al., 2021; Schoar et al., 2024; Garcia et al., 2025). Prior work shows that formative experiences influence individual values and preferences (Malmendier et al., 2011; Bernile et al., 2017; Yonker, 2017; Pan et al., 2020; Duchin et al., 2021). We extend this literature by examining how founders’ early life and career experiences shape the initial cultures of the firms they create.

2 Literature Review and Conceptual Framework

In this section, we first review selected strands of the theoretical literature that speak to our main research question: Is corporate culture persistent, or is it subject to change? We then turn to the empirical literature on the formation and evolution of corporate culture. Finally, we propose some founder characteristics as potential determinants of a firm’s initial culture.

2.1 The theoretical literature and our conceptual framework

We review three streams of the literature with a focus on their implications for the temporal dynamics of corporate culture.

The first stream conceptualizes culture as a stock of knowledge. Crémer (1993) defines culture as the part of a firm’s stock of knowledge—such as common language, shared facts, and

simple rules of behavior—that is widely shared among its employees but not with outsiders. This shared knowledge enables better coordination when information available to employees is noisy or incomplete, because employees can anticipate each other’s responses and make decisions and take actions more efficiently. Under this framework, persistence in culture arises because such knowledge accumulates over time through repeated interactions and shared experiences. Changing culture is costly, both because it is tacit and because it underpins coordination throughout the organization. In other words, changing culture would require simultaneously altering language, facts, or rules across a firm’s different divisions, which is difficult without disrupting ongoing operations, thus creating inertia.

The second stream frames culture as a firm’s reputation. Kreps (1990) and Hermalin (2012) argue that this reputation is built over time through repeated behaviors and signals to employees about what decisions the firm would take on the occasion of unforeseen contingencies. By establishing “how things are done” (Kreps, 1990, p. 93), culture could lead to the selection of the cooperative equilibrium when multiple outcomes are possible, building trust with employees, investors, and other stakeholders. Tirole (1996) extends this view by linking group (firm) reputation to individual incentives: when individual performance is evaluated partially through noisy observations of her past behavior and partially through her group’s behavior, the collective reputation will affect the individual’s incentives to exert effort. Under this framework, persistence in culture arises from reputational lock-in. Once a reputation—good or bad—is established, it becomes costly to deviate because stakeholders adjust their expectations only gradually and continue to evaluate new actions against past behavior. This path dependence implies that, even following leadership changes, culture as a reputational asset evolves only slowly over time.

The third stream views culture as shared beliefs about “the best way of doing things” (Van den Steen, 2010a, p. 1718). Van den Steen (2010b) models firms as organizations in which managers and employees may disagree on the best course of action or the way of doing things and studies how firms develop homogeneity in beliefs (i.e., culture) shared

between management and employees. Misaligned beliefs increase the likelihood that employees will take actions contrary to the manager’s intent, thereby creating incentives for sorting: individuals are more likely to join—and remain in—firms whose managers’ beliefs align with their own. Over time, shared experiences reinforce belief convergence within a firm and divergence across firms. He proposes two mechanisms: screening (i.e., selection) brings in employees who fit the existing belief system, while learning (i.e., treatment) from common experiences deepens internal consensus. Under this framework, cultural change is slow and would require substantial turnover or disruptive events to alter prevailing beliefs.

Taken together, these theoretical frameworks converge on the view that corporate culture is inherently persistent, whether through the accumulation of tacit knowledge, the lock-in of reputational equilibria, or the reinforcement of shared beliefs.

On the one hand, most culture theories emphasize persistence; on the other hand, there are some real-world examples that demonstrate cultural change (see, for example, Satya Nadella fostering greater innovation at Microsoft and James Gorman cultivating a more collaborative culture at Morgan Stanley (Gorton and Zentefis, 2024)). This tension raises some questions: When does culture persist, and when does it change? Giuliano and Nunn (2021) provide valuable insights into the forces that drive both culture persistence and adaptability.

They model the evolution of national culture and test it using extensive historical data on temperature variability and drought severity across 20-year generations from 500 to 1900. They find that when environmental conditions remain stable across generations, traits inherited from the previous generation are more likely to remain well-suited to the current generation, reinforcing culture persistence. Conversely, in more volatile environments, the value of inherited traits declines, accelerating cultural adaptation. Intuitively, this occurs because the traditions and actions that have evolved up to the previous generation are less likely to be suitable for the environment of the current generation. Applied to our business context, this suggests that while corporate culture is generally stable, substantial and sustained environmental shifts—such as major technological disruptions or regulatory

overhauls—may weaken the forces that sustain culture persistence, making change more likely.

2.2 The empirical literature

Despite its importance, corporate culture remains understudied in the finance literature. A key challenge is that culture is an inherently nebulous construct that is difficult to measure. Most prior studies rely on proxies or construct their measure using values promoted on company websites (Guiso et al., 2015b) or values discussed by employees (Grennan, 2019; Guiso et al., 2015b; Li et al., 2024).

The empirical evidence on corporate culture formation and evolution remains limited. Cronqvist et al. (2009) document significant persistence in investment and financing policies, attributing it to persistence in corporate culture (proxied by firm fixed effects). Fahlenbrach et al. (2012) show that a bank’s stock return performance during the 1998 crisis predicts its performance and probability of failure during the recent financial crisis, which they interpret as evidence of persistent risk culture. Cronqvist et al. (2012) uncover firm-CEO matching on risk aversion as a potential explanation for persistence in capital structure (Lemmon et al., 2008). Using the national cultural background of key insiders as a proxy for corporate culture, Liu (2016) provides micro-level evidence on both the selection and treatment channels through which corruption culture leads to corporate misconduct. Similarly, Pan et al. (2017) use founders’ cultural heritage to proxy for risk preferences and highlight the role of assortative matching in the formation and persistence of firms’ risk cultures.

It is important to note, however, that this prior literature addresses research questions distinct from ours and largely relies on measures of insiders’ values and preferences as proxies for corporate culture. As a result, these studies cannot disentangle a firm’s values and norms (i.e., its corporate culture) from its insiders’ preferences, which limits our understanding of the mechanisms underlying culture persistence—such as the role of firm-CEO matching on values.

2.3 Founder characteristics and a firm’s initial culture

We focus on three founder characteristics that may shape a firm’s initial culture: cultural heritage, birthplace environment, and early career exposure to recessions.

Cultural heritage significantly influences an individual’s values and preferences (Guiso et al., 2006; Ahern et al., 2015; Liu, 2016). Building on the seminal work of Hofstede (1980, 2001) and the evidence in Pan et al. (2017, 2020), we examine how a founder’s cultural heritage, measured by the UAI score of her country of origin, affects the corporate culture of the firm she establishes.

Business operations face substantial uncertainty. Kreps (1990) and Van den Steen (2010a) argue that corporate culture functions as an informal institution that helps firms navigate unforeseen events by guiding behavior and decision-making in the absence of explicit rules. In the early years of a start-up, founders’ attitudes toward uncertainty, therefore, can meaningfully impact both organizational culture and firm policies (Schein, 1983; Van den Steen, 2010b; Guiso et al., 2015a). On the one hand, founders from high UAI countries (e.g., Germany and Finland) may seek to reduce anxiety and uncertainty, thereby having strong incentives to build a strong culture. On the other hand, such founders may instead prefer rigid structures and formalized processes (e.g., corporate governance mechanisms) over investing in intangible assets like corporate culture. Whether a founder’s attitude toward uncertainty strengthens or weakens her incentives to build a strong culture is ultimately an empirical question.

Motivated by prior literature, we capture a founder’s birthplace environment using three measures: racial diversity, exposure to the frontier experience, and religiosity.

Alesina and La Ferrara (2005) show that ethnic diversity within a country or city brings together varied abilities and experiences, thereby fostering creativity and innovation. Hunt and Gauthier-Loiselle (2010) further demonstrate that immigrants significantly enhance innovation by contributing diverse perspectives and complementary skills, which stimulate creativity and inventive activity among native workers. Consistent with this evidence,

we propose that founders raised in racially diverse counties are more likely to develop an appreciation of different cultural norms, perspectives, and practices, prompting them to foster inclusive, adaptable, and innovative cultures in the firms they establish.

Bazzi et al. (2020) document that the American frontier experience has left a lasting legacy of rugged individualism. The frontier both attracted inherently individualistic individuals and reinforced these traits in an environment that emphasized self-sufficiency and limited government intervention. Its unique conditions required settlers to be highly independent and resourceful, often working alone rather than in cooperative teams. This emphasis on independence and personal achievement may come at the expense of collaboration and mutual respect. Accordingly, we propose that founders raised in such communities are more likely to prioritize self-reliance and individual achievement, leading to weaker corporate cultures in the firms they establish.

Prior research has established a positive association between individual religiosity and risk aversion (Miller and Hoffmann, 1995), and a negative association between religiosity and unethical behavior (Weaver and Agle, 2002). Hilary and Hui (2009) show that firms located in more religious counties engage in less risk-taking, while Grullon et al. (2009) find that such firms are less likely to backdate options, grant excessive executive compensation, practice aggressive earnings management, or face class action securities lawsuits. Similarly, Dyreng et al. (2012) and McGuire et al. (2012) provide evidence that firms in religious areas are associated with higher-quality financial reporting. On the one hand, founders from highly religious counties may seek to promote ethical behavior and fair treatment of employees by fostering people-oriented cultures centered on integrity and respect. On the other hand, such founders may underinvest in innovation and R&D due to greater risk aversion (Pan et al., 2017), thereby cultivating weaker operations-oriented cultures that de-emphasize innovation and adaptability. The effect of a founder's birthplace religiosity on the culture (spanning both people- and operations-related values) of the firm she creates, is ultimately an empirical question.

Experiencing a recession upon first entry into the labor market can shape founders' perceptions of business risks and opportunities. On the one hand, founders with early career exposure to recessions may instill more cautious, risk-averse cultures in the firms they establish, emphasizing stability, resource preservation, and cost control (Schoar and Zuo, 2017; Schoar et al., 2024). On the other hand, such exposure may motivate founders to foster collaborative and adaptive work environments that help employees navigate economic uncertainty during a firm's formative years. The effect of a founder's early career exposure to recessions on the culture of the firm she creates, is ultimately an empirical question.

3 Sample and Variable Construction

3.1 Sample formation

Our sample comprises firms in the CRSP-Compustat database with culture score data from Li et al. (2021b) over the period 2002–2021. We require firm-year observations to have non-missing values for culture scores and all relevant control variables. We obtain financial and accounting information from Compustat, CEO turnover and compensation data from ExecuComp, institutional ownership data from Thomson Reuters' 13F filings, board characteristics from BoardEx, and mergers and acquisitions (M&As) as well as seasoned equity offerings (SEOs) from SDC Platinum. The final sample comprises 55,377 firm-year observations, representing 6,917 unique firms.

For the variance decomposition and analyses of firms' initial culture, we impose additional sample restrictions and data requirements. First, we focus on S&P 1500 firms, as our primary source for CEO characteristics and turnover events is ExecuComp, which provides comprehensive coverage for these firms. Second, we require information on founders' names, birth dates, and birthplaces, which we manually collect from a variety of sources (see Section 3.2.2 for details). Third, we require founding and IPO dates, obtained from Jay Ritter's website and supplemented with data from SDC.⁴

⁴See: <https://site.warrington.ufl.edu/ritter/ipo-data/>.

3.2 Key variable construction

3.2.1 Corporate culture measures

Our primary measure of corporate culture comes from Li et al. (2021b), who use the Q&A section of earnings calls to capture the values and norms prevailing within a company. To quantify a firm’s cultural values of innovation, integrity, quality, respect, and teamwork (Guiso et al., 2015b), Li et al. (2021b) develop a semi-supervised machine learning approach to construct a culture dictionary and apply it to earnings calls to generate firm-year measures. We use the sum of these five values as our baseline measure of corporate culture.⁵ As robustness checks, we construct alternative measures by applying the Li et al. (2021b) methodology to Glassdoor employee reviews (Grennan, 2019; Li et al., 2024), and by using proxies based on corporate insiders’ values and preferences (Liu, 2016; Pan et al., 2017).

Ideally, a firm’s initial culture would be measured at the time of its founding. However, because our culture data—based on earnings call transcripts—are only available beginning in 2002, and most firms in our sample were founded before that year, it is not possible to observe culture scores at the time of founding.⁶ Instead, we measure a firm’s initial culture at the time of its IPO, which typically occurs relatively early in its life cycle.⁷

We construct three measures of corporate culture at the time of IPO: (1) *Culture IPO*, the firm’s culture score in the IPO year; (2) *Culture first IPO3y*, the firm’s first non-missing

⁵One concern about our culture measure is that earnings calls are held regularly with a fixed format, and as such, our main findings of persistence in corporate culture could be driven by persistence in how a firm’s earnings calls are conducted. However, prior literature suggests that although mandatory disclosure tends to adhere to a relatively fixed structure, voluntary disclosure such as earnings calls varies with managerial incentives, governance, regulation, and market conditions—factors that change over time (e.g., Healy and Palepu, 2001). Supporting this, Cohen et al. (2020) show that the MD&A section—the voluntary portion of annual reports—exhibits the lowest textual similarity compared to other report items. Since our culture measure is derived from voluntary disclosure, specifically earnings calls and particularly the Q&A section, this further alleviates the concern that our main findings are driven merely by stylistic persistence in disclosure format.

⁶As of 2021, the end of our sample period, the mean (median) age since founding for sample firms (with such information available) is 35.6 (29) years. For comparison, Pan et al. (2017) report an average firm age of 32 years. Of the 6,917 unique firms in our sample, only 880 were founded after 2002. Among these, 544 have culture data, and the average time from founding to IPO is less than 10 years. Because our founder sample is limited to S&P 1500 firms, only 20 of the 544 firms have both founder and founding information during 2002–2021.

⁷For the subset of firms with available data, the mean (median) age since founding at IPO is 17.9 (9) years.

culture score within the three years following its IPO; and (3) *Culture avg IPO3y*, the average culture score over the first three years after its IPO.

To examine the effect of founders on culture formation, we restrict the sample to S&P 1500 firms and hand-collect founder-related data. Because it takes time for a newly public firm to be included in the S&P 1500, and because our culture dataset is based on earnings calls beginning in 2002, we proxy a firm’s initial culture with its first available culture observation in the dataset, *Culture first obs*. This approach follows Lemmon et al. (2008), who use an analogous measure to study the role of initial leverage. By construction, this proxy is conservative, as it likely reduces the chance that we find any significant association between founder characteristics and cultural values measured at a point in time away from the time of a firm’s founding.

3.2.2 Founder characteristics

We manually collect data on founders and cofounders for 2,802 firms in the S&P 1500 between 2002 and 2021.⁸ To identify founders and cofounders, we rely on multiple public sources. First, we search company websites, company-histories.com, crunchbase.com, and fundinguniverse.com. Second, we conduct Google searches combining the company name with the keyword “founder.”⁹ When information conflicts, we prioritize Google search results.¹⁰ In total, we identify 3,881 founders for 2,389 firms—an average of 1.6 per firm (954 firms have at least two)—versus 1.4 in Pan et al. (2017).

To identify whether a CEO in our firm-year sample is a founder or cofounder, we match CEO information from ExecuComp with our manually constructed founder dataset. We cross-check our founder-CEO classifications against the sample of Lee et al. (2017) for the period 2008–2012. We are able to verify 289 of the 295 founder CEOs in their sample and

⁸ExecuComp covers S&P 1500 firms and companies that were once part of the index. The 2,802 firm names represent unique entities after consolidating name variations or changes (e.g., Google and Alphabet are combined as Alphabet; Facebook and Meta as Meta).

⁹Google and Copilot searches typically lead to a company’s history page or Wikipedia entry, which disclose prior names, origins, and founders.

¹⁰Founder information can sometimes be inferred from the “title” variable in ExecuComp. However, ExecuComp significantly under-identifies founder CEOs: roughly half are not classified as founders. Accordingly, we do not use ExecuComp to identify founders, but only to identify CEOs.

identify nine additional founder CEOs not included in their data. These validation exercises provide assurance regarding the accuracy of our manual search.

Following Bernile et al. (2017), we collect founder birthplaces and birth dates from sources including Marquis Who’s Who, the Standard & Poor’s Register of Directors and Executives, the U.S. Executive Compensation database via Lexis-Nexis, NNDB.com, and Google searches. Since the data coverage of founder characteristics is uneven, we adopt a stepwise approach to ensure both compatibility and maximal sample size. Specifically, we restrict the regression sample to firms with U.S.-born founders to establish a consistent baseline. We then sequentially add founder characteristics, recognizing that their inclusion reduces sample size because of missing values.

We obtain birthplace information for 1,677 founders, including 1,320 U.S.-born founders with county-level location, 66 U.S.-born founders with state-level location, 29 U.S.-born founders with country location, and 262 foreign-born founders.¹¹

We next collect data on founder characteristics. First, following Pan et al. (2017, 2020), we use the Uncertainty Avoidance Index (UAI) from Hofstede’s cultural framework (Hofstede, 1980, 2001) as a summary measure of cultural heritage. The UAI captures “the extent to which a culture programs its members to feel either uncomfortable or comfortable in unstructured situations. Unstructured situations are novel, unknown, surprising, and different from usual.” For each founder, we assign the UAI score of her dominant country of ancestry and rescale the raw values to fall between 0 and 1. Specifically, following Liu (2016) and Nguyen et al. (2018), we use census records from 1850–1940 in the Integrated Public Use Microdata Series (IPUMS) to match a founder’s last name to her country of ancestry. These

¹¹There are 1,320 U.S.-born founders with county-level location out of 3,881 founders in our sample, representing 34 percent, which is higher than the 22 percent (1,508 out of 6,804) reported in Bernile et al. (2017). The difference in coverage may reflect the fact that we focus on founders of firms that have ever been included in the S&P 1500, who tend to have greater public visibility than the CEOs examined by Bernile et al. (2017). Bernile et al. (2017) report the top ten states of CEO birth (in descending order): New York (1), Illinois (3), Pennsylvania (6), Ohio (4), California (2), Massachusetts (5), New Jersey (11), Texas (7), Missouri (13), and Iowa (22). The numbers in parentheses denote the ranking of these states for founders in our sample. While not directly comparable, this ranking provides additional assurance regarding the quality of our founder sample.

records are the most comprehensive publicly available data in which respondents' names are disclosed, as they are no longer subject to the 72-year confidentiality rule.¹² First, we restrict the IPUMS dataset to first-generation immigrants whose country of birth is outside the United States. Second, we link each unique surname to its most frequently associated country of birth, requiring that each surname have a dominant country of origin (defined as one with a frequency share greater than 50 percent). This procedure allows us to match 95.8 percent of founder surnames in our sample to at least one dominant country of ancestry.¹³ The sample comprises 1,324 founders at 1,038 firms with non-missing data on founder cultural heritage and control variables.

Next, we merge data on founders' birthplaces with location-specific characteristics at the time of their birth. We focus on three measures: racial diversity, exposure to frontier culture, and religiosity. Racial diversity is measured as one minus the Herfindahl-Hirschman Index (HHI) of racial composition in a founder's birth county, constructed from Census data that classify the population into five groups: White; Black or African American; American Indian or Alaska Native; Asian, Native Hawaiian, or Other Pacific Islander; and Other (including Hispanic).

To measure the extent to which a founder's birth county was exposed to frontier culture, we use the county-level measure of total frontier experience (TFE) from Bazzi et al. (2020). Our variable, *Founder birthplace TFE*, is defined as the number of decades between 1790 and 1890 during which a founder's birth county was located within 100 km of the frontier line and had a population density below six people per square mile.

¹²Only one percent of the records are publicly available. Liu (2016) obtained additional access to the full records for the 1880, 1920, 1930, and 1940 waves through the Minnesota Population Center, while relying on the one percent sample for other waves.

¹³Liu (2016) achieve an 89 percent match rate using a stricter threshold of 75 percent. In our data, the average (median) number of countries of origin associated with a surname is 13 (8). We start with 1,415 founders born in the United States. Birthplace detail is available at the county level for 1,320 founders, at the state level for 66, and at the country-only level for 29. We cannot match 10 surnames to any record in IPUMS and cannot assign a dominant country of origin for 49 additional surnames. We also exclude 3 founders whose inferred origin is Cuba or Haiti, which are not covered in Hofstede's national-culture dataset of 111 countries. These steps leave 1,353 founders. After merging with control variables, 1,324 founders remain in the regression sample.

To measure religiosity in a founder’s birth county, we use the Churches and Church Membership files from the American Religion Data Archive (ARDA). Our variable, *Founder birthplace REL*, is defined as the ratio of religious adherents in a county (as reported by ARDA) to the county’s total population (as reported by the U.S. Census).¹⁴ The sample comprises 1,064 founders at 850 firms with non-missing data on founder birth county characteristics and control variables.

Following Schoar and Zuo (2017), we construct a recession-founder indicator, *Founder work recession*. This variable equals one if a founder’s first job (assumed to begin at age 24) coincided with a recession, as defined by the National Bureau of Economic Research (NBER) business cycle dating dataset, and zero otherwise. Using a founder’s birth year plus 24 to proxy for labor market entry helps mitigate concerns of endogenous selection regarding when individuals choose to start their careers. After merging with the NBER business cycle dataset, which begins in 1967, we end up with 1,061 founders at 857 firms with non-missing data on founder career start and control variables.

3.3 Summary statistics

Panel A of Table 1 reports summary statistics for the full panel dataset. The average firm-level culture score is 14.897. Panel B presents summary statistics for the initial culture variables. At the time of IPO, the average culture score is 16.399.

Panel C of Table 1 reports summary statistics on founder characteristics. The average UAI score of founders is 0.475. With respect to racial diversity, founders’ birthplaces exhibit relatively high diversity, with an average diversity value of 0.859 (corresponding to a racial HHI value of 0.141). For comparison, Pan et al. (2017) report an average racial HHI value of 0.204 (at the city level) for CEO birthplaces. On average, founders’ birth counties were exposed to the American frontier by 0.860 decades. The average share of religious adherents in a founder’s birth county is 0.497, compared with 0.530 for headquarters counties over

¹⁴County-level religiosity data are available for 1971, 1980, 1990, 2000, and 2010. We use the observation closest to a founder’s birth year. For founders born before 1971, we assign the 1971 county-level religiosity measure.

1971–2000 in Hilary and Hui (2009). Finally, 28.7 percent of founders in our sample entered the labor market during a recession, a figure broadly comparable to the 21 percent reported by Schoar and Zuo (2017) for CEOs.

4 The Persistence of Corporate Culture

4.1 Corporate culture over time

We begin our analysis by examining the evolution of corporate culture over time. Following Lemmon et al. (2008), we sort firms each fiscal year into quartiles—*Very High*, *High*, *Medium*, and *Low*—based on their culture scores. The year of group formation is designated as event year 0. For each group, we compute the average culture score in each of the subsequent ten years, holding group membership fixed (except when firms exit the sample). We repeat this two-step procedure of sorting and averaging for every fiscal year in the sample period. This process produces 20 sets of event-year averages, one for each fiscal year, from which we compute the average culture score of each group at each event year.

Panel A of Figure 1 plots the average culture scores of the four firm groups by event year, with bars indicating 95% confidence intervals. A number of patterns emerge. First, at the time of group formation, there are pronounced differences in culture scores, with a maximum gap of 14.228 between the *Very High* and *Low* groups. Given that the sample mean of corporate culture is 14.897, this difference is economically meaningful. Second, culture scores across the groups tend to converge gradually over time. For example, over a ten-year horizon, the average score of the *Very High* group declines from 22.992 to 20.090, while that of the *Low* group rises from 8.764 to 11.971. Third, most of this convergence occurs within the first few years following group formation, as reflected in the flattening slopes of the lines. Finally, although the groups' scores move closer together, significant differences remain even after ten years. In year ten, the average scores of the *Very High*, *High*, *Medium*, and *Low* groups are 20.090, 16.205, 14.082, and 11.971, respectively, yielding an average cross-group spread of 2.706. This gap remains substantial when benchmarked against the average within-firm standard deviation of culture scores (5.932). Taken together, these

findings suggest that culture scores contain both a transitory component, which dissipates over time, and a persistent component, which sustains long-run differences across firms.

One potential concern with the interpretation of Panel A is that sorting firms on the basis of culture scores may simply reflect cross-sectional variation in underlying firm characteristics that are themselves persistent over time. To address this issue, we adopt an alternative sorting procedure that isolates the portion of culture unexplained by firm fundamentals. Specifically, in each year we estimate a cross-sectional regression of culture scores on the one-year lagged determinants of culture identified in prior work (Schein, 1985; Van den Steen, 2010b; Grennan, 2019; Li et al., 2021b, 2024): *Firm size*, *Firm age*, *Sales growth*, *Leverage*, *M/B*, *ROA*, *Tangibility*, *Institutional ownership*, *Num M&As*, and *Num SEOs*, as well as Fama–French 38 industry fixed effects. We then sort firms into quartiles based on the regression residuals—what we term *Unexplained culture*—and track the average culture scores of each group over the subsequent ten years.

Panel B of Figure 1 reports the results. The patterns are nearly identical to those in Panel A: culture scores still span a wide range (approximately 11 points) at the time of group formation, indicating that most of the variation in culture scores is captured by *Unexplained culture*.

In summary, Panel A of Figure 1 shows that although culture scores exhibit some short-run convergence, cross-firm differences remain highly persistent. Panel B further indicates that observable firm characteristics account for only a limited share of this variation. Taken together, these findings point to the existence of a substantial and unidentified permanent component of corporate culture. In the remainder of the paper, we quantify the economic importance of this permanent component and investigate its origins.

4.2 Variance decomposition of corporate culture

A key takeaway from Figure 1 is the persistence of corporate culture over time. To shed light on the sources of this persistence, we begin with a non-parametric variance decomposition of culture scores. The results show that within-firm variation accounts for 19% of the total,

while between-firm variation accounts for 81%, indicating that corporate culture differs far more across firms than it does within a given firm over time.

Next, we turn to a parametric framework to assess how much of the variation in corporate culture can be attributed to observable firm characteristics versus unobserved, time-invariant differences across firms (firm fixed effects) and CEOs (CEO fixed effects). Panel A of Table 2 reports the results using the full sample. Columns (1)–(3) show that firm, CEO, and year fixed effects account for 61%, 60%, and 4% of the variation in corporate culture, respectively. When both firm and CEO fixed effects are included in column (4), and firm, CEO, and year fixed effects are included in column (5), firm fixed effects emerge as the dominant component, accounting for 88% of the explained sum of squares. In column (6), we examine the explanatory power of firm characteristics, year fixed effects, and industry fixed effects, finding that together these factors account for only 32% of the variation in culture. Finally, in column (7), we add firm and CEO fixed effects (dropping industry fixed effects) to firm characteristics and year fixed effects, and find that firm fixed effects remain central, accounting for 86% of the explained sum of squares.

In the full sample analysis reported in Panel A, most CEOs appear at only one firm, and many firms are led by a single CEO throughout the sample period. This overlap raises the possibility that firm and CEO fixed effects capture some of the same variation. To disentangle these effects, we focus on a subset of firms whose CEOs have served at multiple companies (Bertrand and Schoar, 2003; Dittmar and Duchin, 2016; Schoar et al., 2024). We identify executives in the ExecuComp universe who have worked at two or more firms (“movers”), requiring that each mover spend at least three years at each firm to allow sufficient time to “leave their mark.” If a firm employs a mover in any year during the sample period, we retain all observations for that firm. We identify 117 CEO-to-CEO movers who worked at 122 different firms. To separate firm and CEO fixed effects, we include all CEOs employed by these 122 firms during our sample period, not only the movers. This yields a dataset of 235 unique CEOs. Restricting the sample to firm-years with available corporate culture data

gives us 1,085 observations. Our mover sample is comparable to the 132 movers studied by Schoar et al. (2024).

Panel B presents the results. Firm fixed effects emerge as the dominant explanatory factor, with even greater importance than in the full sample. In column (7), CEO fixed effects account for only 1% of the explained sum of squares, while firm fixed effects account for 95%, compared to 13% and 86%, respectively, in Panel A column (7). These results suggest that culture is shaped primarily by firm-specific factors rather than by individual CEOs.¹⁵

For comparison, Panel C of Table 2 reports the variance decomposition for other corporate policies, using the same sample as in Panel A. We note that firm fixed effects explain a substantially larger share of the variation in corporate culture than in most other corporate policies, with the sole exception of financial leverage (Lemmon et al., 2008).

In summary, Table 2 shows that firm fixed effects account for the majority of the variation in corporate culture, suggesting that these effects underlie the observed persistence in culture.¹⁶

5 The Economic Importance of A Firm’s Initial Culture

While the variance decomposition demonstrates that firm fixed effects account for much of the persistence in corporate culture, these effects aggregate all unobserved, time-invariant firm characteristics. To gain a better understanding of the nature of these fixed effects, we further investigate their underlying sources in this section.

5.1 The role of a firm’s initial culture

Motivated by seminal work on the origins of corporate culture (Schein, 1983; Schneider, 1987; Van den Steen, 2010b; Guiso et al., 2015a) and empirical evidence from Pan et al. (2017), we hypothesize that a firm’s culture is shaped in important ways by its founding principles and values. To test this hypothesis, we use culture scores around the time of a firm’s IPO as a proxy for its culture in the early years of its life. Our analysis focuses on firms that went public in 2002 or later, for which culture data are available.

¹⁵Our main findings are robust to restricting the sample to a $(-3, +3)$ window around CEO turnover events (with year 0 denoting the turnover year).

¹⁶In untabulated analysis, we repeat the variance decomposition for each cultural value separately (Li et al., 2021b) and obtain qualitatively similar results.

We run the following panel data regression of culture scores:

$$Culture_{i,t} = \alpha + \gamma_1 CultureIPO_i + \gamma_2 CultureIPO_i \times Ln(Firm\ age) + \beta X_{i,t-1} + \lambda_j + v_t + \varepsilon_{i,t}, \quad (1)$$

where i indexes firms, t indexes years, and $X_{i,t-1}$ is a vector of lagged firm-level control variables. $Culture\ IPO_i$ denotes firm i 's culture score at the time of its IPO, λ_j are Fama–French 38 industry fixed effects, and v_t are year fixed effects. The coefficients of interest are γ_1 , which measures the influence of a firm's culture score at IPO on its subsequent culture scores, and γ_2 , which captures the rate at which the effect of initial culture decays over time.

Panel A of Table 3 reports the regression results. In columns (1)–(3), we use *Culture IPO* as the key explanatory variable. In column (1), we find that the culture score at the time of a firm's IPO is positively and significantly related to its subsequent culture scores. The interaction term between *Culture IPO* and the number of years since IPO is negative and statistically significant at the 10% level. However, the economic magnitude of this effect is negligible: it would take more than 22,300 years for the influence of *Culture IPO* to dissipate ($e^{0.781/0.078}$).

In column (2), we add industry fixed effects, which increases the adjusted R^2 from 0.414 to 0.477. In this specification, the interaction term is no longer statistically significant. In column (3), after including firm-level controls and year fixed effects, *Culture IPO* remains highly significant, while the interaction term again loses significance. Among the controls, firm age and market-to-book are positively and significantly associated with, while leverage, ROA, and tangibility are negatively and significantly associated with, culture scores.

Turning to economic significance, using column (3) as an example, a one-standard-deviation increase in a firm's IPO culture score corresponds to a 0.452 standard-deviation increase in subsequent culture scores ($0.467 \times 6.717 / 6.934$, where 6.717 and 6.934 are the standard deviations of *Culture IPO* and *Culture* in this regression sample, respectively). As a comparison, a one-standard-deviation increase in firm age (M/B) corresponds to a 0.097

(0.167) standard-deviation increase in subsequent culture scores; a one-standard-deviation increase in a firm’s leverage (ROA or tangibility) corresponds to a 0.048 (0.048 or 0.118) standard-deviation decrease in subsequent culture scores. Thus, a firm’s initial culture is the single most important determinant of its subsequent culture. The adjusted R^2 rises from 0.414 without industry or firm-level controls in column (1) to 0.537 with them in column (3). As robustness checks, we also use *Culture first IPO3y* in columns (4)-(6) and *Culture avg IPO3y* in columns (7)-(9) as alternative measures of a firm’s initial culture and obtain consistent results, confirming that a firm’s culture at the time of its IPO is a strong predictor of its long-term cultural trajectory.

Overall, the findings in Panel A are consistent with the patterns shown in Panel B of Figure 1. Importantly, the specification in Equation 1 provides a more stringent test of culture persistence, since it allows firm-level determinants (aside from initial culture) to vary over time.

One potential concern with the above analysis is that, although culture evolves gradually, a firm’s culture at the time of its IPO may not perfectly reflect its founding culture. To address this issue, we impose an additional requirement that sample firms go public within ten years of founding. This restriction allows us to treat a firm’s culture score at IPO as a more reliable proxy for its culture at founding.¹⁷ Panel B presents the results. Consistent with our baseline findings in Panel A, we show that a firm’s initial culture continues to be a significant determinant of its subsequent culture, even though the reduced sample size lowers statistical power.

5.2 Founders serving as CEOs or board members

In the analysis above, we restrict the sample to firms that went public after 2002, ensuring data availability on culture scores. For some of these firms, founders may still be serving as officers or directors. This raises the possibility that the strong explanatory power of a firm’s

¹⁷We use ten years as the cutoff because it is approximately the median number of years between founding and IPO in our sample. A narrower cutoff would provide a more precise proxy but would substantially reduce the sample size, as firms typically require time to grow before going public.

initial culture for its subsequent culture could simply reflect a founder’s continued active involvement rather than the imprint of its initial culture.

To explore this possibility, we first identify founders who continue to serve as CEOs or board members of the firms they established. We classify executives and directors as founders or cofounders by matching CEO names in ExecuComp and director names in BoardEx with our manually constructed founder dataset. We then exclude these firm-year observations and re-estimate Equation 1. Panel C of Table 3 reports the results. The number of firm-year observations drops from 6,670 in the baseline sample to 6,011. Despite the reduced sample, the strong explanatory power of a firm’s initial culture for its subsequent culture persists, indicating that founders’ ongoing involvement is not the primary driver of our findings. We note that, in the absence of active founder involvement at the firm she creates, the influence of a firm’s initial culture exhibits some decay over time.¹⁸

In summary, our empirical evidence indicates that a firm’s initial culture leaves a persistent imprint on its future cultural trajectory, regardless of whether its founders remain actively involved.

6 Founder Characteristics and Corporate Culture Formation

Building on the findings that a firm’s initial culture strongly predicts its subsequent culture, we next examine founders’ role in establishing this cultural foundation. Unlike top executives, founders are not selected by the firm, so any influence they exert on corporate culture is likely causal.

6.1 The baseline

For this analysis, we employ a sample of firms in the S&P 1500 and use the first available observation of corporate culture in our dataset, *Culture first obs*, to proxy for a firm’s initial

¹⁸As a robustness check, we examine firms backed by venture capital (VC). VCs often shape business strategies and mentor founders, potentially influencing their portfolio firm’s initial culture. Using VC investment data from Jay Ritter’s VC-backed IPO dataset, we find consistent results across both VC-backed and non-VC-backed firms: a firm’s culture at the time of the IPO remains a strong predictor of its subsequent culture.

culture.¹⁹

Panel A of Table 4 reports the results. In column (1), we regress a firm’s *Culture first obs* on its founder’s cultural heritage, *Founder UAI*, controlling for firm characteristics known to correlate with corporate culture. The UAI score captures the extent to which individuals in a society feel uncomfortable with ambiguity and uncertainty (Hofstede, 1980, 2001). Founders with high UAI scores are expected to prefer structured decision-making processes, formalized procedures, and lower tolerance for risk, which can significantly influence the culture within the firm that they found. We find that a founder’s UAI score is positively and significantly associated with the culture score of the firm she founds. In column (2), we show that founders raised in more racially diverse counties are more likely to establish firms with stronger cultures. This result complements prior work documenting that the ethnic composition of a city or region can have persistent economic effects (D’Acunto et al., 2019; Pan et al., 2020). By contrast, we find no significant association between a founder’s birthplace TFE and the organizational culture of the firm she creates. The lack of association between frontier exposure and firm culture is surprising given the literature on rugged individualism (Bazzi et al., 2020). One possible explanation is that the average exposure of founders’ birthplaces to the American frontier in our sample is less than ten years, which might be too short to have any impact. Alternatively, it could be that the American frontier fosters individualism, which is inherently at odds with the collaborative and team-oriented values emphasized in modern corporations. Similarly, a founder’s birthplace religiosity (REL) is unrelated to the culture of the firm she founds. The insignificant result for religiosity may reflect competing effects. On the one hand, high religiosity is shown to be correlated with ethical behavior (i.e., integrity). On the other hand, high religiosity is negatively correlated with risk-taking (i.e., innovation). We will explore this further when we use culture subscores or constituent

¹⁹Our sample for analyzing founder characteristics is drawn from the S&P 1500, most of which completed their IPOs well before 2002, the first year of our culture measure. Collecting detailed biographical information on founders—including full names, birth dates, and birthplaces—further constrains sample size. Only 193 firms in our sample with complete founder data went public after 2002. Accordingly, we use the first observed culture score, rather than the culture score around the IPO, as our measure of a firm’s initial culture in this section.

values as the dependent variables. In column (3), we show that founders who began their careers during recessions are significantly more likely to establish firms with weaker cultures, consistent with a resource-conservation or cost-control focus (Schoar and Zuo, 2017; Schoar et al., 2024). Column (4) presents results from an encompassing specification, in which our main findings remain.

Liu (2016) provides suggestive evidence on the role of corporate insiders in shaping a corruption culture. To examine whether insiders influence a firm’s culture in its early years, we extend the analysis in Panel A of Table 4 by including measures of cultural heritage for other key insiders. Appendix Table A.2 reports the results. We find that only the UAI score of a firm’s founder—rather than that of its CEO, other executives, or directors—is positively and significantly associated with the culture of the firm she founds.²⁰

6.2 Decomposing culture score into its components

The composite culture score provides an intuitive summary measure. However, our conceptual framework yields mixed predictions when linking founder characteristics to this overall score. To gain a deeper understanding, it is useful to examine how founder characteristics relate to the individual components of the score. In this section, we first decompose the culture score into two subscores: operations-related values (innovation and quality) and people-related values (integrity, respect, and teamwork). We then further examine the five constituent cultural values: innovation, integrity, quality, respect, and teamwork.

Panel B of Table 4 reports the results using the operations- and people-related subscores as dependent variables. The evidence reveals a clear contrast between the two subscores. Founder uncertainty avoidance (UAI) and birthplace racial diversity are both positively and significantly associated with the people-related subscore, but show no significant relation to

²⁰To address the concern that our founder effects might be confounded with founding location effects, for example, a founder raised in a racially diverse city starting a company in the racially diverse Silicon Valley region, we take two approaches. First, we remove sample firms whose founding location is in California. Second, we control for the racial diversity of a firm’s founding location. Requiring data on a firm’s founding location reduces the sample size. Nonetheless, we find that founders’ early-life exposure to racial diversity and early-career recession experience remain important, whereas founding location characteristics do not matter (untabulated).

the operations-related subscore. By contrast, firms founded by individuals who began their careers during a recession exhibit significantly lower values for both subscores at founding. Other founder birthplace characteristics, such as exposure to the American frontier (TFE) and religiosity (REL), show no significant association with either subscore. Taken together, these results suggest that founders' cultural heritage and early-life exposure to racial diversity exert a stronger influence on people-related values and norms than on operations-related ones, whereas early-career recession experience reduces emphasis on both subscores.

Panel C of Table 4 reports the results when the five individual values—innovation, quality, integrity, teamwork, and respect—are examined separately as dependent variables. Several notable patterns emerge. Consistent with the prior literature linking religiosity to lower risk-taking (Hilary and Hui, 2009), we find a negative and significant association between founders' birthplace religiosity and the initial innovation scores of the firms they establish. This suggests that religiosity discourages risk-taking behaviors, impeding innovation. In contrast, we uncover a puzzling negative and significant association between founders' birthplace religiosity and firms' initial integrity scores—opposite to the prior literature documenting a negative association between religiosity and corporate misconduct (Grullon et al., 2009). We also find a positive and significant association between founders' UAI scores and the initial integrity scores of their firms. In addition, we find that founders growing up in more racially diverse counties are positively and significantly associated with their firms' initial teamwork scores. Finally, both founders' UAI scores and birthplace racial diversity are positively and significantly associated with the initial respect scores of the firms they create.

In summary, we find that a firm's culture in its early years is greatly influenced by its founder's cultural heritage and early life/work experiences. As such, our paper contributes to the large literature on management style (see our cites in the introduction section) by highlighting founders' role in culture formation.

7 The Mechanisms

The literature proposes two primary mechanisms through which corporate culture operates. The first is a selection mechanism, whereby firms attract or retain employees whose values align with those prevailing in the workplace (Schneider, 1987; Meglino et al., 1989; O’Reilly et al., 1991; Hilary and Hui, 2009; Liu, 2016).²¹ The second is a treatment mechanism, under which corporate culture directly shapes employee behavior through workplace norms (Schein, 1985; O’Reilly et al., 1991; Hackman, 1992; Liu, 2016). Combining these two mechanisms, Van den Steen (2010b) argue that culture can persist even in the face of employee turnover.

7.1 Assortative matching between firms and CEOs

We conjecture that selection can operate in two ways. First, CEOs may be chosen because their values align with those of the firm they join, which helps explain the low explanatory power of CEO fixed effects for the variation in corporate culture (as shown in Table 2). Second, CEOs whose values conflict with those of the firm they join are more likely to be replaced. In this section, we examine selection—specifically, assortative matching on values—as a key mechanism underlying the persistence of corporate culture.

Our sample comprises 2,942 CEO turnover events from ExecuComp during 2002–2021, for which both corporate culture scores and CEO UAI scores are available. Following the framework in Section 6, CEOs’ UAI scores serve as proxies for risk and uncertainty preferences rooted in their cultural heritage. Under selection, we expect CEOs with high UAI scores to be matched with firms exhibiting high culture scores.

Panel A of Table 5 presents the results. In column (1), we regress incoming CEO UAI scores on lagged corporate culture scores.²² We find that firms with strong cultures prior to a CEO turnover are significantly more likely to appoint CEOs with high UAI scores, consistent

²¹Outside the corporate culture setting, Cronqvist et al. (2012) document a strong positive association between a CEO’s personal leverage on her primary home purchase and her firm’s corporate leverage, suggesting that CEO–firm matching based on preferences is an important explanation. Similarly, using psychometric tests administered to CEOs, Graham et al. (2013) find evidence consistent with matching between executives’ behavioral traits (e.g., optimism and risk aversion) and the types of firms they join.

²²Both Liu (2016) and Pan et al. (2017) conduct a similar analysis, but use corporate insiders’ preferences to proxy for corporate culture.

with selection. In column (2), we control for firm characteristics prior to turnover to account for firm-specific heterogeneity, and the main findings remain. In column (3), we add industry fixed effects to capture potential industry-specific preferences for CEO risk attitudes, and again our main findings remain.

In columns (4)–(6), we further include the UAI scores of departed CEOs, as they may influence succession choices and/or proxy for the values the board seeks in a replacement (Cronqvist et al., 2012). We find that former CEOs’ UAI scores are positively correlated with those of their successors; however, this relationship becomes statistically insignificant once industry fixed effects are included. Importantly, across all specifications, the positive and significant association between firms’ pre-turnover culture scores and the UAI scores of incoming CEOs persists.

Next, we examine the departure probability of potentially mismatched CEOs. If firm–CEO matching contributes to the persistence of culture, then CEOs whose values are misaligned with those of the firm they join should be more likely to depart shortly after appointment. To maximize the likelihood of observing such mismatches, we employ a sample of exogenous CEO turnover events when the board does not have much time to pick the next CEO (Fee et al., 2013).

We measure potential mismatch as the absolute difference between the quartile rank of the incoming CEO’s UAI score and that of the departed CEO, under the assumption that the departed CEO was well-matched to the firm on values in cases of exogenous turnover. Accordingly, the former CEO’s UAI score serves as a proxy for the firm’s preferred cultural profile of an incoming CEO. The dependent variable is an indicator equal to one if the new CEO departs within the first three years of appointment, and zero otherwise. Panel B reports the results based on a linear probability model. Consistent with our conjecture, we find that larger gaps between the UAI scores of incoming and departed CEOs significantly increase the likelihood of turnover of the incoming CEO within the first three years into her tenure.

Taken together, these results provide suggestive evidence that assortative matching

between firms and their newly appointed CEOs on cultural values is an important mechanism underlying the persistence of corporate culture.

7.2 Assortative matching between firms and employees

In this section, we present suggestive evidence consistent with firm-employee matching on cultural values. Due to data limitations, this analysis is carried out on a firm’s immigrant workers (see details later). To identify each firm’s workforce, we use LinkedIn employment histories from Revelio Labs. Following Amanzadeh et al. (2024), we infer an immigrant employee’s country of origin from their undergraduate education history. We proxy an immigrant employee’s values using the values prevailing in their country of origin based on the World Values Survey (WVS). Appendix Table A.3 lists the survey questions mapped to each corporate cultural value.

We measure cultural similarity between an employee and her employer as the cosine similarity between the employee’s value vector and their firm’s value vector spanning integrity, respect, innovation, quality, and cooperation—where higher values indicate greater similarity. The final sample comprises 1,803,708 immigrant employees in 3,538 firms from 2002–2021, yielding 8,130,720 employee–year observations. On average, each employee contributes 4.51 years of employment data. The sample spans 82 countries of origin.

Table 6 reports the regression results. Column (1) presents the baseline specification with employee, firm, and year fixed effects; standard errors are clustered at the firm–year level. The coefficient on *Cultural Similarity* is negative and statistically significant at the 1% level, indicating that greater cultural congruence between a firm and an employee is associated with a lower probability of the latter’s turnover. Columns (2)–(4) add firm-level controls; the results remain economically and statistically robust.

Overall, we show that employees whose cultural values align more closely with their firm’s culture are significantly less likely to leave. This pattern highlights the role of values-based firm-employee matching in retention, suggesting that assortative matching on values helps sustain corporate culture

7.3 The treatment effect of culture on CEOs

In this section, we explore the treatment effect of corporate culture on CEOs and its role in explaining culture persistence. Owing to data limitations, we focus specifically on the treatment effect of culture on CEOs. Our empirical strategy proceeds as follows. We use the culture score of a new CEO’s former employer as a proxy for her potential cultural treatment and examine whether this treatment is associated with firm policies at her new employer. If treatment is operative, we would expect a positive association between the culture of a CEO’s former employer and the policies implemented at her new firm.

To construct the sample, we focus on mover CEOs whose turnovers are exogenous, driven by their predecessors’ death, health problems, or retirement (Fee et al., 2013). We require a mover CEO have had served at least three years at her former employer to ensure sufficient exposure to that firm’s culture (Schoar and Zuo, 2017; Schoar et al., 2024). Similarly, we require a mover CEO have had at least three years of tenure at her new employer so that the new firm’s policies can reasonably reflect her influence. We retain firm-year observations within a (-3, +3) year window around the turnover event. The final sample includes 320 CEO turnover events between 2002 and 2021.²³

We define *Former employer culture* as the culture score at the mover CEO’s previous employer, which proxies for the treatment she received there. Our conjecture is that, absent such treatment, the former employer’s culture should have no predictive power for the policies at the CEO’s new employer. Evidence of a significant association would therefore be consistent with a treatment effect of culture on CEOs.

Table 7 presents the results. In columns (1) and (2), we regress *Product quality* on the interaction between *Former employer culture* and *Post*, which indicates the period after the turnover event. *Product quality* is measured using the product safety and quality score from MSCI ESG ratings. The specification further controls for the culture of the mover CEO’s new employer, CEO and executive UAI scores, firm characteristics, firm fixed effects, and

²³This sample is different from the sample used in Table 2 Panel B, because we do not require the mover CEO (to a new firm) also serve as CEO in her former employer (only as a top executive).

year fixed effects.

We find that *Former employer culture* is positively and significantly associated with *Product quality*, consistent with our conjecture that a mover CEO exposed to the strong culture at her former employer is treated by that culture, and that such treatment manifests in the policies at her new employer, for example, through improved product quality. We extend the analysis to other policy outcomes, including *R&D* and *Discretionary accruals*, and obtain consistent results.²⁴

Overall, the evidence suggests that culture’s imprint on top executives is an additional mechanism sustaining the persistence of corporate culture. Taken together, complementary to the management style literature started by Bertrand and Schoar (2003), we document a more nuanced role for CEOs in shaping corporate culture. Our evidence on the two mechanisms above is consistent with the view that CEOs matter for culture persistence because they are selected for alignment with prevailing values or treated to align with those values, thereby leading rank-and-file employees to uphold them. Our findings thus add a new insight into CEOs’ role in culture persistence.

8 Additional Analyses

In this section, we first conduct a number of robustness checks to ensure that our main findings remain. We then explore the impact of major corporate events on culture. Finally, we provide suggestive evidence on culture persistence and the role of initial culture in private firms.

8.1 Using alternative measures of corporate culture

To address concerns that our key findings on the persistence of corporate culture may be driven by the way we measure culture using earnings call transcripts, we employ two alternative measures of culture. The first is based on employee reviews from Glassdoor, a leading career intelligence platform where employees post anonymous reviews of their firms. Recent research

²⁴In supplemental analysis, we assemble firm-year employment records using LinkedIn profiles from Revelio Labs. We find that firms with stronger cultures in their early years (proxied by the first year with a non-missing corporate culture score) are associated with greater racial diversity among employees. We view this as suggestive evidence on one way through which a firm’s early culture persists via employee recruitment.

(e.g., Grennan, 2019; Li et al., 2024, 2025) shows that the language in these reviews captures the shared values and norms of organizational members.

We begin with our full sample and match them to Glassdoor data. We retain reviews from both current and former employees, but drop firm-year observations with fewer than ten reviews. Because Glassdoor requires reviewers to provide both positive (“pros”) and negative (“cons”) comments, we focus on the “pros” section to mitigate potential confounding effects of negative sentiment.²⁵ The final sample comprises 4,053,273 employee reviews from 3,010 firms, yielding 25,197 firm-year observations from 2008 (the launch year of Glassdoor) to 2023. Appendix Table A.4 details the sample construction process.

Following Li et al. (2021b), we construct a culture dictionary using their seed words and applying their semi-supervised machine learning method to employee reviews. The resulting dictionary captures the cultural values of innovation, integrity, quality, respect, and teamwork. We measure corporate culture by first scoring each review with a value-specific dictionary and a term frequency–inverse document frequency (tf-idf) weighting scheme. The resulting culture scores are then averaged across all reviews for a given firm-year.

Appendix Figure A.1 shows that culture, as measured from employee reviews, is persistent. We next replicate the variance decomposition analysis using this alternative measure. Appendix Table A.5, Panel A, reports the results for the full sample, and Panel B reports the results for a subsample of firms whose CEOs have led two or more firms. Consistent with our baseline findings in Table 2, firm fixed effects account for 93% and 92% of the variation in the full and mover CEO samples, respectively (column (7)).

We then examine the role of a firm’s initial culture using Glassdoor culture scores. Appendix Table A.6 shows that a firm’s initial culture continues to exert a significant influence on its subsequent culture.

As a second alternative, we use corporate insiders’ UAI scores to proxy for a firm’s risk culture (Pan et al., 2017). Appendix Figure A.2 shows the persistence of corporate risk

²⁵Our main findings remain when restricting the sample to reviews from current employees only, or limiting to the “cons” section.

culture, and Appendix Table A.7 confirms that a firm’s initial risk culture continues to shape its risk culture in subsequent years (with the exception of using CEO UAI scores to proxy for culture).

Taken together, the evidence from the two alternative measures of culture based on employee reviews and insiders’ cultural heritage provides consistent support for our main findings: corporate culture is highly persistent.

8.2 Using alternative samples

Our may argue that the persistence in culture is driven by our sample formation, i.e., firms with a changing culture drop out because of delistings or their removal from the S&P 1500 which include only the most successful firms (maybe due to a weak culture or a changing culture).

To explore this, we repeat the variance decomposition using a sample of delisted firms (excluding those delisted due to M&As) or a sample of firms outside the S&P 1500. Appendix Table A.8 presents the results. We note that the decomposition results are similar to those reported in Table 2, suggesting that our findings are not driven by survivorship or sample selection.²⁶

8.3 Corporate culture and CEO turnover

As supplemental evidence on the persistence of culture, we examine the temporal variation in corporate culture around CEO turnover events. Following Bai and Mkrtchyan (2023), we construct a seven-year panel centered on the turnover year, including three years before and three years after the event. To be included in the sample, firms must have at least one observation in both the pre- and post-turnover periods. Appendix Figure A.3 reports the effects of CEO turnover on culture scores. Panel A shows no significant change in culture during the three years preceding a turnover, but some significant increases immediately thereafter. However, these effects are short-lived, as culture scores revert to pre-turnover

²⁶The CEO fixed effect accounts for a larger share of the variance in corporate culture among delisted firms. This likely reflects the limited within-CEO variation across firms, as most delisted firms are led by CEOs who have not held comparable positions elsewhere. Consequently, it is harder to distinguish empirically firm and CEO fixed effects.

levels within a few years, consistent with the persistence of corporate culture. Panel B extends the post-event window to six years and confirms that our main findings remain.

Appendix Figure A.4 examines the effects of CEO turnover on the components of the culture score. Panel A focuses on operations-related values—innovation and quality—while Panel B focuses on people-related values—integrity, respect, and teamwork. We observe some short-term increases in innovation and respect following turnover events, but all component scores eventually revert to pre-turnover levels.

Appendix Figure A.5 compares founder and non-founder CEO turnover events. Panel A shows no significant cultural changes when an incoming CEO succeeds a founder, suggesting that founders may deliberately select successors aligned with their firm’s culture. Panel B shows that non-founder CEO turnovers are associated with significant shifts in culture during the first two years, followed by a reversal in the third year.

Motivated by Fee et al. (2013), we next compare the effects of exogenous and endogenous CEO turnover on corporate culture. Following their classification, we define exogenous turnover as events due to death (21 cases), health problems (37 cases), or retirement (1,438 cases), and endogenous turnover as events driven by poor performance (410 cases). The reasons for CEO turnover are obtained from Gentry et al. (2021). Appendix Figure A.6 presents the results. We find that exogenous turnover is associated with little change in culture (Panel A), whereas endogenous turnover leads to significant cultural shifts in the first two years, followed by a reversal in the third year (Panel B). These findings reinforce the central insight of Fee et al. (2013)—that distinguishing between exogenous and endogenous turnover is critical when assessing the role of CEOs in shaping corporate policies. Distinct from their study, however, we show that in both cases corporate culture persists despite CEO turnover.

Finally, we examine whether the effects of turnover differ between internal and external successors. Following Bai and Mkrtchyan (2023), we classify a CEO as external if her tenure at the firm—as an executive or director—was one year or less prior to appointment. Among

the 2,101 turnover events in our sample, 319 involved outside CEOs and 1,782 involved inside CEOs. Appendix Figure A.7 presents the results. We find that only firms experiencing outside CEO turnover exhibit small changes in culture scores in the first year following turnover, which quickly revert to pre-turnover levels from the second year onward. This evidence is consistent with Biggerstaff et al. (2015) and Bai and Mkrtchyan (2023), who show that outside CEOs tend to implement more operational changes than inside CEOs.²⁷

8.4 Corporate culture and other major corporate events

As additional evidence on the persistence of culture, we examine the effects of major corporate events on culture. Appendix Figure A.8 presents the results for large M&As. We find no significant changes in culture following such transactions. A plausible explanation is that cultural alignment is an important consideration in target selection (Bereskin et al., 2018; Ahern et al., 2015; Li et al., 2021b). Appendix Figure A.10 reports the results for Chapter 11 bankruptcies. In contrast to M&As, bankruptcy is associated with a pronounced deterioration in corporate culture, although the effect is not statistically significant. Appendix Figure A.11 presents the results for accounting frauds.²⁸ We do not observe statistically significant changes in corporate culture following these events.

8.5 Corporate culture in private firms

Our main evidence is based on public firms, raising the question of whether similar patterns hold for private firms. To examine culture persistence among private firms, we restrict the sample to firms that have never been publicly listed (identified as those not matched to CRSP) and measure culture using Glassdoor employee reviews. Appendix Figure A.13 shows patterns similar to Figure 1 for public firms. Although culture scores for the very high and high groups exhibit some convergence over a ten-year horizon, the evidence points to a sizable permanent component of corporate culture.

²⁷In untabulated analysis, we focus on CEO turnover events in which half or three-quarters of top executives are also replaced, and note that our main findings remain: corporate culture ultimately persists despite management team turnover.

²⁸Accounting fraud data over the period 2002-2018 are obtained from https://github.com/casualcomputer/accounting_fraud/blob/master/README.md.

We next examine how a private firm’s culture relates to its initial culture. We proxy a firm’s initial culture with its first available Glassdoor culture score and interact this variable with the number of years since the initial observation to gauge decay. Appendix Table A.9 reports the results. In column (1), a private firm’s initial culture score is positively and significantly associated with its subsequent culture scores. The interaction between *Glassdoor CC first obs* and the number of years since the initial observation is negative and statistically significant, but economically negligible: based on the estimates, the effect would take 1,263 years to dissipate ($e^{0.807/0.113}$). Columns (2)–(4) add industry fixed effects, industry and year fixed effects, and industry times year fixed effects, respectively; the results are largely unchanged. The inclusion of these fixed effects adds little explanatory power for the variation in corporate culture. Overall, we find that culture persistence extends to private firms.

8.6 Corporate culture and IPOs

To investigate cultural change around IPOs, we match Glassdoor culture scores to IPOs over the period 2009-2022; we focus on the period from the five years before to the five years after an IPO. Our sample comprises 374 firms that underwent an IPO and for which we have at least one culture score from both the pre- and post-IPO periods.²⁹ Appendix Figure A.13 shows no significant cultural change after the IPO, supporting the view that corporate culture persists through the listing event.

9 Conclusion

We know relatively little about how corporate culture is formed and how it evolves over time. In this paper, we study the evolution of corporate culture and trace its origins, distinguishing between the values and norms that prevail within firms and the preferences of corporate insiders. Our primary dataset comes from Li et al. (2021b), who use machine learning methods to score corporate culture based on earnings call transcripts.

Using one of the largest panel datasets on corporate culture, we first show that culture is highly persistent: firms with strong (weak) cultures tend to remain so for at least a decade.

²⁹Requiring a balanced sample around an IPO event would substantially reduce the sample size.

We further show that most of the variation in culture is explained by time-invariant firm fixed effects, largely attributable to the culture formed around its founding. To ensure that these findings are not an artifact of measurement, we replicate the analysis using two alternative culture measures based on employee reviews from Glassdoor and corporate insiders' cultural heritage. Across both measures, our main results hold.

Using a rich set of founder characteristics to explain a firm's initial culture, we show that a founder's cultural heritage, the racial diversity of her birthplace, and the business environment at the start of her career all significantly shape her firm's initial culture. We further demonstrate that assortative matching between firms and CEOs (employees) on cultural values, as well as the direct influence of culture on CEOs, are two key mechanisms underlying the persistence of corporate culture.

Our study also raises a number of questions. What governance mechanisms help sustain culture over time? How do product market competition and stakeholder pressure shape the formation and evolution of culture? Addressing these questions could provide valuable insights for firms seeking to make better investment decisions, strengthen risk management practices, and mitigate the risk of abrupt cultural change.

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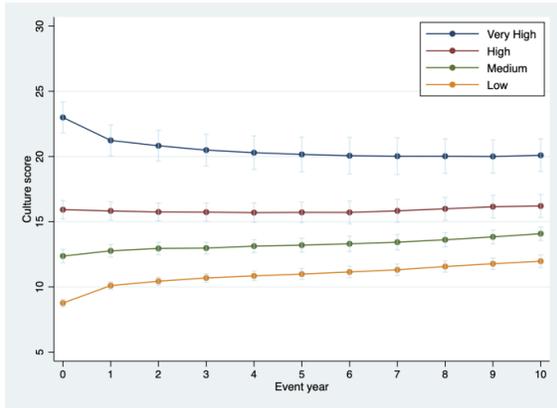
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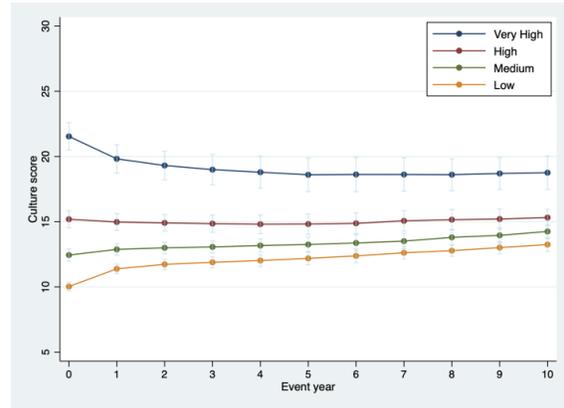
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Figure 1: Average Culture Scores of Culture Groups in Event Year



Panel A: Raw Culture Groups



Panel B: Unexplained Culture Groups

This figure shows the evolution of corporate culture over time. Each fiscal year, we sort firms into quartiles (i.e., *Very High*, *High*, *Medium*, and *Low* groups) using their (unexplained) culture scores. The group formation year is denoted event year 0. We then compute the average culture score for each group in each of the subsequent ten years, holding the group composition constant (except for firms that exit the sample). We repeat these two steps of sorting and averaging for every year in the sample period. This process generates 20 sets of event-year averages, one for each fiscal year in our sample. We then compute the average culture score of each group across the 20 sets within each event year. The bars represent 95% confidence intervals. Panel A shows the evolution of corporate culture using raw culture scores to sort. The sample comprises 55,377 firm-year observations for 6,917 firms from 2002 to 2021. Panel B shows the evolution of corporate culture using unexplained culture scores to sort. The sample comprises 47,069 firm-year observations for 6,029 firms from 2002 to 2021.

Table 1: Summary Statistics

Panel A: Firm Characteristics						
	Obs.	Mean	Median	SD	P25	P75
Culture	55,377	14.897	13.791	5.932	10.627	17.997
Total assets	55,377	5358.723	583.302	17880.910	144.767	2449.602
Firm size	55,377	6.442	6.369	2.076	4.975	7.804
Firm age	55,377	18.657	14.000	17.098	6.000	25.000
Ln(Firm age)	55,377	2.609	2.708	0.903	1.946	3.258
Sales growth	55,377	0.132	0.073	0.374	-0.025	0.201
Leverage	55,377	0.225	0.196	0.196	0.042	0.357
M/B	55,377	1.924	1.434	1.410	1.070	2.192
ROA	55,377	0.071	0.095	0.162	0.031	0.149
Tangibility	55,377	0.237	0.138	0.246	0.047	0.358
Institutional ownership	55,377	0.630	0.706	0.313	0.405	0.879
Num M&As	55,377	2.357	1.000	3.247	0.000	3.000
Num SEOs	55,377	1.771	1.000	2.467	0.000	3.000

Panel B: Initial Culture Variables						
	Obs.	Mean	Median	SD	P25	P75
Culture IPO	1,236	16.399	15.021	7.697	10.856	20.094
Culture first IPO3y	2,387	16.058	14.784	7.174	10.826	19.692
Culture avg IPO3y	2,090	15.726	14.505	6.278	10.930	19.148
Culture first obs	1,324	13.356	12.438	4.950	9.663	16.068

Panel C: Founder Characteristics						
	Obs.	Mean	Median	SD	P25	P75
Founder UAI	1,324	0.475	0.350	0.157	0.350	0.650
Founder birthplace racial diversity	1,064	0.859	0.894	0.113	0.798	0.948
Founder birthplace TFE	1,064	0.860	0.500	1.056	0.000	1.400
Founder birthplace REL	1,064	0.497	0.495	0.123	0.403	0.576
Founder work recession	1,061	0.287	0.000	0.453	0.000	1.000

The table presents the summary statistics. The sample comprises 55,377 firm-year observations for 6,917 firms in the CRSP-Compustat database with non-missing culture scores from 2002 to 2021. Panel A reports the summary statistics for firm characteristics. Panel B reports the summary statistics for initial culture variables. Panel C reports the summary statistics for founder characteristics. Variable definitions are provided in Appendix Table A.1.

Table 2: Variance Decomposition of Corporate Culture

Panel A: The Full Sample

	Culture (1)	Culture (2)	Culture (3)	Culture (4)	Culture (5)	Culture (6)	Culture (7)
Firm FE	1.00			0.88	0.88		0.86
CEO FE		1.00		0.12	0.11		0.13
Year FE			1.00		0.01	0.21	0.01
Industry FE						0.62	
Firm size						0.00	0.00
Ln(Firm age)						0.00	0.00
Sales growth						0.00	0.00
Leverage						0.01	0.00
M/B						0.10	0.00
ROA						0.02	0.00
Tangibility						0.03	0.00
Institutional ownership						0.00	0.00
Num M&As						0.00	0.00
Num SEOs						0.00	0.00
Adj. R ²	0.61	0.60	0.04	0.74	0.74	0.32	0.75

Panel B: Firms with CEOs Who Have Worked at Two or More Firms

	Culture (1)	Culture (2)	Culture (3)	Culture (4)	Culture (5)	Culture (6)	Culture (7)
Firm FE	1.00			0.99	0.95		0.95
CEO FE		1.00		0.01	0.01		0.01
Year FE			1.00		0.04	0.26	0.03
Industry FE						0.54	
Firm size						0.02	0.00
Ln(Firm age)						0.00	0.00
Sales growth						0.00	0.00
Leverage						0.00	0.00
M/B						0.07	0.00
ROA						0.01	0.00
Tangibility						0.04	0.00
Institutional ownership						0.01	0.00
Num M&As						0.01	0.00
Num SEOs						0.03	0.00
Adj. R ²	0.73	0.59	0.07	0.74	0.77	0.32	0.77

Panel C: Impact of Different Fixed Effects on Firm Policies

	Sales (1)	Capex (2)	ROA (3)	Book Leverage (4)	Market Leverage (5)	Cash (6)	R&D (7)
Firm FE	0.63	0.54	0.62	0.89	0.88	0.61	0.66
CEO FE	0.35	0.45	0.33	0.10	0.11	0.37	0.33
Year FE	0.02	0.01	0.05	0.01	0.01	0.02	0.01
Adj. R ²	0.91	0.84	0.73	0.79	0.81	0.74	0.93

The table presents a variance decomposition of corporate culture using different model specifications. *Industry FE* are based on the Fama and French 38-industry classification. We compute the partial sum of squares for each effect in a model and then normalize each estimate by the sum across the effects, forcing each column to sum to one. Panel A presents the results for the full sample, comprising 29,368 firm-year observations for 2,587 firms from 2002 to 2021. Panel B presents the results for a sample of firms whose CEOs have worked at two or more firms. The sample comprises 1,085 firm-year observations for 235 CEOs at 122 firms. Panel C presents the results of a variance decomposition of firm policies for the full sample. Variable definitions are provided in Appendix Table A.1.

Table 3: The Role of A Firm's Initial Culture in Shaping Its Subsequent Culture

Panel A: The Full Sample

	Culture (1)	Culture (2)	Culture (3)	Culture (4)	Culture (5)	Culture (6)	Culture (7)	Culture (8)	Culture (9)
Culture IPO	0.781*** (0.052)	0.646*** (0.053)	0.467*** (0.054)						
Culture IPO × Ln(Firm age)	-0.078* (0.043)	-0.068 (0.041)	-0.040 (0.039)						
Culture first IPO3y				0.777*** (0.036)	0.651*** (0.036)	0.491*** (0.037)			
Culture first IPO3y × Ln(Firm age)				-0.070*** (0.027)	-0.058** (0.026)	-0.032 (0.025)			
Culture ave IPO3y							0.946*** (0.067)	0.831*** (0.064)	0.645*** (0.067)
Culture ave IPO3y × Ln(Firm age)							-0.063 (0.045)	-0.047 (0.042)	-0.006 (0.043)
Ln(Firm age)	2.335*** (0.546)	2.095*** (0.528)	1.311** (0.530)	1.938*** (0.361)	1.740*** (0.343)	1.079*** (0.365)	2.177*** (0.593)	1.903*** (0.556)	0.753 (0.590)
Firm size			0.024 (0.106)			-0.004 (0.069)			0.059 (0.065)
Sales growth			0.171 (0.168)			0.056 (0.104)			-0.068 (0.112)
Leverage			-1.556*** (0.601)			-1.982*** (0.412)			-1.612*** (0.407)
M/B			0.691*** (0.095)			0.550*** (0.062)			0.456*** (0.061)
ROA			-2.176*** (0.769)			-2.333*** (0.482)			-1.456*** (0.487)
Tangibility			-3.079*** (0.725)			-2.439*** (0.483)			-1.992*** (0.468)
Institutional ownership			-0.455 (0.370)			-0.562** (0.259)			-0.545** (0.263)
Num M&As			-0.033 (0.079)			-0.047 (0.047)			-0.036 (0.048)
Num SEOs			-0.082 (0.060)			-0.073* (0.041)			-0.039 (0.039)
Industry FE	No	Yes	Yes	No	Yes	Yes	No	Yes	Yes
Year FE	No	No	Yes	No	No	Yes	No	No	Yes
No. of firms	1,236	1,236	1,236	2,387	2,387	2,387	2,090	2,090	2,090
Obs.	6,670	6,670	6,670	13,248	13,248	13,248	11,275	11,275	11,275
Adj. R ²	0.414	0.477	0.537	0.408	0.462	0.513	0.496	0.524	0.558

Table 3 – Continued

Panel B: Firms Going Public within Ten Years of Founding

	Culture (1)	Culture (2)	Culture (3)	Culture (4)	Culture (5)	Culture (6)	Culture (7)	Culture (8)	Culture (9)
Culture IPO	0.743*** (0.093)	0.569*** (0.094)	0.389*** (0.089)						
Culture IPO × Ln(Firm age)	-0.035 (0.074)	-0.022 (0.069)	0.001 (0.059)						
Culture first IPO3y				0.801*** (0.066)	0.627*** (0.067)	0.487*** (0.065)			
Culture first IPO3y × Ln(Firm age)				-0.068 (0.050)	-0.044 (0.046)	-0.022 (0.043)			
Culture ave IPO3y							0.954*** (0.132)	0.779*** (0.123)	0.610*** (0.121)
Culture ave IPO3y × Ln(Firm age)							-0.052 (0.090)	-0.017 (0.082)	0.020 (0.079)
Ln(Firm age)	2.288** (1.006)	1.653* (0.931)	0.834 (0.914)	2.533*** (0.765)	1.978*** (0.710)	1.457* (0.792)	2.737** (1.349)	2.049* (1.227)	1.171 (1.274)
Firm size			0.461* (0.240)			0.201 (0.184)			0.180 (0.171)
Sales growth			0.091 (0.261)			0.028 (0.172)			-0.029 (0.184)
Leverage			-3.727*** (1.205)			-3.052*** (0.842)			-2.518*** (0.774)
M/B			0.613*** (0.162)			0.504*** (0.100)			0.427*** (0.089)
ROA			-2.170 (1.473)			-1.927** (0.916)			-1.074 (0.892)
Tangibility			-4.478*** (1.630)			-3.442*** (1.093)			-3.360*** (1.020)
Institutional ownership			-1.639** (0.723)			-1.207** (0.546)			-1.273** (0.553)
Num M&As			0.042 (0.316)			-0.051 (0.151)			-0.075 (0.131)
Num SEOs			-0.263** (0.121)			-0.239** (0.098)			-0.233** (0.093)
Industry FE	No	Yes	Yes	No	Yes	Yes	No	Yes	Yes
Year FE	No	No	Yes	No	No	Yes	No	No	Yes
No. of firms	427	427	427	828	828	828	721	721	721
Obs.	2,220	2,220	2,220	4,287	4,287	4,287	3,606	3,606	3,606
Adj. R ²	0.428	0.532	0.594	0.425	0.503	0.547	0.508	0.560	0.594

Table 3 – Continued

Panel C: Founders Having No Active Involvement

	Culture (1)	Culture (2)	Culture (3)	Culture (4)	Culture (5)	Culture (6)	Culture (7)	Culture (8)	Culture (9)
Culture IPO	0.821*** (0.045)	0.689*** (0.046)	0.507*** (0.045)						
Culture IPO × Ln(Firm age)	-0.113*** (0.036)	-0.101*** (0.035)	-0.073** (0.032)						
Culture first IPO3y				0.796*** (0.035)	0.672*** (0.035)	0.510*** (0.035)			
Culture first IPO3y × Ln(Firm age)				-0.088*** (0.026)	-0.075*** (0.025)	-0.051** (0.024)			
Culture ave IPO3y							1.004*** (0.057)	0.889*** (0.054)	0.698*** (0.057)
Culture ave IPO3y × Ln(Firm age)							-0.106*** (0.038)	-0.089** (0.035)	-0.050 (0.035)
Ln(Firm age)	2.592*** (0.495)	2.339*** (0.479)	1.594*** (0.463)	2.048*** (0.350)	1.856*** (0.334)	1.266*** (0.346)	2.597*** (0.496)	2.329*** (0.460)	1.253*** (0.477)
Firm size			-0.036 (0.093)			-0.048 (0.064)			0.020 (0.062)
Sales growth			0.167 (0.170)			0.063 (0.107)			-0.037 (0.115)
Leverage			-1.714*** (0.573)			-1.933*** (0.410)			-1.589*** (0.414)
M/B			0.618*** (0.092)			0.502*** (0.062)			0.416*** (0.064)
ROA			-2.000*** (0.724)			-2.228*** (0.482)			-1.434*** (0.500)
Tangibility			-3.530*** (0.677)			-2.781*** (0.471)			-2.264*** (0.480)
Institutional ownership			-0.481 (0.375)			-0.623** (0.264)			-0.582** (0.272)
Num M&As			-0.076 (0.059)			-0.068 (0.041)			-0.048 (0.045)
Num SEOs			-0.048 (0.057)			-0.055 (0.039)			-0.021 (0.038)
Industry FE	No	Yes	Yes	No	Yes	Yes	No	Yes	Yes
Year FE	No	No	Yes	No	No	Yes	No	No	Yes
No. of firms	1,167	1,167	1,167	2,267	2,267	2,267	1,972	1,972	1,972
Obs.	6,011	6,011	6,011	12,003	12,003	12,003	10,172	10,172	10,172
Adj. R ²	0.435	0.492	0.556	0.415	0.466	0.518	0.491	0.518	0.553

This table examines the relation between a firm's culture at the time of its IPO and its subsequent culture using different specifications. Panel A presents the results using the full sample. Panel B presents the results using a sample of firms that went public within the ten years of its founding. Panel C presents the results using a sample of firms whose founders are neither the CEO nor a member of the board in any firm-year over the sample period. *Culture IPO* is the culture score of a firm in the year of its IPO. *Culture first IPO3y* is the first non-missing culture score during the first

three years following a firm's IPO. *Culture avg IPO3y* is the average culture score over the first three years following a firm's IPO. Variable definitions are provided in Appendix Table A.1. *Industry FE* are based on the Fama and French 38-industry classification. The standard errors are clustered at the firm level. ***, **, * denote significance at the 1%, 5%, and 10% levels, respectively.

Table 4: Founder Characteristics and Corporate Culture Formation

Panel A: Founder Characteristics and Initial Corporate Culture Score

	Culture first obs (1)	Culture first obs (2)	Culture first obs (3)	Culture first obs (4)
Founder UAI	2.092** (0.949)			1.220*** (0.190)
Founder birthplace racial diversity		2.935*** (1.109)		2.162* (1.122)
Founder birthplace TFE		-0.024 (0.145)		-0.023 (0.149)
Founder birthplace REL		0.286 (1.242)		-0.109 (1.316)
Founder work recession			-0.869*** (0.313)	-0.944*** (0.328)
Firm controls	Yes	Yes	Yes	Yes
No. of firms	1,038	850	857	802
Obs.	1,324	1,064	1,061	987
Adj. R ²	0.146	0.133	0.146	0.137

Panel B: Founder Characteristics and Initial Operations- and People-related Culture Scores

	Operations-related first obs (1)	People-related first obs (2)
Founder UAI	0.024 (0.675)	1.278** (0.588)
Founder birthplace racial diversity	0.403 (0.738)	1.688** (0.762)
Founder birthplace TFE	0.051 (0.089)	-0.094 (0.106)
Founder birthplace REL	-0.087 (0.859)	-0.047 (0.823)
Founder work recession	-0.424** (0.200)	-0.514** (0.224)
Firm controls	Yes	Yes
No. of firms	802	802
Obs.	987	987
Adj. R ²	0.080	0.114

Panel C: Founder Characteristics and Initial Cultural Values

	Innovation first obs (1)	Quality first obs (2)	Integrity first obs (3)	Teamwork first obs (4)	Respect first obs (5)
Founder UAI	0.630 (0.467)	-0.392 (0.286)	0.506** (0.228)	-0.089 (0.287)	0.861*** (0.331)
Founder birthplace racial diversity	0.678 (0.611)	0.324 (0.301)	0.339 (0.301)	0.580* (0.330)	0.769* (0.459)
Founder birthplace TFE	-0.023 (0.069)	0.067 (0.045)	-0.050 (0.036)	-0.044 (0.043)	-0.000 (0.074)
Founder birthplace REL	-0.360** (0.154)	0.453 (0.358)	-0.203** (0.085)	-0.096 (0.101)	-0.215 (0.138)
Founder work recession	-0.551 (0.650)	-0.060 (0.093)	-0.192 (0.318)	0.080 (0.381)	0.065 (0.516)
Firm controls	Yes	Yes	Yes	Yes	Yes
No. of firms	802	802	802	802	802
Obs.	987	987	987	987	987
Adj. R ²	0.119	0.030	0.038	0.143	0.079

This table examines the relation between founder characteristics and their firm's initial culture. *Culture first obs* is the first non-missing culture score for a firm in our sample. *Operations-related first obs* is the first non-missing subscore of innovation and quality for a firm in our sample. *People-related first obs* is the first non-missing subscore of integrity, teamwork, and respect for a firm in our sample. *Innovation first obs* (*Quality first obs*, *Integrity first obs*, *Teamwork first obs*, *Respect first obs*) is the first non-missing

culture score of innovation (quality, integrity, teamwork, respect) for a firm in our sample. Panel A presents the results using the initial culture score as the dependent variable. Panel B presents the results using the operations- and people-related initial subscores as the dependent variables. Panel C presents the results using the initial individual cultural values as the dependent variables. Variable definitions are provided in Appendix Table A.1. The standard errors are clustered at the firm level. ***, **, * denote significance at the 1%, 5%, and 10% levels, respectively.

Table 5: Culture Matching Between Firms and CEOs

Panel A: Firm-CEO Culture Matching

	Incoming CEO UAI (1)	Incoming CEO UAI (2)	Incoming CEO UAI (3)	Incoming CEO UAI (4)	Incoming CEO UAI (5)	Incoming CEO UAI (6)
Culture before turnover	0.147** (0.061)	0.130** (0.066)	0.148** (0.072)	0.145** (0.061)	0.130** (0.066)	0.148** (0.072)
Departed CEO UAI				0.035* (0.019)	0.031* (0.019)	0.024 (0.019)
Firm size		-0.189 (0.212)	-0.190 (0.236)		-0.181 (0.212)	-0.190 (0.236)
Ln(Firm age)		0.121 (0.420)	0.039 (0.442)		0.112 (0.420)	0.038 (0.442)
Sales growth		3.132** (1.333)	3.154** (1.343)		3.153** (1.333)	3.162** (1.343)
Leverage		-0.427 (1.945)	-1.324 (2.022)		-0.456 (1.944)	-1.302 (2.022)
M/B		-0.637** (0.319)	-0.660** (0.329)		-0.647** (0.319)	-0.667** (0.329)
ROA		3.917 (3.384)	4.027 (3.494)		3.914 (3.383)	4.077 (3.494)
Tangibility		-3.812** (1.571)	-2.263 (2.284)		-3.705** (1.572)	-2.172 (2.285)
Institutional ownership		2.213 (1.448)	2.526* (1.490)		2.217 (1.448)	2.527* (1.490)
Num M&As		0.042 (0.098)	0.067 (0.103)		0.035 (0.098)	0.062 (0.103)
Num SEOs		-0.069 (0.132)	-0.110 (0.146)		-0.069 (0.132)	-0.110 (0.146)
Industry FE	No	No	Yes	No	No	Yes
Obs.	2,942	2,915	2,904	2,942	2,915	2,904
Adj. R ²	0.002	0.005	0.004	0.002	0.006	0.004

Panel B: Departure of Potentially Mismatched CEOs

	CEO departure (1)	CEO departure (2)	CEO departure (3)	CEO departure (4)
Abs diff in UAI quartile	0.021** (0.009)	0.020** (0.010)	0.018** (0.009)	0.019** (0.010)
Culture before turnover	0.004*** (0.002)	0.004** (0.002)	0.003 (0.002)	0.003 (0.002)
Firm size		-0.020*** (0.005)		-0.019*** (0.006)
Ln(Firm age)		-0.031** (0.012)		-0.027** (0.012)
Sales growth		0.003*** (0.000)		0.003*** (0.000)
Leverage		0.017 (0.054)		0.031 (0.057)
M/B		-0.007 (0.005)		-0.004 (0.006)
ROA		-0.214* (0.117)		-0.248** (0.125)
Tangibility		0.053 (0.042)		0.047 (0.065)
Institutional ownership		0.000 (0.039)		-0.010 (0.039)
Num M&As		0.001 (0.002)		0.001 (0.002)
Num SEOs		-0.001 (0.002)		0.001 (0.003)
Industry FE	No	No	Yes	Yes
Obs.	1,952	1,759	1,916	1,748
Adj. R ²	0.036	0.058	0.045	0.070

This table examines firm-CEO matching on cultural values. Panel A examines firm-CEO matching using CEOs' UAI scores and firms' culture scores. The sample comprises 2,942 CEO turnover events from 2002 to 2021. *Incoming CEO UAI* is the UAI score of an incoming CEO, multiplied by 100. *Culture before turnover* is the culture score of a firm in the year before a CEO turnover event. *Departed CEO UAI* is the UAI score of a CEO who left a firm, multiplied by 100. Panel B examines departure of potentially mismatched CEOs. We employ a linear probability model. The sample comprises 1,952 CEO turnover events due to exogenous reasons including death, health problems, or retirement following Fee et al. (2013) and Dittmar and Duchin (2016). *CEO departure* is an indicator variable that takes a value of one if a CEO departs within the first three years following appointment, and zero otherwise. *Abs diff in UAI quartile* is the absolute value of the difference between the quartile of an incoming CEO's UAI score and that of a departed CEO's UAI score. Variable definitions are provided in Appendix Table A.1. *Industry FE* are based on the Fama and French 38-industry classification. The standard errors are clustered at the firm level. ***, **, * denote significance at the 1%, 5%, and 10% levels, respectively.

Table 6: Culture Matching Between Firms and Employees

	Employee departure (1)	Employee departure (2)	Employee departure (3)	Employee departure (4)
Culture similarity	-1.953*** (0.042)	-1.827*** (0.039)	-1.953*** (0.002)	-1.827*** (0.002)
Ln(Employee age)		0.217*** (0.013)		0.217*** (0.004)
Ln(Tenure)		0.163*** (0.001)		0.163*** (0.000)
Firm size		-0.029*** (0.006)		-0.029*** (0.000)
Ln(Firm age)		0.036*** (0.009)		0.036*** (0.001)
Sales growth		-0.000 (0.000)		-0.000 (0.000)
Leverage		-0.003 (0.021)		-0.003 (0.002)
M/B		-0.010*** (0.002)		-0.010*** (0.000)
ROA		-0.027 (0.041)		-0.027*** (0.004)
Tangibility		-0.011 (0.047)		-0.011*** (0.004)
Institutional ownership		-0.001 (0.015)		-0.001 (0.001)
Loss		0.017*** (0.006)		0.017*** (0.001)
ROA volatility		0.072 (0.083)		0.072*** (0.008)
Unemployment rate		0.003 (0.003)		0.003*** (0.000)
Employee FE	Yes	Yes	Yes	Yes
Firm FE	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes
No. of firms	3,538	3,538	3,538	3,538
No. of employee	1,803,708	1,803,708	1,803,708	1,803,708
Obs.	8,130,720	8,130,720	8,130,720	8,130,720
Adj. R ²	0.178	0.238	0.178	0.238

This table examines firm-employee matching on cultural values. The sample comprises 8,130,720 employee-year observations for 1,803,708 immigrant employees at 3,538 firms from 2002 to 2021. *Employee departure* is an indicator variable that takes a value of one if an employee leaves her firm in a given year, and zero otherwise. *Culture similarity* is the cosine similarity between an employee's cultural values in a vector (based on the World Values Survey and her country of origin) and her firm's culture in a vector (a higher value indicates greater similarity). Variable definitions are provided in Appendix Table A.1. *Industry FE* are based on the Fama and French 38-industry classification. The standard errors are clustered at the firm level. ***, **, * denote significance at the 1%, 5%, and 10% levels, respectively.

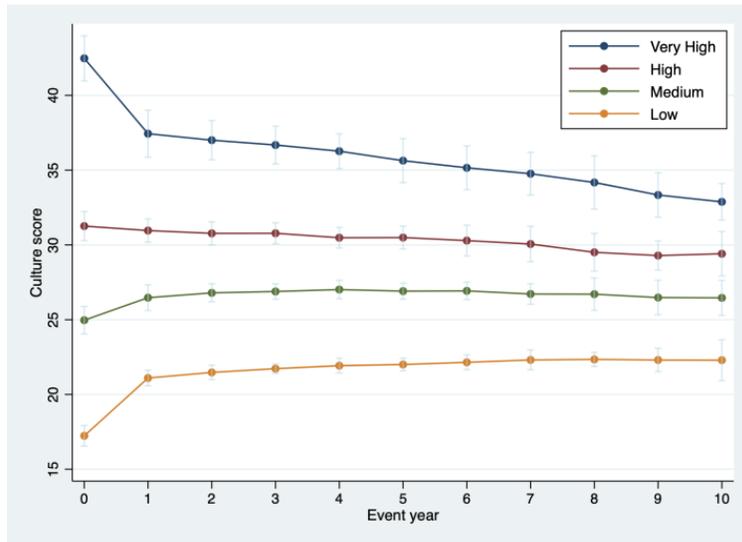
Table 7: The Treatment Effect of Culture on CEOs

	Product quality (1)	Product quality (2)	R&D (3)	R&D (4)	Discretionary accruals (5)	Discretionary accruals (6)
Former employer culture \times Post	0.003* (0.002)	0.003** (0.001)	0.025*** (0.009)	0.023*** (0.009)	-0.047* (0.025)	-0.058** (0.026)
Culture	-0.006** (0.003)	-0.004 (0.003)	-0.001 (0.026)	-0.013 (0.025)	0.099 (0.069)	0.114* (0.068)
CEO UAI	0.123* (0.071)	0.100 (0.063)	-0.321 (0.625)	-0.259 (0.581)	-0.309 (1.474)	-0.057 (1.540)
Exec UAI	-0.167 (0.207)	-0.237 (0.178)	0.680 (1.695)	0.363 (1.572)	-3.690 (3.254)	-1.790 (3.427)
Firm size		0.023 (0.042)		-0.847* (0.456)		-3.513*** (1.086)
Ln(Firm age)		0.086 (0.080)		-1.055 (1.272)		4.451*** (1.672)
Sales growth		0.040 (0.029)		0.323 (0.370)		-0.835 (1.128)
Leverage		0.320* (0.174)		-1.525 (1.271)		-2.458 (3.538)
M/B		-0.025** (0.012)		-0.230 (0.176)		1.094*** (0.348)
ROA		0.283 (0.270)		-5.694 (4.150)		-2.509 (3.922)
Tangibility		0.304 (0.307)		4.765 (3.229)		1.516 (4.938)
Institutional ownership		0.171 (0.106)		-0.008 (0.596)		1.902 (1.286)
Num M&As		-0.002 (0.020)		-0.113 (0.204)		0.095 (0.446)
Num SEOs		0.076 (0.050)		-0.337 (0.544)		0.625 (0.581)
Firm FE	Yes	Yes	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes	Yes	Yes
No. of events	270	268	320	320	407	406
No. of firms	239	237	264	264	339	338
Obs.	1,059	1,049	1,479	1,469	1,877	1,863
Adj. R ²	0.559	0.579	0.884	0.891	0.289	0.318

This table examines the treatment effect of corporate culture on CEOs. We track the career paths of CEOs using the ExecuComp database and use the culture score of a CEO's previous employer as a proxy for the culture imprinted on her. *Former employer culture* is the culture score of an incoming CEO's previous employer. *Post* is an indicator variable that takes a value of one for the first three years following a CEO's appointment, and zero for the three years leading to appointment. The CEO turnover sample is limited to those due to exogenous reasons related to death, health problems, or retirement. *Product quality* is the product safety & quality score from MSCI ESG ratings. *R&D* is the ratio of capital expenditures to book assets. *Discretionary accruals* are the abnormal accruals from the modified Jones model—the component of accruals that deviates from the industry benchmark, multiplied by 100. Variable definitions are provided in Appendix Table A.1. The standard errors are clustered at the firm level. ***, **, * denote significance at the 1%, 5%, and 10% levels, respectively.

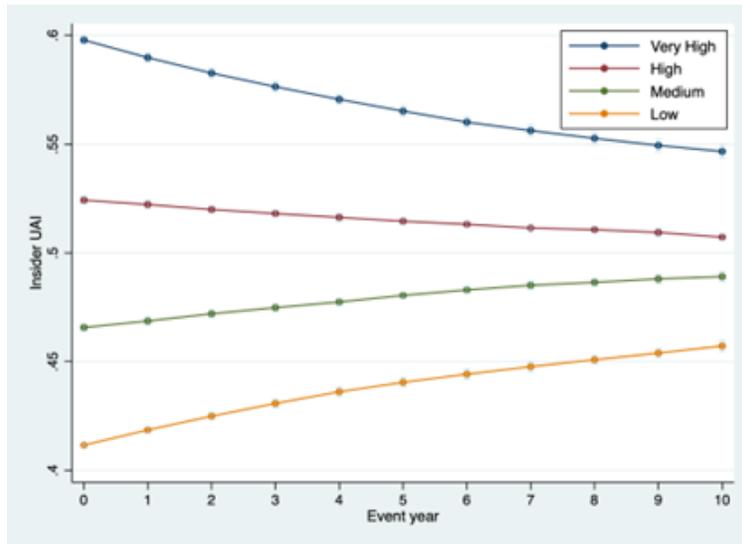
**Online Appendix for
“Set in Stone: The Persistence and Origins of Corporate
Culture”**

Figure A.1: Average Culture Scores of Glassdoor Culture Groups in Event Year



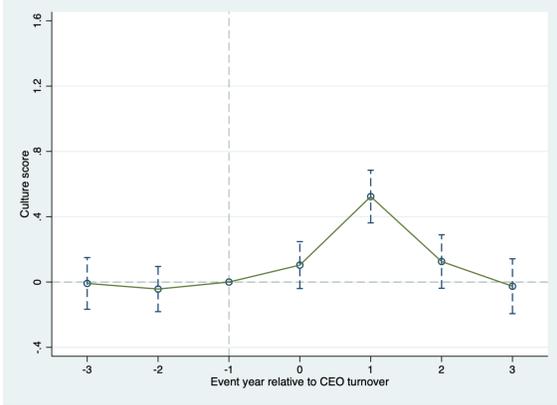
This figure shows the evolution of corporate culture over time using Glassdoor culture scores as an alternative measure. The sample comprises 25,197 firm-year observations for 3,010 firms from 2008 to 2023. Each fiscal year, we sort firms into quartiles (i.e., *Very High*, *High*, *Medium*, and *Low* groups) using their culture scores. The group formation year is denoted event year 0. We then compute the average culture score for each group in each of the subsequent ten years, holding the group composition constant (except for firms that exit the sample). We repeat these two steps of sorting and averaging for every year in the sample period. This process generates 16 sets of event-year averages, one for each fiscal year in our sample. We then compute the average culture score of each group across the 16 sets for each event year. The bars represent 95% confidence intervals.

Figure A.2: Average UAI of Insider UAI Groups in Event Year

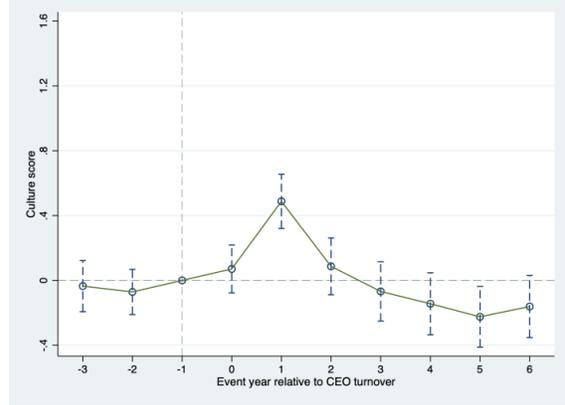


This figure shows the evolution of corporate culture over time using average insiders' uncertainty avoidance index (UAI) scores as an alternative measure. The sample comprises 34,852 firm-year observations for 2,885 firms from 2002 to 2021. Each fiscal year, we sort firms into quartiles (i.e., *Very High*, *High*, *Medium*, and *Low* groups) using their culture scores. The group formation year is denoted event year 0. We then compute the average culture score for each group in each of the subsequent ten years, holding the group composition constant (except for firms that exit the sample). We repeat these two steps of sorting and averaging for every year in the sample period. This process generates 20 sets of event-year averages, one for each fiscal year in our sample. We then compute the average culture score of each group across the 20 sets for each event year. The bars represent 95% confidence intervals.

Figure A.3: CEO Turnover and Corporate Culture



Panel A: The Window of Year (-3, +3)



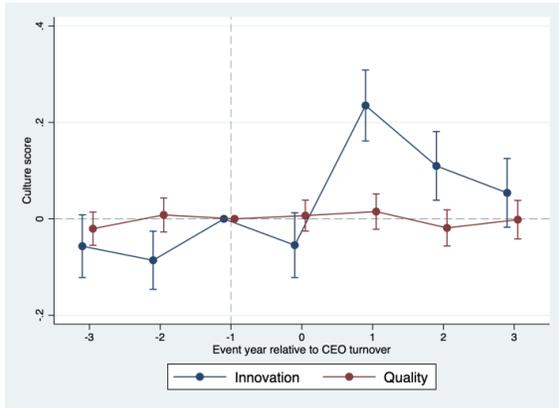
Panel B: The Window of Year (-3, +6)

This figure presents the temporal variation in corporate culture around CEO turnover. We require that there is at least one observation both before and after a CEO turnover event and that we employ the same CEO turnover sample when examining two different event windows (for comparability). The sample comprises 1,727 CEO turnover events from 2002 to 2021, including 9 founder-to-founder events (i.e., a founder CEO is replaced by another founder), 159 founder-to-non-founder events (i.e., a founder CEO is replaced by a non-founder), 40 non-founder-to-founder events (i.e., a non-founder CEO is replaced by a founder), and 1,522 non-founder-to-non-founder events (i.e., a non-founder CEO is replaced by another non-founder). We compare cultural changes before and after CEO turnover with those of firms that do not experience turnover, using the following difference-in-differences specification:

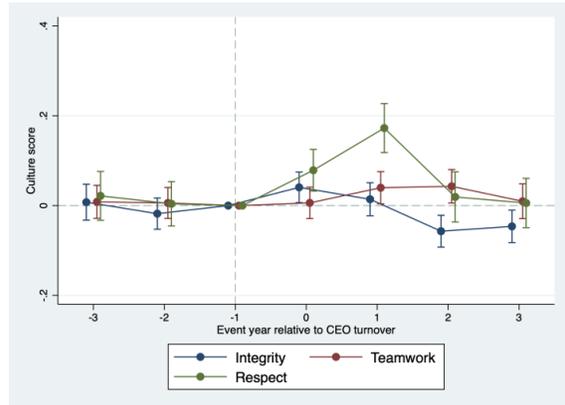
$$Culture_{i,t} = \alpha + \sum_{k \in [-3,3], k \neq -1} Treat_i * Year_k + \beta X_{i,t-1} + \eta_i + v_t + \epsilon_{i,t} \quad (2)$$

where i indexes firms and t indexes years. $X_{i,t-1}$ denotes a set of lagged firm-level controls, η_i are firm fixed effects, and v_t are year fixed effects. $Treat_i$ is an indicator equal to one if a firm undergoes a CEO turnover, and zero otherwise. $Year_k$ captures time relative to the turnover year (year 0), with event year -1 serving as the benchmark. We then plot corporate culture over the period around a CEO turnover event. Panel A presents the results examining the temporal variation in corporate culture in the year (-3, +3) window. Panel B presents the results examining the temporal variation in corporate culture in the year (-3, +6) window. The solid line represents the parameter estimates. The bars represent 95% confidence intervals.

Figure A.4: CEO Turnover and Corporate Cultural Values



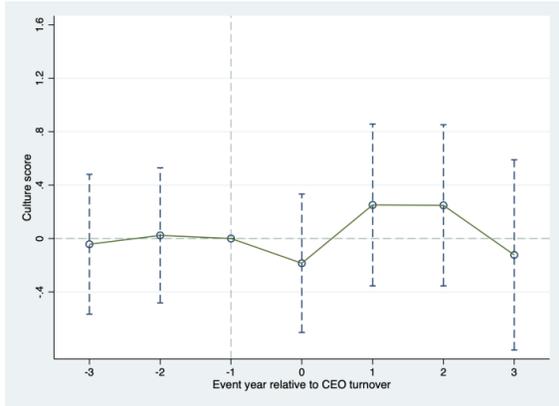
Panel A: Operations-related Culture Values



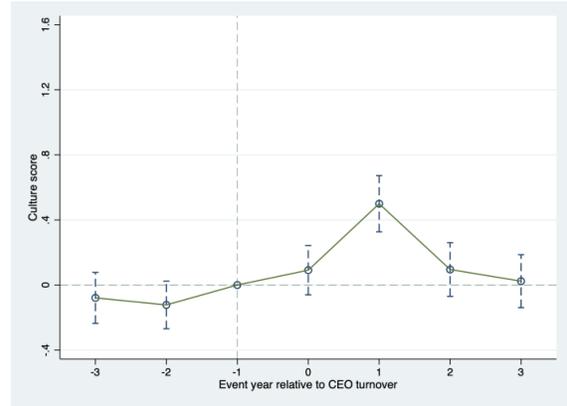
Panel B: People-related Culture Values

This figure presents the temporal variation in different cultural values around CEO turnover. We require that there is at least one observation both before and after a CEO turnover event. The sample comprises 2,101 CEO turnover events from 2002 to 2021, including 10 founder-to-founder events (i.e., a founder CEO is replaced by another founder), 193 founder-to-non-founder events (i.e., a founder CEO is replaced by a non-founder), 47 non-founder-to-founder events (i.e., a non-founder CEO is replaced by a founder), and 1,851 non-founder-to-non-founder events (i.e., a non-founder CEO is replaced by another non-founder). We plot corporate cultural values in the year (-3, +3) window around a CEO turnover event. Year 0 refers to the year in which a CEO turnover occurs; year t-1 serves as the benchmark. Panel A presents the results using operations-related cultural values including innovation and quality. Panel B presents the results using people-related cultural values including integrity, respect, and teamwork. The solid line represents the parameter estimates. The bars represent 95% confidence intervals.

Figure A.5: Founder CEO vs. Non-founder CEO Turnover and Corporate Culture



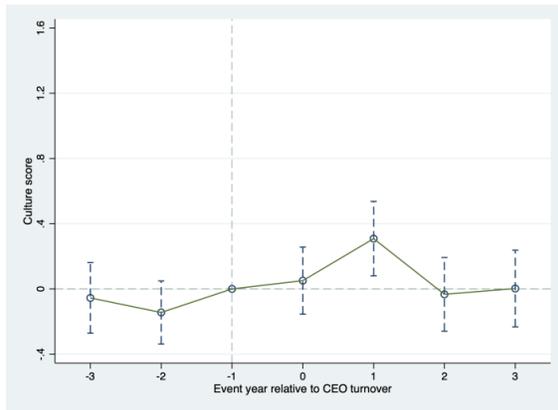
Panel A: Founder CEO Turnover



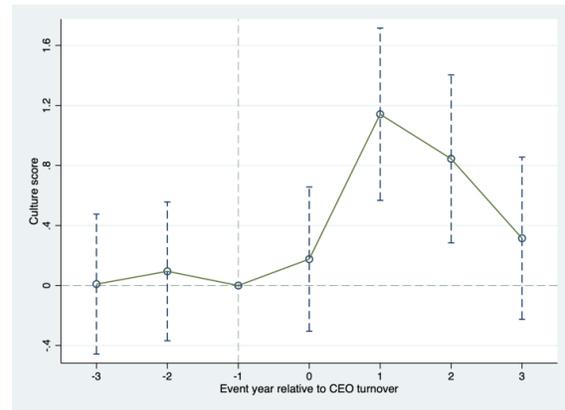
Panel B: Non-founder CEO Turnover

This figure compares the temporal variation in corporate culture around founder CEO vs. non-founder CEO turnover. We plot corporate culture in the year (-3, +3) window around a CEO turnover event. Year 0 refers to the year in which a CEO turnover occurs; year t-1 serves as the benchmark. Panel A presents the results using the founder CEO turnover sample, comprising 193 founder-to-non-founder events (i.e, a founder CEO is replaced by a non-founder). Panel B presents the results using the non-founder CEO turnover sample, comprising 1,851 non-founder-to-non-founder events (i.e, a non-founder CEO is replaced by another non-founder). The solid line represents the parameter estimates. The bars represent 95% confidence intervals.

Figure A.6: Exogenous vs. Endogenous CEO Turnover and Corporate Culture



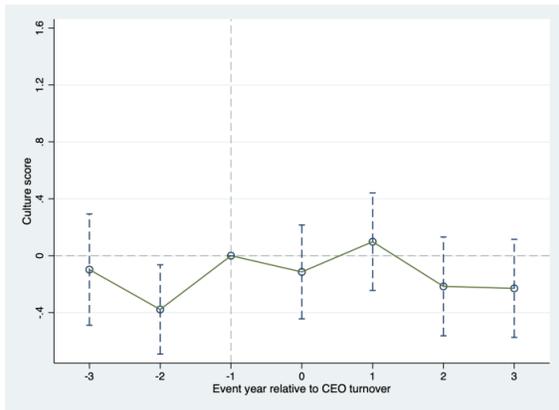
Panel A: Exogenous CEO Turnover



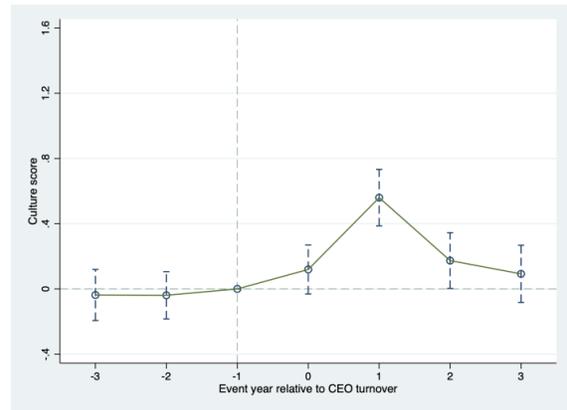
Panel B: Endogenous CEO Turnover

This figure compares the temporal variation in corporate culture around exogenous vs. endogenous CEO turnover events. Following Fee et al. (2013) and Dittmar and Duchin (2016), we classify CEO turnover into exogenous events related to death (21 events), health problems (37 events), or retirement (1,438 events) and endogenous events related to poor performance (410 events). We obtain reasons behind a CEO turnover from Gentry et al. (2021). We plot corporate culture in the year (-3, +3) window around a CEO turnover event. Year 0 refers to the year in which a CEO turnover occurs; year t-1 serves as the benchmark. Panel A presents the results using the exogenous CEO turnover sample, comprising 1,496 events. Panel B presents the results using the endogenous CEO turnover sample, comprising 410 events. The solid line represents the parameter estimates. The bars represent 95% confidence intervals.

Figure A.7: Internal vs. External CEO Appointments and Corporate Culture



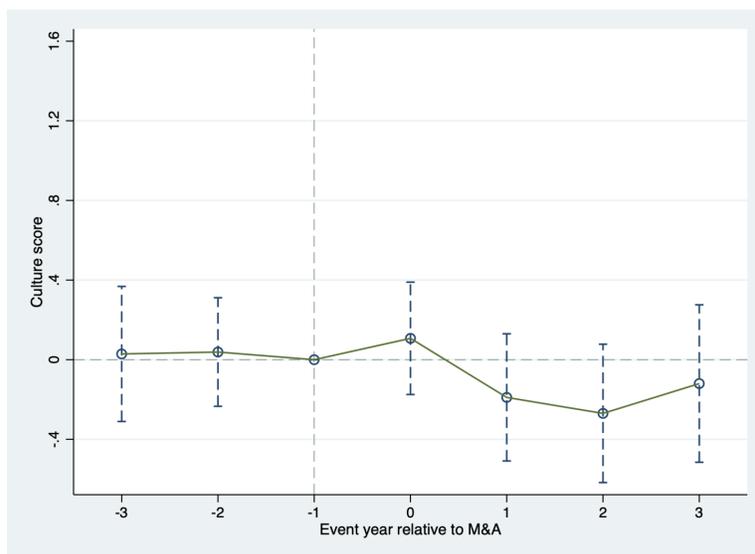
Panel A: Internal CEO Appointments



Panel B: External CEO Appointments

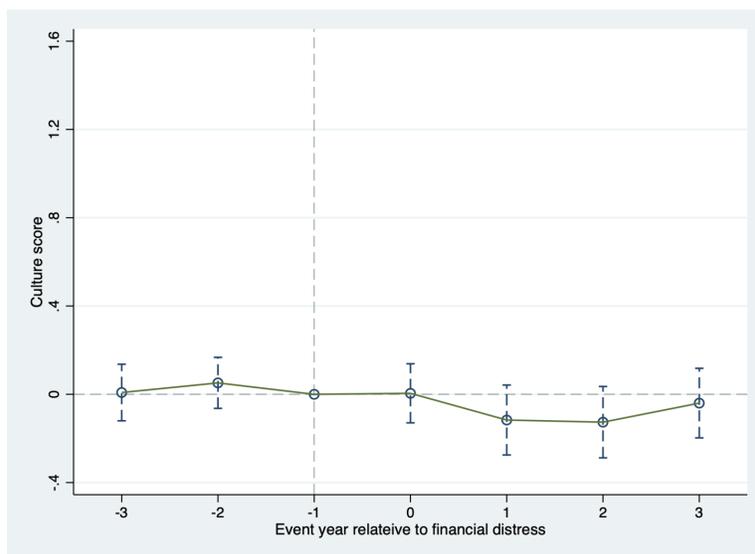
This figure compares the temporal variation in corporate culture around internal vs. external CEO appointments. Following Bai and Mkrтчyan (2023), a successor is classified as an outside CEO if her total tenure at the firm (as an executive or a director) is one year or less at the time of her appointment as CEO. We plot corporate culture in the year (-3, +3) window around a CEO turnover event. Year 0 refers to the year in which a CEO turnover occurs; year t-1 serves as the benchmark. Panel A presents the results using the sample of 1,782 turnover events involving incoming internal CEOs. Panel B presents the results using the sample of 319 turnover events involving incoming external CEOs. The solid line represents the parameter estimates. The bars represent 95% confidence intervals.

Figure A.8: Large M&As on Corporate Culture



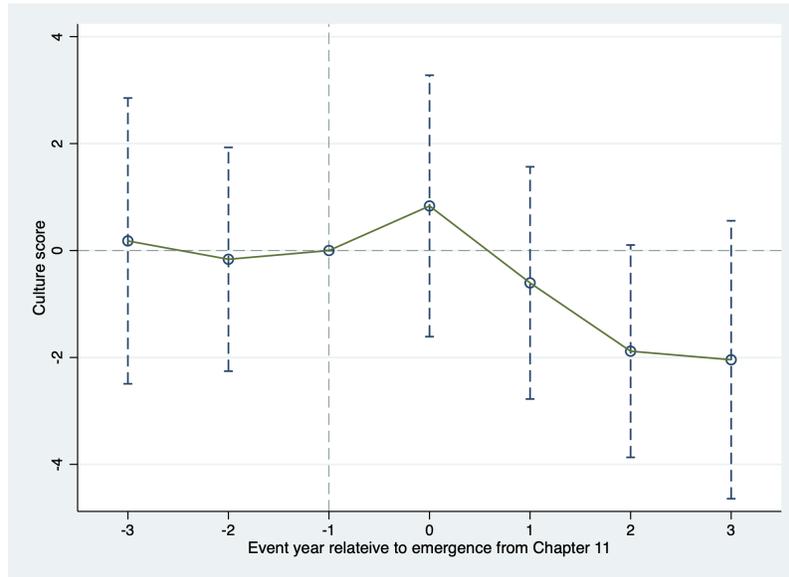
This figure presents the temporal variation in corporate culture around large M&As. We obtain completed M&A deals over the period 2002–2021 from Thomson Reuters’ SDC database. The sample selection criteria are as follows: 1) the deal is classified as “Acquisition of Assets (AA)”, “Acquisition of Majority Interest (AM),” or “Merger (M)” by the data provider; 2) the acquirer is a U.S. public firm listed on the AMEX, NYSE, or NASDAQ; 3) the acquirer holds less than 50% of the shares of the target firm before the deal announcement and ends up owning 100% of the shares of the target firm through the deal; 4) the deal value is at least \$1 million (in 2019 dollar value); 5) the relative size of the deal, i.e., M&A deal value divided by the market value of the acquirer 2 weeks before the announcement date is at least 50%. 6) the target firm is domiciled in the U.S.; 7) the target firm is a public firm, a private firm, or a subsidiary. The sample comprises 799 large M&A events from 2002 to 2021. We plot corporate culture in the year (-3, +3) window around M&A events. Year 0 refers to the year in which a M&A event occurs; year t-1 serves as the benchmark. The solid line represents the parameter estimates. The bars represent 95% confidence intervals.

Figure A.9: Financial Distress and Corporate Culture



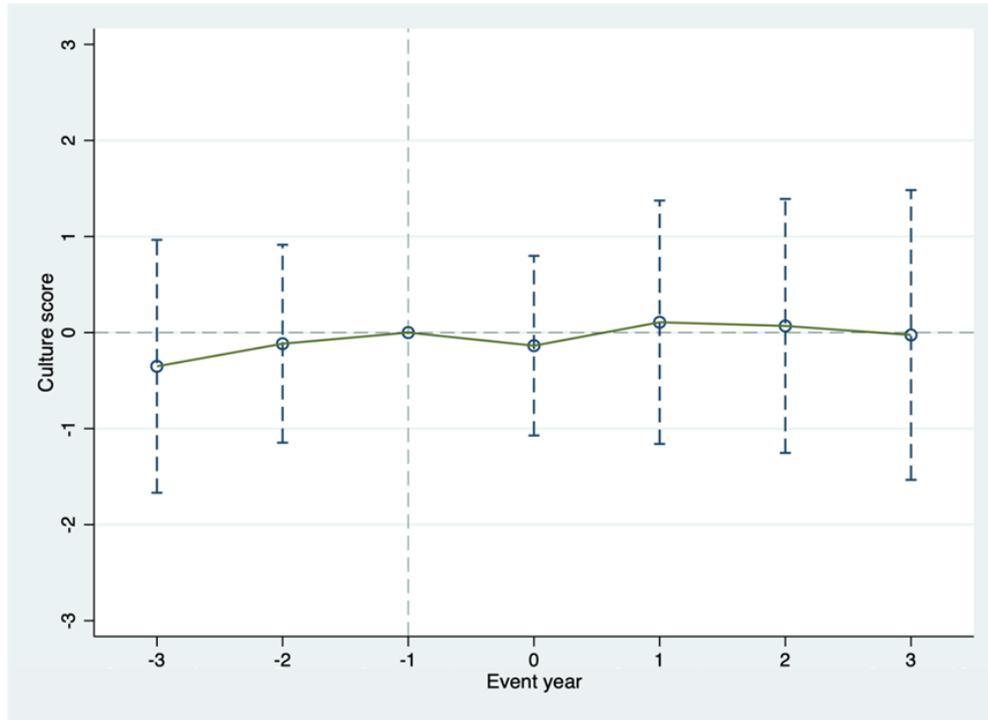
This figure presents the temporal variation in corporate culture around financial distress events. We first calculate the expected default risk (EDF) for each firm every month. If a firm's EDF exceeds the 90th percentile of its firm-month cohort, that firm-month is classified as distressed. If a firm has more than six distressed months in a year, the distress indicator takes a value of one for this firm-year observation, and zero otherwise. The sample comprises 4,028 distress events from 2002 to 2021. We plot corporate culture in the year (-3, +3) window around a distress event. Year 0 refers to the year in which a distress event occurs; year t-1 serves as the benchmark. The solid line represents the parameter estimates. The bars represent 95% confidence intervals.

Figure A.10: Bankruptcy and Corporate Culture



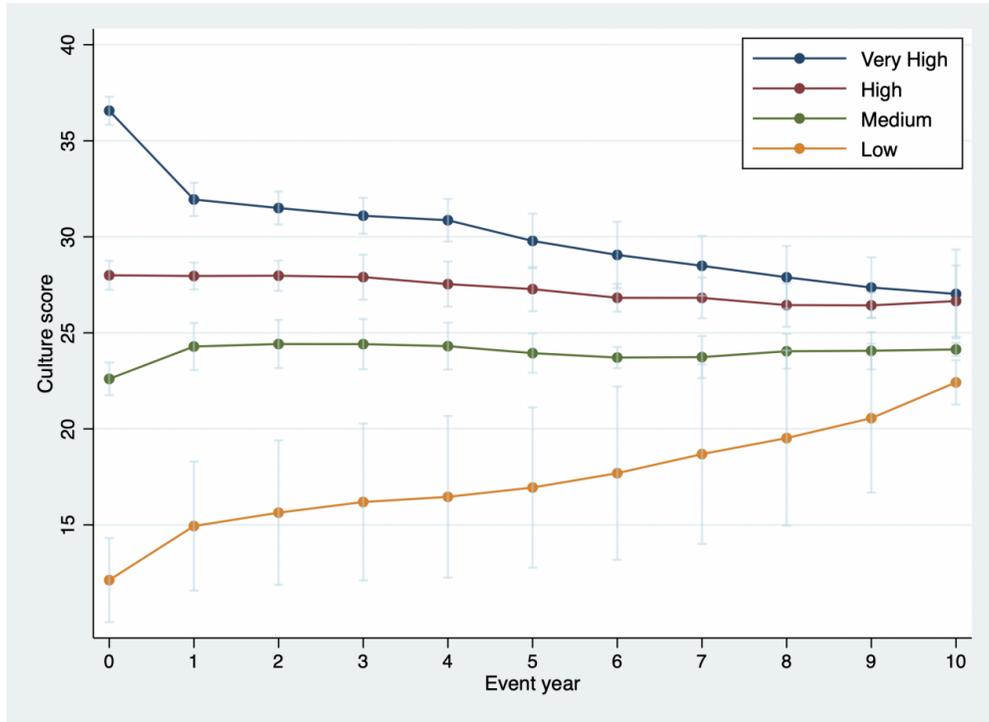
This figure presents the temporal variation in corporate culture around bankruptcy events. We obtain information on firms emerged from Chapter 11 bankruptcy from the Florida-UCLA-LoPucki Bankruptcy Research Database. The sample comprises 217 such events from 2002 to 2021. We plot corporate culture in the year $(-3, +3)$ window around a firm's emergence from bankruptcy. Year 0 refers to the year in which a bankrupt firm emerged from Chapter 11; year $t-1$ serves as the benchmark. The solid line represents the parameter estimates. The bars represent 95% confidence intervals.

Figure A.11: Accounting Frauds and Corporate Culture



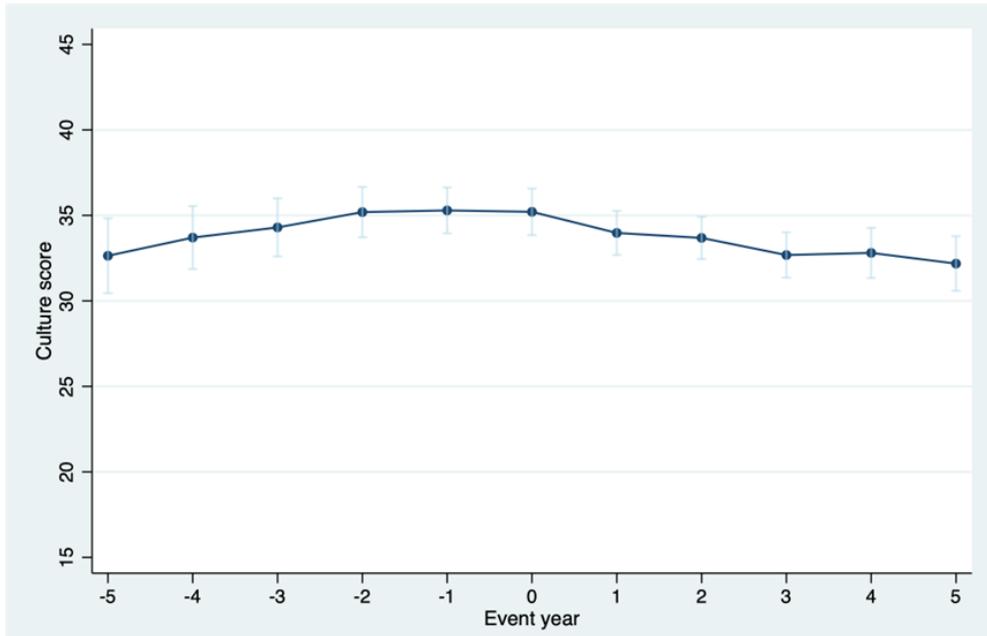
This figure presents the temporal variation in corporate culture around accounting frauds. We obtain information on accounting frauds from the SEC's Accounting and Auditing Enforcement Releases (AAERs). The sample comprises 190 such events from 2002 to 2018. We plot corporate culture in the year (-3, +3) window around a firm's accounting fraud event. Year 0 refers to the year in which accounting fraud is detected; year $t-1$ serves as the benchmark. The solid line represents the parameter estimates. The bars represent 95% confidence intervals.

Figure A.12: Average Culture Scores of Culture Groups in Event Year for Private Firms



This figure shows the evolution of corporate culture over time for private firms. Private firms are defined as those that could not be matched to the CRSP database. We require firms to have at least ten consecutive years of culture score observations. The sample comprises 8,938 firm-year observations for 756 firms from 2008 to 2023. Each year, we sort firms into quartiles (i.e., *Very High*, *High*, *Medium*, and *Low* groups) using their culture scores based on Glassdoor employee reviews. The group formation year is denoted event year 0. We then compute the average culture score for each group in each of the subsequent ten years, holding the group composition constant. We repeat these two steps of sorting and averaging for every year in the sample period. We then compute the average culture score of each group within each event year. The bars represent 95% confidence intervals.

Figure A.13: IPOs and Corporate Culture



This figure presents the temporal variation in corporate culture around IPOs using Glassdoor culture scores. We require that there is at least one observation both before and after an IPO event. The sample comprises 374 IPO events from 2009 to 2022. We plot corporate culture in the year (-5, +5) window around a firm's IPO. Year 0 refers to the IPO year. The solid line represents the parameter estimates. The bars represent 95% confidence intervals.

Table A.1: Variable Definitions

Variable	Definition	Source
Corporate culture measures		
Culture	Culture score of a firm in a year by taking the sum of its five cultural values: innovation, integrity, quality, respect, and teamwork.	Li et al. (2021b)
Culture IPO	Culture score of a firm in the year of its initial public offering (IPO).	Li et al. (2021b)
Culture avg IPO3y	Average culture score over the first three years following a firm's IPO.	Li et al. (2021b)
Culture before turnover	Culture score of a firm in the year before a CEO turnover event.	Li et al. (2021b)
Culture first IPO3y	Culture score based on the first non-missing culture score during the first three years post-IPO.	Li et al. (2021b)
Culture first obs	First non-missing culture score for a firm.	Li et al. (2021b)
Former employer culture	Culture score of an incoming CEO's previous employer.	Li et al. (2021b)
Glassdoor CC	Glassdoor culture score for a firm in a given year.	Glassdoor
Glassdoor CC first obs	First non-missing Glassdoor culture score for a firm.	Glassdoor
Innovation first obs	First non-missing culture score of innovation for a firm.	Li et al. (2021b)
Integrity first obs	First non-missing culture score of integrity for a firm.	Li et al. (2021b)
Operations-related first obs	First non-missing subscore of innovation and quality for a firm.	Li et al. (2021b)
People-related first obs	First non-missing subscore of integrity, teamwork, and respect for a firm.	Li et al. (2021b)
Quality first obs	First non-missing culture score of quality for a firm.	Li et al. (2021b)
Respect first obs	First non-missing culture score of respect for a firm.	Li et al. (2021b)
Teamwork first obs	First non-missing culture score of teamwork for a firm.	Li et al. (2021b)
Founder/Founding characteristics		
Founder UAI	The UAI score in a founder's dominant country of origin which represents the country of origin of more than 50% of the immigrants with the same last name. It is scaled to be between 0 and 1. UAI captures "to what extent a culture programs its members to feel either uncomfortable or comfortable in unstructured situations."	Hofstede cultural values
Founder birthplace REL	The ratio of the number of religious adherents to the population in a founder's birth county.	ARDA
Founder birthplace TFE	The number of years scaled in decades between 1790 and 1890 when a founder's birth county was within 100 km of the frontier line and its population density was below 6 people per square mile.	Bazzi et al. (2020).
Founder birthplace racial diversity	One minus the Herfindahl-Hirschman Index measuring racial concentration in a founder's birth county.	US Census
Founder work recession	An indicator variable that takes a value of one if a founder's first job (at the age of 24) started in a recession, defined according to the National Bureau of Economic Research (NBER) business cycle dating database, and zero otherwise.	NBER
Insider characteristics		
Abs diff in UAI quartile	The absolute difference between the quartile of an incoming CEO's UAI score and that of a departed CEO UAI score.	ExecuComp
All exec UAI	The average UAI score of top executives (including the CEO) for a firm in a year.	Hofstede cultural values
All exec UAI first obs	The first non-missing average UAI score of top executives (including the CEO) for a firm.	Hofstede cultural values
All insider UAI	The average UAI score of top executives and board members for a firm in a year.	Hofstede cultural values
All insider UAI first obs	The first non-missing average UAI score of top executives and board members for a firm.	Hofstede cultural values
Board UAI culture first obs	The average UAI score of board members for a firm (excluding the top executives) in the year when we have the first non-missing average UAI score of board members for the same firm in the culture dataset.	Hofstede cultural values
CEO UAI	The UAI score of a CEO in a year.	Hofstede cultural values
CEO UAI IPO	The UAI score of a CEO in a firm's IPO year.	Hofstede cultural values
CEO UAI avg IPO3y	The average UAI score of a CEO (CEOs) over the first three years following a firm's IPO.	Hofstede cultural values
CEO UAI culture first obs	The UAI score of a CEO for a firm in the year when we have the first non-missing culture score for the same firm in the culture dataset.	Hofstede cultural values
CEO UAI first IPO3y	The first non-missing UAI score of a CEO during the first three years post-IPO.	Hofstede cultural values
CEO UAI first obs	The first non-missing UAI score of a CEO for a firm.	Hofstede cultural values

Table A.1 – Continued

Departed CEO UAI	The UAI score of a departed CEO around a CEO turnover event.	Hofstede cultural values
CEO departure	An indicator variable that takes a value of one if a CEO departs within the first three years following appointment, and zero otherwise.	ExecuComp
Exec UAI	The average UAI score of top executives (excluding the CEO) for a firm in a year.	Hofstede cultural values
Exec UAI culture first obs	The average UAI score of top executives (excluding the CEO) for a firm in the year when we have the first non-missing culture score for the same firm in the culture dataset.	Hofstede cultural values
Incoming CEO UAI	The UAI score of an incoming CEO around a CEO turnover event.	Hofstede cultural values
Firm characteristics		
Discretionary accruals	The abnormal accruals from the modified Jones model—the component of accruals that deviates from the industry benchmark, multiplied by 100.	Compustat
Institutional ownership	Fraction of shares outstanding held by institutional investors.	Thomson Reuters (13F)
Leverage	Book value of debt divided by book assets.	Compustat
Ln(Firm age)	Natural logarithm of a firm’s age since its IPO.	Compustat
Ln(GD year gap)	Natural logarithm of the number of years since the first non-missing Glassdoor culture score for a firm.	Glassdoor
Ln(Year gap)	Natural logarithm of the number of years since the first non-missing UAI score for a CEO at a firm.	Compustat
Loss	An indicator variable that takes a value of one if a firm has negative EBITDA, and zero otherwise.	Compustat
M/B	Market value of equity divided by book value of equity.	Compustat
Num M&As	The number of mergers and acquisitions conducted by a firm up to the fiscal year.	SDC
Num SEOs	The number of seasoned equity offerings executed by a firm up to the fiscal year.	SDC
Product quality	The product safety & quality score.	MSCI ESG ratings
R&D	R&D expenditures divided by book assets.	Compustat
ROA	Earnings before interest, tax, and depreciation divided by book assets.	Compustat
ROA volatility	The standard deviation of ROA over the past three years	Compustat
Sales growth	Annual growth rate of sales revenue.	Compustat
Tangibility	Property, plant, and equipment divided by book assets.	Compustat
Employee characteristics		
Culture similarity	The cosine similarity between an employee’s cultural values in a vector (based on the World Values Survey and her country of origin) and her firm’s culture in a vector (a higher value indicates greater similarity).	World Values Survey/Li et al. (2021b)
Employee departure	An indicator variable that takes a value of one if an employee leaves her firm in a given year, and zero otherwise.	Revelio
Ln(Employee age)	Natural logarithm of an employee’s age.	Revelio
Ln(Tenure)	Natural logarithm of an employee’s tenure on the job.	Revelio
Unemployment rate	Annual unemployment rate in the state of a firm’s headquarters.	BLS

All continuous variables are winsorized at the 1st and 99th percentiles.

Table A.2: The Determinants of A Firm’s Initial Culture: Founders vs. Insiders

	Culture first obs (1)	Culture first obs (2)	Culture first obs (3)
Founder UAI	0.562*** (0.167)	0.553*** (0.166)	0.545*** (0.206)
CEO UAI culture first obs	-0.119 (0.161)	-0.098 (0.160)	-0.130 (0.187)
Exec UAI culture first obs	0.117 (0.164)	0.091 (0.163)	-0.022 (0.189)
Board UAI culture first obs	0.106 (0.200)	0.109 (0.198)	0.331 (0.234)
Founder work recession		-1.225*** (0.333)	-1.286*** (0.385)
Founder birthplace racial diversity			2.692** (1.356)
Founder birthplace TFE			0.115 (0.173)
Founder birthplace REL			0.499 (1.473)
Firm size	-0.093 (0.098)	-0.088 (0.098)	-0.031 (0.114)
Ln(Firm age)	-0.738*** (0.137)	-0.710*** (0.136)	-0.611*** (0.157)
Sales growth	0.189 (0.458)	0.220 (0.455)	0.002 (0.603)
Leverage	-2.207** (0.886)	-2.048** (0.881)	-1.676 (1.038)
M/B	0.842*** (0.118)	0.824*** (0.117)	0.757*** (0.146)
ROA	-7.844*** (1.691)	-7.739*** (1.680)	-7.062*** (2.106)
Tangibility	-1.201 (0.782)	-1.333* (0.778)	-0.075 (0.904)
Institutional ownership	-0.401 (0.718)	-0.450 (0.713)	-0.399 (0.843)
Num M&As	0.006 (0.051)	0.001 (0.051)	-0.059 (0.059)
Num SEOs	-0.058 (0.062)	-0.059 (0.061)	-0.077 (0.065)
Constant	16.378*** (0.931)	16.686*** (0.928)	17.727*** (1.685)
Obs.	918	918	645
Adj. R ²	0.175	0.186	0.152

This table examines the relation between founder vs. insider characteristics and their firm’s initial culture. *Culture first obs* is the first non-missing culture score for a firm in our sample. *Founder UAI* is a founder’s UAI score based on her dominant country of origin. *CEO UAI culture first obs* is the UAI score of a firm’s CEO in the year when we have the first non-missing culture score for that firm in the culture dataset. *Exec UAI culture first obs* is the average UAI score of a firm’s top executives (excluding the CEO) in the year when we have the first non-missing culture score for that firm in the culture dataset. *Board UAI culture first obs* is the average UAI score of a firm’s board members (excluding top executives) in the year when we have the first non-missing culture score for that firm in the culture dataset. Variable definitions are provided in Appendix Table A.1. The standard errors are clustered at the firm level. ***, **, * denote significance at the 1%, 5%, and 10% levels, respectively.

Table A.3: Linking Cultural Values to National Culture Based on World Values Survey

Cultural Value	Definition by Guiso et al. (2015)	World Values Survey (2017)
Innovation	This variable takes a value of one if at least one of the following words appears on a firm’s website: Innovation, Creativity, Excellence, Improvement, Passion, Pride, Leadership, Growth, Performance, Efficiency, Results.	Q158. Science and technology are making our lives healthier, easier, and more comfortable.
Integrity	This variable takes a value of one if at least one of the following words appears on a firm’s website: Integrity, Ethics, Accountability, Trust, Honesty, Responsibility, Fairness, Do the right thing, Transparency, Ownership.	Q177 Claiming government benefits to which you are not entitled
		Q178 Avoiding a fare on public transport. Q180 Cheating on taxes if you have a chance.
Respect	This variable takes a value of one if at least one of the following words appears on a firm’s website: Respect, Diversity, Inclusion, Development, Talent, Employees, Dignity, and Empowerment.	Q12 Tolerance and respect for other people
Quality	This variable takes a value of one if at least one of the following words appears on a firm’s website: Quality, Customer, Meet needs, Commitment, Make a difference, Dedication, Value, Exceed expectations.	Q39 People who don’t work turn lazy.
		Q40 Work is a duty towards society. Q41 Work should always come first, even if it means less spare time.
Teamwork	This variable takes a value of one if at least one of the following words appears on a firm’s website: Teamwork, Collaboration/Cooperation.	Q57. Generally speaking, would you say that most people can be trusted or that you need to be very careful in dealing with people?

We map World Values Survey (WVS) items to five corporate cultural values—innovation, integrity, quality, respect, and teamwork. For each value, we select the relevant WVS questions, rescale responses to be between 0 and 1 (a higher value indicates stronger endorsement), and use the country-level mean as the proxy for that value for immigrant employees from that country.

Table A.4: Sample Formation Using Glassdoor Employee Reviews

	# of reviews	# of firms	# of firm-year obs.
Glassdoor employee reviews	13,150,185	138,244	367,710
Match with CUSIP	8,693,107	11,520	100,618
Obtain culture scores using methodology by Li et al. (2021b)	5,422,535	4,839	48,093
Match with Compustat-CRSP merged data	4,082,705	3,746	30,232
Remove observations with less than 10 employee reviews or missing control variables	4,053,273	3,010	25,197
Final sample		3,010	25,197

This table describes the sample formation process using Glassdoor employee reviews from 2008 to 2023 to score culture.

Table A.5: Variance Decomposition: Using Glassdoor Culture Scores

Panel A: The Full Sample

	Glassdoor CC (1)	Glassdoor CC (2)	Glassdoor CC (3)	Glassdoor CC (4)	Glassdoor CC (5)	Glassdoor CC (6)	Glassdoor CC (7)
Firm FE	1.00			0.95	0.94		0.93
CEO FE		1.00		0.05	0.05		0.06
Year FE			1.00		0.01	0.04	0.01
Industry FE						0.64	
Firm size						0.02	0.00
Ln(Firm age)						0.01	0.00
Sales growth						0.00	0.00
Leverage						0.00	0.00
M/B						0.12	0.00
ROA						0.04	0.00
Tangibility						0.11	0.00
Institutional ownership						0.01	0.00
Num M&As						0.01	0.00
Num SEOs						0.00	0.00
Adj. R ²	0.62	0.62	0.01	0.62	0.62	0.24	0.62

Panel B: Firms with CEOs Who Have Worked at Two or More Firms

	Glassdoor CC (1)	Glassdoor CC (2)	Glassdoor CC (3)	Glassdoor CC (4)	Glassdoor CC (5)	Glassdoor CC (6)	Glassdoor CC (7)
Firm FE	1.00			1.00	0.94		0.92
CEO FE		1.00		0.00	0.00		0.00
Year FE			1.00		0.06	0.22	0.07
Industry FE						0.45	
Firm size						0.00	0.00
Ln(Firm age)						0.11	0.00
Sales growth						0.02	0.00
Leverage						0.00	0.00
M/B						0.11	0.00
ROA						0.00	0.00
Tangibility						0.01	0.00
Institutional ownership						0.02	0.00
Num M&As						0.06	0.00
Num SEOs						0.00	0.00
Adj. R ²	0.48	0.34	0.01	0.48	0.50	0.22	0.48

This table presents a variance decomposition of corporate culture using Glassdoor culture scores. *Industry FE* are based on the Fama and French 38-industry classification. We compute the partial sum of squares for each effect in the model and then normalize each estimate by the sum across the effects, forcing each column to sum to one. Panel A presents the results for the full sample, comprising 10,646 firm-year observations for 1,379 firms from 2008 to 2023. Panel B presents the results for a sample of firms whose CEOs have worked at two or more firms. The sample comprises 328 firm-year observations for 62 CEOs at 103 firms. Variable definitions are provided in Appendix Table A.1.

Table A.6: The Role of A Firm's Initial Culture: Using Glassdoor Culture Scores

	Glassdoor CC (1)	Glassdoor CC (2)	Glassdoor CC (3)	Glassdoor CC (4)	Glassdoor CC (5)	Glassdoor CC (6)	Glassdoor CC (7)	Glassdoor CC (8)	Glassdoor CC (9)
Glassdoor CC IPO	0.219*** (0.073)	0.168*** (0.064)	0.107* (0.060)						
Glassdoor CC IPO × Ln(Firm age)	-0.003 (0.039)	-0.003 (0.034)	0.003 (0.032)						
Glassdoor CC first IPO3y				0.232*** (0.055)	0.187*** (0.051)	0.140*** (0.051)			
Glassdoor CC first IPO3y × Ln(Firm age)				-0.032 (0.033)	-0.038 (0.032)	-0.027 (0.032)			
Glassdoor CC ave IPO3y							0.465*** (0.132)	0.396*** (0.123)	0.337*** (0.115)
Glassdoor CC ave IPO3y × Ln(Firm age)							-0.101 (0.073)	-0.104 (0.068)	-0.095 (0.065)
Ln(Firm age)	-0.263 (1.342)	-0.035 (1.184)	0.360 (1.260)	-0.051 (1.136)	0.399 (1.089)	0.569 (1.184)	2.402 (2.348)	2.827 (2.151)	3.380 (2.126)
Firm size			-0.088 (0.258)			0.121 (0.238)			0.147 (0.248)
Sales growth			0.012*** (0.001)			0.010*** (0.001)			0.121 (0.141)
Leverage			-2.822 (1.758)			-3.395** (1.706)			-2.696* (1.611)
M/B			1.028*** (0.119)			1.004*** (0.133)			0.956*** (0.147)
ROA			-13.004*** (2.614)			-12.810*** (2.131)			-12.341*** (2.539)
Tangibility			-5.609*** (1.943)			-5.895*** (2.177)			-6.503*** (1.907)
Institutional ownership			0.676 (1.051)			0.511 (0.908)			-0.103 (0.847)
Num M&As			-0.079 (0.151)			-0.135 (0.119)			-0.044 (0.132)
Num SEOs			-0.021 (0.153)			0.021 (0.135)			-0.005 (0.134)
Industry FE	No	Yes	Yes	No	Yes	Yes	No	Yes	Yes
Year FE	No	No	Yes	No	No	Yes	No	No	Yes
No. of firms	649	649	649	888	886	886	791	789	789
Obs.	2,989	2,989	2,989	3,955	3,955	3,955	3,260	3,260	3,260
Adj. R ²	0.075	0.184	0.251	0.060	0.141	0.194	0.109	0.172	0.220

This table examines the relation between a firm's initial culture and its subsequent culture using Glassdoor culture scores. The sample comprises 2,989 firm-year observations for 649 firms with non-missing Glassdoor culture scores in the CRSP-Compustat database from 2008 to 2023. *Glassdoor CC IPO* is a firm's culture score in the year of its IPO. *Glassdoor CC first IPO3y* is a firm's culture score using the first non-missing culture score

during the first three years post-IPO. *Glassdoor CC avg IPO3y* is the average culture score over the first three years following a firm's IPO. Variable definitions are provided in Appendix Table A.1. *Industry FE* are based on the Fama and French 38-industry classification. The standard errors are clustered at the firm level. ***, **, * denote significance at the 1%, 5%, and 10% levels, respectively.

Table A.7: The Role of A Firm’s Initial Culture: Using Insiders’ UAI Scores

	CEO UAI (1)	All exec UAI (2)	All insider UAI (3)
CEO UAI first obs	0.023 (0.040)		
CEO UAI first obs \times Ln(Year gap)	0.005 (0.003)		
All exec UAI first obs		0.469*** (0.038)	
All exec UAI first obs \times Ln(Year gap)		-0.015*** (0.003)	
All insider UAI first obs			0.579*** (0.039)
All insider UAI first obs \times Ln(Year gap)			-0.017*** (0.003)
Ln(Year gap)	-0.001 (0.009)	-0.010 (0.006)	-0.003 (0.005)
Firm controls	Yes	Yes	Yes
Industry FE	Yes	Yes	Yes
Year FE	Yes	Yes	Yes
No. of firms	1,866	1,864	1,514
Obs.	16,000	15,987	13,258
Adj. R ²	0.024	0.117	0.194

This table examines the relation between a firm’s initial culture and its subsequent culture using corporate insiders’ UAI scores. The sample comprises 16,000 firm-year observations for 1,866 firms in the CRSP-Compustat database with non-missing CEO UAI scores from 2002 to 2021. *CEO UAI* is a CEO’s UAI score in a firm-year. *CEO UAI first obs* is a firm’s first non-missing CEO UAI score. *All exec UAI* is the average UAI score of a firm’s top executives (including the CEO) in a firm-year. *All exec UAI first obs* is a firm’s first non-missing average UAI score of its top executives (including the CEO). *All insider UAI* is the average UAI score of a firm’s insiders (including top executives and board members) in a firm-year. *All insider UAI first obs* is a firm’s first non-missing average UAI score of its insiders (including top executives and board members). *Ln(Year gap)* is the natural logarithm of the number of years since the first non-missing CEO UAI score. Variable definitions are provided in Appendix Table A.1. *Industry FE* are based on the Fama and French 38-industry classification. The standard errors are clustered at the firm level. ***, **, * denote significance at the 1%, 5%, and 10% levels, respectively.

Table A.8: Variance Decomposition: Delisted Firms and Non-S&P 1500 Firms

Panel A: Delisted Firms

	Culture (1)	Culture (2)	Culture (3)	Culture (4)	Culture (5)	Culture (6)	Culture (7)
Firm FE	1.00			0.71	0.71		0.68
CEO FE		1.00		0.29	0.26		0.29
Year FE			1.00		0.02	0.17	0.02
Industry FE						0.68	
Firm size						0.00	0.00
Ln(Firm age)						0.00	0.00
Sales growth						0.01	0.00
Leverage						0.00	0.00
M/B						0.02	0.00
ROA						0.02	0.00
Tangibility						0.06	0.00
Institutional ownership						0.01	0.00
Num M&As						0.03	0.00
Num SEOs						0.00	0.00
Adj. R ²	0.55	0.69	0.03	0.69	0.71	0.34	0.71

Panel B: Non-S&P 1500 Firms

	Culture (1)	Culture (2)	Culture (3)	Culture (4)	Culture (5)	Culture (6)	Culture (7)
Firm FE	1.00			0.92	0.92		0.90
CEO FE		1.00		0.08	0.07		0.09
Year FE			1.00		0.01	0.11	0.01
Industry FE						0.63	
Firm size						0.01	0.00
Ln(Firm age)						0.01	0.00
Sales growth						0.00	0.00
Leverage						0.00	0.00
M/B						0.15	0.00
ROA						0.03	0.00
Tangibility						0.04	0.00
Institutional ownership						0.01	0.00
Num M&As						0.01	0.00
Num SEOs						0.00	0.00
Adj. R ²	0.75	0.78	0.04	0.79	0.80	0.44	0.80

The table presents a variance decomposition of corporate culture using delisted and non-S&P 1500 subsamples. *Industry FE* are based on the Fama and French 38-industry classification. We compute the partial sum of squares for each effect in a model and then normalize each estimate by the sum across the effects, forcing each column to sum to one. Panel A presents the results for a sample of delisted firms (excluding those due to M&As). The sample comprises 1,820 firm-year observations for 484 firms. Panel B presents the results for a sample of non-S&P 1500 firms. The sample comprises 16,577 firm-year observations for 3,003 firms. Variable definitions are provided in Appendix Table A.1

Table A.9: The Role of A Firm’s Initial Culture: Private Firms

	Glassdoor CC (1)	Glassdoor CC (2)	Glassdoor CC (3)	Glassdoor CC (4)
Glassdoor CC first obs	0.807*** (0.022)	0.796*** (0.021)	0.790*** (0.021)	0.791*** (0.022)
Glassdoor CC first obs \times Ln(GD year gap)	-0.113*** (0.016)	-0.114*** (0.016)	-0.111*** (0.016)	-0.112*** (0.016)
Ln(GD year gap)	2.232*** (0.390)	2.171*** (0.384)	2.392*** (0.415)	2.405*** (0.423)
Constant	4.851*** (0.530)	5.236*** (0.527)	4.946*** (0.567)	4.935*** (0.579)
Industry FE	No	Yes	Yes	No
Year FE	No	No	Yes	No
Industry-Year FE	No	No	No	Yes
Obs. of firms	2,761	2,761	2,761	2,760
Obs.	15,180	15,180	15,180	15,154
Adj. R ²	0.460	0.471	0.475	0.471

This table examines the relation between a firm’s initial culture and its subsequent culture using a sample of private firms. Private firms are defined as those that could not be matched to the CRSP database. The sample comprises 15,180 firm-year observations for 2,761 private firms with non-missing Glassdoor culture scores from 2008 to 2023. *Glassdoor CC* is the Glassdoor culture score in a firm-year. *Glassdoor CC first obs* is a firm’s first non-missing Glassdoor culture score. *Ln(GD year gap)* is the natural logarithm of the number of years since a firm’s first non-missing *Glassdoor CC*. Variable definitions are provided in Appendix Table A.1. *Industry FE* are based on the two-digit NAICS code provided by Glassdoor. The standard errors are clustered at the firm level. ***, **, * denote significance at the 1%, 5%, and 10% levels, respectively.