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

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Abstract

This paper examines the origins and evolution of corporate culture, distinguishing firm-level values and norms from insiders' individual preferences. We document that corporate culture is highly persistent: firm-specific differences account for the vast majority of the explained variation in culture. Using detailed data on founders, we show that firms' initial cultures are associated with founders' cultural heritage, the racial diversity of their birthplaces, and exposure to recessions early in their careers. We further find evidence of assortative matching: firms are more likely to match with CEOs whose values are aligned with their cultures, and greater misalignment between incoming CEOs' values and firms' cultures predicts subsequent CEO departure. In contrast, we find limited evidence that exposure to corporate culture has lasting effects on CEOs' subsequent decision-making. Overall, the evidence suggests that founder imprint and assortative matching play a central role in the persistence of corporate culture.

Keywords: Corporate Culture, Founders, CEOs, Cultural Heritage, Business Cycles, Racial Diversity, Assortative Matching, Cultural Imprinting, 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 surveyed top executives view culture as highly important to their firms, with 79% ranking it as a "top five" factor affecting firm value.[1] Yet fundamental questions remain about how culture is formed and how it 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.[2]

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' (outside shareholders') ability to specify and enforce every desired action of the agents they hire (insider managers) (Meckling and Jensen, 1976; Demsetz, 1988). The same frictions arise between managers and employees. Kreps (1990) and Van den Steen (2010a) argue that because employees frequently face situations that cannot be fully specified in contracts ex ante (e.g., when their firm is hit by an unforeseen shock such as the COVID-19 pandemic), shared beliefs and values, i.e., a strong corporate culture, can support greater delegation, reduced monitoring, higher employee satisfaction, and increased effort, all of which affect firm performance (see empirical evidence in Li et al. (2021a)). Gorton et al. (2022) and Gorton and Zentefis (2024) develop a theory of the firm in which corporate culture acts as an informal institution that complements formal contracting and governance systems,

[1] A growing body of research has established that corporate culture explains mergers and acquisitions, corporate risk-taking, fraud, 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; Liu, 2016; Pan et al., 2017, 2020; Li et al., 2021a,b; Graham et al., 2022a,b; Li et al., 2026).

[2] Throughout the paper, we use the term "persistence" to refer to the stability of firm-specific cultural values over time, rather than the persistence of short-run shocks.

playing a central role in modern corporations.

In this paper, we employ one of the largest panel datasets on corporate culture to study how firm culture evolves over time. We distinguish between the values and norms that prevail within a firm and the individual preferences of corporate insiders to shed light on 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 to generate firm-year scores for each value. We use the sum of these five values, which we refer to as the culture score, as our overall measure of firm culture. Our sample comprises 37,535 firm-year observations for 2,950 S&P 1500 companies from 2002 to 2025.

We begin with 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 explained sum of squares, compared with 13% for CEO fixed effects and 1% for year effects. To ensure that the documented pattern for culture is not a measurement artifact, we employ an alternative culture measure based on Glassdoor employee reviews and obtain consistent results. To further separate firm and CEO contributions, we examine a sample of CEOs who move across firms. In this mover sample, firm fixed effects account for up to 95% of the explained sum of squares in firm culture, whereas CEO fixed effects account for only 2%. Taken together, these results indicate that most variation in corporate culture is time-invariant and tied to the firm rather than to the incumbent CEO.

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 its culture score at the time of its initial public offering (IPO) and test the score's ability to predict subsequent culture. 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 0.762-standard-deviation increase in its subsequent culture scores. By contrast, the interaction term is largely insignificant, suggesting little decay in the influence of a firm's initial culture over time. Allowing for nonlinear decay in the regression specification does not alter our main finding.

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 primarily influences its culture today.

We next examine whether and how founder characteristics are related to their firm's initial culture. We focus on three founder characteristics: cultural heritage, birthplace environment, and early-career exposure to recessions.

We show that founders whose cultural heritage originates from countries with high levels of uncertainty avoidance are more likely to establish strong cultures, and that founders born in more racially diverse communities also tend to establish stronger cultures. By 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). We find little association between the historical frontier exposure of founders' birthplaces and the initial cultures of the firms they establish. The main findings remain robust to controlling for industry, founding cohort, and industry-by-founding cohort fixed effects.

We then examine the economic mechanisms underlying the persistence of corporate culture. We consider two possibilities. The first is assortative matching, whereby firms and CEOs are more likely to match when their values are aligned (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 because researchers rarely observe firm culture

separately from managers' own preferences. Our culture measures, which capture the values and norms prevailing within firms separately from CEOs' personal values, allow us to examine cultural matching directly.

Using a sample of 3,217 CEO turnover events from 2002 to 2024, we proxy CEOs' attitudes toward uncertainty using the uncertainty avoidance index (UAI) scores associated with their ancestral origins, inferred from their surnames. We find a firm's culture score is positively and significantly associated with the UAI score of its incoming CEO, controlling for the departing CEO's UAI score and firm characteristics. We then examine the durability of these matches and find that incoming CEOs whose UAI profiles differ more from those of departing CEOs are more likely to leave within one or two years, consistent with less aligned matches being less durable. Together, these findings provide evidence consistent with cultural alignment contributing to the formation and durability of employment matches. Supplemental evidence points to a similar pattern among employees. Using employment histories from Revelio Labs to measure employee departures and the World Values Survey to proxy immigrant employees' values by country of origin, we find that employees whose values are less aligned with their employers' cultures are more likely to leave.

The second possibility is a cultural imprinting channel, whereby an established corporate culture may shape the values and decision-making of managers who are exposed to it (Schein, 1985; O'Reilly et al., 1991; Hackman, 1992; Liu, 2016). Under this mechanism, firms need not always hire CEOs whose values are closely aligned with their existing cultures: over time, incoming leaders may internalize the values and norms already embedded in the organization, thereby helping preserve culture despite imperfect initial matching. Directly testing such internalization is difficult because managers' personal values are rarely observed before and after joining a firm. We therefore examine whether exposure to corporate culture leaves a persistent imprint that travels with managers across firms. Specifically, we focus on CEOs who move across firms and require that each CEO have worked for at least three years at her former employer, allowing sufficient exposure to its culture (Schoar and Zuo, 2017;

Schoar et al., 2024), and at least three years at her new employer, providing a sufficiently long window to examine whether the former employer's culture is reflected in policies at the firm she subsequently leads. We find limited support for cultural imprinting. Although the estimated associations have the expected signs, none is statistically significant, providing little systematic evidence that exposure to a firm's culture carries over to managers' subsequent decision-making. One possible interpretation is that managerial values and styles contain durable individual-specific components. Prior work shows that managerial styles can travel across firms and that formative experiences earlier in managers' careers can have long-lasting effects (Bertrand and Schoar, 2003; Schoar and Zuo, 2017). This suggests that workplace exposure later in a manager's career may exert a weaker or less transferable influence on subsequent decision-making. Overall, cultural imprinting appears considerably weaker than the assortative matching mechanism documented above.

We conduct several additional analyses to validate our main findings. First, we show that the persistence of corporate culture is not driven by sample selection or survivorship bias: the results remain similar when we restrict the sample to delisted firms or to firms outside the S&P 1500. Second, we examine whether major corporate events, including CEO turnovers, large acquisitions, financial distress, and accounting fraud, disrupt existing culture and find that firm culture remains relatively stable around these events. Finally, using our Glassdoor review-based culture measure or restricting the sample to private firms, we find that initial culture strongly predicts subsequent culture. We also find little change in corporate culture around IPOs, suggesting that the transition from private to public ownership does not materially alter firms' established cultures.

While our analysis emphasizes the persistence of corporate culture, we also identify 77 instances of large and sustained cultural change over our sample period. These cases are economically meaningful and potentially informative, but they occur too infrequently to overturn our main conclusion that corporate culture is generally highly persistent. Understanding the causes and consequences of these major cultural shifts is an important

avenue for future research.

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., 2026). Gorton et al. (2022) and Grennan and Li (2023) provide reviews of this literature. While prior studies show that corporate culture is closely associated with firm value and other important firm outcomes (Guiso et al., 2015b; Graham et al., 2022a,b), we know considerably less about where culture comes from and how it evolves over time. Using a cross-validated measure of corporate culture, our study is among the first to document substantial persistence in firm culture and to systematically examine the origins of firms' initial cultural values. We show that these values are rooted in founders' backgrounds and formative experiences, providing evidence that corporate culture is not merely a contemporaneous reflection of firm characteristics, life-cycle stage, or market forces (Graham et al., 2022a,b; Grennan and Li, 2023). Our findings therefore shift attention from the consequences of corporate culture to its origins and persistence.

Our paper is particularly related to two studies that use corporate insiders' cultural heritage to proxy for firm culture and examine its consequences. Liu (2016) constructs a measure of corruption culture using insiders' cultural backgrounds and shows that firms with stronger corruption cultures are more likely to engage in misconduct, with culture operating through both the sorting of individuals and its influence on individual behavior. Pan et al. (2017) study the formation and evolution of corporate risk culture, proxied by insiders' attitudes toward uncertainty, and document persistent commonality in risk preferences associated with founders' risk preferences and the matching of executives with similar preferences. Our paper differs from these studies in three important aspects. First, our culture measure distinguishes the values and norms embedded within the firm from the personal preferences of

corporate insiders. This separation allows us to examine whether firms' pre-existing cultures are associated with the values of incoming CEOs and to distinguish assortative matching from cultural imprinting as alternative mechanisms sustaining culture. Second, our detailed founder data allow us to trace firms' initial cultural values to a broad set of founder backgrounds and formative experiences. Third, rather than inferring persistence from commonality in insiders' characteristics, we directly quantify the importance of persistent firm-specific differences in corporate culture, which account for a large majority of the explained variation in 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 shows that firm-specific differences account for most of the variation in corporate culture and traces some of these differences to founders' backgrounds and formative experiences. We further document that firms tend to match with CEOs whose values are more closely aligned with their existing cultures and that incoming CEOs whose UAI profiles differ more from those of departing CEOs are more likely to leave shortly after appointment. In contrast, we find limited evidence that exposure to a firm's culture has any effects on managers' subsequent decision-making. Together with the relatively small explanatory power of CEO fixed effects for cultural variation, these findings suggest that CEOs contribute to the persistence of corporate culture primarily through assortative matching rather than by imposing their own values on the firm or by adopting the cultures of the firms they lead. More broadly, our results highlight the lasting effects of firms' founding conditions and provide a counterpoint to the view that corporate culture primarily reflects the influence of successive leaders.

Finally, our paper contributes to the literature on how managers' life and career experiences

[3]Fee et al. (2013) distinguish between exogenous CEO turnovers (e.g., death and health shocks) and endogenous turnovers (e.g., forced departures). They find little change in corporate policies following exogenous turnovers but substantial change after endogenous turnovers, when boards are more likely to draw from a broader pool of CEO candidates. These findings suggest that CEO "styles" reflected in corporate policies may in part arise from boards' deliberate selection of CEOs.

shape their managerial styles and decision-making (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 can have lasting effects on individual values, preferences, and managerial behavior (Malmendier et al., 2011; Bernile et al., 2017; Yonker, 2017; Pan et al., 2020; Duchin et al., 2021). We extend this literature by showing that founders' early-life and career experiences are associated with the initial cultures of the firms they create, suggesting that individual formative experiences can become embedded in persistent firm-level values and norms.

2 Literature Review and Conceptual Framework

In this section, we first review selected strands of the theoretical literature that speak to the persistence and evolution of corporate culture. We then discuss the empirical literature on its formation and persistence. Finally, we develop predictions linking founder characteristics to firms' initial cultures.

2.1 The theoretical literature and our conceptual framework

We review three strands of the theoretical literature that inform our conceptual framework, with particular attention to their implications for the persistence and evolution of corporate culture.

The first strand conceptualizes culture as a stock of organizational 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 held among employees but not by outsiders. This common knowledge facilitates coordination when information is noisy or incomplete because employees can better anticipate one another's responses and act more efficiently. In this framework, culture persists because organizational knowledge accumulates gradually through repeated interactions and common experiences. Cultural change is costly because much of this knowledge is tacit and embedded in coordination routines throughout

the firm. Altering culture therefore requires simultaneous changes in language, beliefs, or behavioral rules across the organization, which is difficult without disrupting ongoing operations and thus creates inertia.

The second strand conceptualizes 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 how the firm is likely to act in unforeseen contingencies. By establishing "how things are done" (Kreps, 1990, p. 93), culture can help coordinate expectations and sustain cooperative outcomes when multiple equilibria are possible, thereby building trust with employees, investors, and other stakeholders. Tirole (1996) extends this perspective by linking group (firm) reputation to individual incentives: when an individual's performance is evaluated partly through noisy signals of her own past behavior and partly through the behavior of the group to which she belongs, collective reputation affects incentives to exert effort. In this framework, culture persists because reputation is path dependent. Once established, stakeholders update their beliefs only gradually, so current actions continue to be interpreted through the lens of the firm's past behavior. This path dependence implies that even following leadership changes, culture as a reputational asset is likely to evolve slowly.

The third strand conceptualizes 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 about the best course of action and studies how firms develop homogeneous beliefs (i.e., a shared culture) among organizational members. Misaligned beliefs increase the likelihood that employees take actions contrary to managerial intent, creating incentives for assortative matching: individuals are more likely to join and remain in firms whose prevailing beliefs are aligned with their own. At the same time, shared experiences within the organization may lead members to update their beliefs in similar ways, further strengthening internal agreement and differences across firms. The model therefore highlights two channels through which cultural homogeneity can arise and persist: assortative

matching brings together individuals with compatible beliefs, while common organizational experiences can generate greater convergence in beliefs among those already inside the firm. In this framework, culture tends to change slowly, as meaningful shifts in prevailing beliefs generally require substantial changes in organizational membership or experiences.

Taken together, these theoretical frameworks converge on the view that corporate culture tends to be persistent, whether through the accumulation of tacit organizational knowledge, the path dependence of reputation, or the reinforcement of shared beliefs.

At the same time, real-world examples suggest that corporate culture can change, sometimes substantially (see, for example, Satya Nadella's effort to foster greater innovation at Microsoft and James Gorman's emphasis on a more collaborative culture at Morgan Stanley (Gorton and Zentefis, 2024)). The coexistence of theoretical forces favoring persistence and observed episodes of cultural change raises a natural question: Under what conditions does corporate culture persist, and when does it change? Giuliano and Nunn (2021) provide valuable insights into the forces that drive both culture persistence and adaptation.

They model the evolution of national culture and test the model using historical variation in temperature and drought severity across 20-year generations from 500 to 1900. They find that when environmental conditions remain stable across generations, inherited traits remain well suited to current conditions, reinforcing culture persistence. In contrast, when environments are more volatile, inherited traits become less well suited to current conditions, reducing the value of cultural inheritance and accelerating adaptation. Applied to our setting, this framework suggests that although corporate culture is generally persistent, large and sustained changes in a firm's environment, such as major technological disruptions or regulatory shifts, may weaken the forces supporting existing values and norms and make cultural change more likely.

2.2 The empirical literature

Despite growing interest in corporate culture, empirical evidence on the origins and evolution of corporate culture remains relatively limited. Cronqvist et al. (2009) document substantial

persistence in firms' investment and financing policies, which they attribute in part to persistent corporate culture proxied by firm fixed effects. Fahlenbrach et al. (2012) show that banks' stock return performance during the 1998 crisis predicts their performance and probability of failure during the 2007-2009 financial crisis, which they interpret as evidence of persistent risk culture. Cronqvist et al. (2012) document firm–CEO matching on risk aversion as a potential explanation for persistence in capital structure (Lemmon et al., 2008). Using the national cultural backgrounds of key insiders to proxy for corporate culture, Liu (2016) provides micro-level evidence that corruption culture affects corporate misconduct through both the sorting of individuals across firms and the influence of culture on individual behavior. Similarly, Pan et al. (2017) use founders' cultural heritage to proxy for risk preferences and highlight the roles of founder imprint and assortative matching in the formation and persistence of firms' risk cultures.

These studies address questions related to ours but generally infer corporate culture from the values and preferences of the individuals inside the firm. Consequently, it is difficult to distinguish the values and norms embedded within the organization from the personal preferences of founders, executives, and employees. This distinction is central to our analysis. By measuring firm-level culture separately from insiders' preferences, we can directly assess the persistence and origins of corporate culture and examine whether its persistence is associated primarily with assortative matching between firms and managers or with cultural imprinting through managers' exposure to organizational values and norms.

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 has been shown to influence individual values and preferences (Guiso et al., 2006; Ahern et al., 2015; Liu, 2016). Building on Hofstede (1980, 2001) and Pan et al. (2017, 2020), we examine whether founders' cultural heritage, measured by the UAI scores of their countries of origin, is associated with the initial culture of the firms they establish.

Business operations are inherently subject to uncertainty. Kreps (1990) and Van den Steen (2010a) argue that corporate culture can function as an informal institution that guides behavior and decision-making when unforeseen circumstances make explicit rules and contracts incomplete. This role may be particularly important during a firm's early years, when organizational structures and formal procedures are still developing and founders have substantial influence over emerging values and norms (Schein, 1983; Van den Steen, 2010b; Guiso et al., 2015a). Founders with greater aversion to uncertainty may therefore have stronger incentives to establish a well-defined culture that provides employees with shared principles for navigating ambiguous situations. Alternatively, they may respond to uncertainty by relying more heavily on formal rules, procedures, and governance structures, reducing the relative importance of culture as an informal coordinating mechanism. Thus, whether greater uncertainty avoidance among founders is associated with a stronger initial corporate culture is ultimately an empirical question.

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

Alesina and La Ferrara (2005) show that ethnic diversity within countries and cities brings together individuals with varied abilities and experiences, potentially fostering creativity and innovation. Hunt and Gauthier-Loiselle (2010) further document that immigrants contribute disproportionately to innovation, consistent with the benefits of diverse perspectives and complementary skills. Building on this evidence, we conjecture that founders born in more racially diverse counties may develop greater openness to different norms, perspectives, and practices. Such exposure may, in turn, lead them to foster more inclusive, adaptable, and innovative cultures in the firms they establish.

Bazzi et al. (2020) document that the American frontier experience left a lasting legacy of rugged individualism. The frontier both attracted more individualistic individuals and reinforced values emphasizing self-reliance, independence, and limited reliance on formal institutions. Founders born in counties with greater historical exposure to the frontier may

therefore place greater emphasis on individual autonomy and achievement and less emphasis on shared norms and collective coordination. Accordingly, we conjecture that greater frontier exposure in a founder's birthplace is associated with a weaker initial corporate culture.

Early-career exposure to recessions may also shape the cultures founders subsequently establish. Prior research shows that economic conditions experienced at the beginning of a manager's career can have lasting effects on managerial attitudes and decision-making (Schoar and Zuo, 2017; Schoar et al., 2024). On the one hand, founders who enter the labor market during recessions may place greater emphasis on caution, stability, resource preservation, and cost discipline. On the other hand, exposure to adverse economic conditions may heighten the perceived value of shared norms, adaptability, and cooperation in navigating uncertainty, strengthening founders' incentives to build a cohesive organizational culture. Thus, whether founders' early-career exposure to recessions is associated with a stronger initial corporate culture is ultimately an empirical question.

3 Sample and Variable Construction

3.1 Sample formation

We begin with firms in the CRSP-Compustat database for which culture score data from Li et al. (2021b) are available over the 2002–2025 period. 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. We focus on S&P 1500 firms because ExecuComp, our primary source for CEO characteristics and turnover events, provides comprehensive coverage of these firms. We also require information on founders' names, birth dates, and birthplaces, which we hand-collect from a variety of sources (see Section 3.2.2 for details). Finally, we obtain founding and IPO dates from Jay Ritter's website and supplement these data with information from SDC.[4] The final sample comprises 37,535 firm-year observations for 2,950 S&P 1500 firms.

[4]See: 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]

To examine the role of a firm's initial culture in its future cultural trajectory in Section 5, ideally, we would measure a firm's culture at founding. Because transcript-based culture scores are available only from 2002 onward and only after a firm is listed, this is not feasible for most firms.[6] We use culture measured near the IPO: *Culture IPO*, *Culture first IPO3y*, and *Culture avg IPO3y*, because these measures capture culture early in a firm's public life and provide a common event-time origin.[7] For the founder-origin analyses in Section 6, using IPO-period culture would sharply reduce the sample. We therefore use the first available culture observation in our dataset, *Culture first obs*, which we interpret as the earliest observable culture measure rather than as a direct measure of founding culture. Because this measure is generally observed after founding and often after the IPO, any relation between founder characteristics and culture is likely attenuated.

[5]We interpret this aggregate as a parsimonious measure of the overall emphasis a firm places on the five cultural values identified in prior work (Guiso et al., 2015b; Li et al., 2021b), rather than as evidence that corporate culture is unidimensional. Because firms may place different emphasis on different cultural values, and because these values may evolve differently over time, we separately examine the operations- and people-oriented subscores, as well as each of the five individual values in Section 4.

[6]As of 2025, the end of our sample period, the mean (median) firm age since founding is 32.1 (24) years. For comparison, Pan et al. (2017) report an average firm age of 32 years. Among the 9,217 unique firms in our broader culture database, only 1,746 were founded after 2002, while 2,458 went public within ten years of founding. Of the 1,094 firms satisfying both conditions: founded after 2002 and going public within ten years of founding, only 36 have complete information on founder demographics (birth year and birthplace) and founding characteristics (year and place).

[7]For the subset of firms with available data, the mean (median) age since founding at IPO is 20.1 (11) years.

3.2.2 Founder characteristics

We manually collect data on founders and cofounders for 3,426 firms in the S&P 1500 between 2002 and 2025.[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 across sources, we prioritize official company records and reputable biographical sources and seek corroboration from multiple independent sources.[10] In total, we identify 3,897 founders for 2,398 firms, an average of 1.6 founders among firms with at least one identified founder; 958 firms have at least two founders.

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. Because data coverage for founder characteristics is uneven, we adopt a stepwise approach to ensure both compatibility and maximal sample size. Specifically, we restrict the baseline regression sample to firms with U.S.-born founders to establish a consistent benchmark, and then sequentially add founder characteristics, recognizing that each addition reduces sample size due to missing values.

We obtain birthplace information for 1,684 founders, including 1,323 U.S.-born founders with county-level location, 66 U.S.-born founders with state-level location, 29 U.S.-born

[8]ExecuComp covers S&P 1500 firms and companies that were once part of the index. The 3,426 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).

[9]Search engines and AI-assisted search tools are used only to locate the underlying sources. For example, Google and Copilot searches typically lead to a company's history page or Wikipedia entry, which disclose prior names, origins, and founders.

[10]Founder 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.

founders with country-only location, and 266 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 lie 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 records are the most comprehensive publicly available data with disclosed respondent names, as they are no longer subject to the 72-year confidentiality rule.[12] We first restrict the IPUMS dataset to first-generation immigrants whose country of birth is outside the United States. We then 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]

[11]There are 1,323 U.S.-born founders with county-level birthplace information out of 3,897 founders in our sample, representing 34 percent, which exceeds the 22 percent (1,508 out of 6,804) reported in Bernile et al. (2017). This higher coverage likely reflects our 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 reassurance regarding the quality of our founder sample.

[12]Only one percent of the IPUMS census 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 the remaining waves.

[13]Liu (2016) achieves 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 1,418 founders born in the United States. Birthplace detail is available at the county level for 1,323 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.

Next, we merge data on founders' birthplaces with location-specific characteristics at the time of their birth. We focus on two measures: racial diversity and exposure to frontier culture. 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 kilometers of the frontier line and had a population density below six people per square mile.

Following Schoar and Zuo (2017), we construct a recession-founder indicator, *Founder work recession*, that takes a value of 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 about endogenous selection into the timing of career start. We further merge founder data with the NBER business cycle dataset, which begins in 1967. In the end, the resulting sample comprises 1,023 founders at 831 firms with non-missing data on founder cultural heritage, founder birthplace racial diversity, founder birthplace TFE, founder work recession, and the control variables.

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

3.3 Summary statistics

Panel A of Table 1 reports summary statistics for the full panel dataset. The average firm-level culture score is 14.487. Panel B presents summary statistics for the initial culture variables. At the time of IPO, the average culture score is 18.365.

Panel C of Table 1 reports summary statistics on founder characteristics. The average founder UAI score is 0.584. Founders' birthplaces exhibit an average racial diversity value of 0.183 (corresponding to an average racial HHI value of 0.817). On average, founders' birth counties were exposed to the American frontier for 0.897 decades. Finally, 27.5 percent of founders in our sample entered the labor market during a recession, broadly comparable to the 21 percent reported by Schoar and Zuo (2017) for CEOs.

4 Variance Decomposition of Corporate Culture

We turn to a parametric framework to assess how much of the variation in corporate culture can be attributed to time-invariant firm-specific differences (firm fixed effects), persistent CEO-specific heterogeneity (CEO fixed effects), and firm characteristics. Panel A of Table 2 reports the results for the full sample. Column (1) shows that firm, CEO, and year fixed effects together explain 76% of the variation in culture, with firm fixed effects accounting for 87% of the explained sum of squares, CEO fixed effects for 11%, and year fixed effects for 2%. Column (2) examines the explanatory power of year fixed effects, industry fixed effects, and firm characteristics; these factors jointly explain 34% of the variation in culture, with industry fixed effects contributing 49% of the explained sum of squares. Column (3) adds firm and CEO fixed effects to firm characteristics and year fixed effects; firm fixed effects remain dominant, accounting for 86% of the explained sum of squares, while CEO fixed effects account for 13%.

One concern about our culture measure is that earnings calls are held regularly and follow a relatively fixed format, raising the possibility that our persistence results reflect persistence in how earnings calls are conducted rather than in culture itself. However, prior literature suggests that while mandatory disclosure tends to follow a relatively stable 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). Consistent with this view, Cohen et al. (2020) show that the MD&A section, the voluntary portion of annual reports, exhibits the lowest textual similarity across years relative to other report items. Given that our culture measure is derived from voluntary disclosure, specifically earnings calls and in particular the Q&A section, our approach alleviates concerns that our main findings are driven merely by persistent disclosure practices. Nonetheless, as a robustness check, we construct an alternative culture measure by applying the Li et al. (2021b) methodology to Glassdoor employee reviews (Grennan, 2019; Li et al., 2024) (see Online Appendix B for implementation details).

Columns (4)–(6) replicate the analysis in columns (1)–(3) using Glassdoor review-based culture scores and yield qualitatively similar results: firm fixed effects consistently account for the majority of the explained sum of squares (79% in column (4) and 78% in column (6)).

The aggregate culture score provides a parsimonious summary of a firm's overall emphasis on the five cultural values, but it does not imply that corporate culture is unidimensional. Firms emphasize these different values to different degrees, and persistence in the aggregate score may mask offsetting movements or heterogeneous dynamics across the underlying values. To address this concern, we decompose the overall culture score into two conceptually distinct subscores: operations-oriented culture, which comprises innovation and quality, and people-oriented culture, which comprises integrity, respect, and teamwork. We then extend the variance decomposition to both subscores and to each of the five cultural values. Panel B reports the results.

Across all culture measures, firm fixed effects account for the largest share of the explained variation. Their contribution ranges from 81% for integrity to 89% for respect, while CEO fixed effects explain between 10% and 18%. Thus, the persistence we document is not driven solely by the aggregate score or by one particular cultural value. Instead, stable firm-specific differences are present across both operations-oriented and people-oriented values and across

each of the five underlying values.

In the analysis thus far, most CEOs appear at only one firm and many firms are led by a single CEO, raising the possibility that firm and CEO fixed effects capture some of the same underlying variation. To disentangle these effects, we follow the "mover" design in Bertrand and Schoar (2003), Dittmar and Duchin (2016), and Schoar et al. (2024) and focus on firms whose CEOs have served at multiple companies. We identify executives in ExecuComp 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. This procedure identifies 178 CEO movers spanning 342 firms; 170 worked at two firms and eight worked at three firms.[14]

Panel C reports the variance decomposition for the mover sample. Firm fixed effects again dominate and are even more important than in the full sample. In column (1), they account for 95% of the explained sum of squares for corporate culture, whereas CEO fixed effects account for only 2%, compared with 86% and 13%, respectively, in column (3) of Panel A. In column (2), firm fixed effects explain 87% of the explained variation in the Glassdoor culture measure, while CEO fixed effects account for only 2%. The remaining columns in Panel C show the same pattern: firm fixed effects account for 94% to 97% of the explained sum of squares, whereas CEO fixed effects never exceed 3%. These findings indicate that culture is shaped primarily by firm-specific factors rather than by individual CEOs.[15]

For comparison, Panel D of Table 2 reports the variance decomposition for other corporate policies using the same sample as in Panel A and specifications that include only firm, CEO, and year fixed effects. Firm fixed effects explain a share of the variation in corporate culture

[14]The mean (median) tenure of these CEOs is 7.1 (6) years.

[15]To address the concern that retaining all firm-year observations for firms that ever employ a mover CEO may overstate the contribution of firm fixed effects, we repeat the variance decomposition using only observations within a narrow (−3,+3) year window around CEO turnover events (untabulated). This restriction limits the influence of long firm histories outside the relevant CEO transitions. The results are similar: firm fixed effects continue to account for the dominant share of explained variation in culture, while CEO fixed effects remain small. Thus, the dominance of firm fixed effects is not driven by combining relatively short CEO tenures with long firm histories in which culture is highly serially correlated.

comparable to that in many corporate policies.

Overall, Table 2 shows that firm fixed effects explain most of the variation in culture, indicating that persistence primarily reflects stable differences across firms rather than changes in culture within firms over time.

5 The Economic Importance of A Firm's Initial Culture

While the variance decomposition shows that firm fixed effects account for much of the persistence in culture, these effects aggregate all unobserved, time-invariant firm characteristics. To better understand their nature, we next investigate the underlying sources of these fixed effects.

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 by the empirical evidence in 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, focusing on firms that went public in 2002 or later, for which culture data are available.

We estimate the following panel data regression:

$$Culture_{i,t} = \alpha + \beta_1 CultureIPO_i + \beta_2 CultureIPO_i \times Ln(Firm\ age) + \gamma X_{i,t-1} + \lambda_j + v_t + \varepsilon_{i,t}, \quad (1)$$

where the dependent variable $Culture_{i,t}$ denotes firm i's culture score in year t. $Culture\ IPO_i$ denotes firm i's culture score at the time of its IPO, and $Ln(Firm\ age)$ denotes firm i's age since its IPO. $X_{i,t-1}$ includes lagged firm-level controls (size, age, sales growth, leverage, M/B, ROA, tangibility, institutional ownership, number of M&As, and number of SEOs). λ_j are Fama–French 38 industry fixed effects, and v_t are year fixed effects. The coefficient β_1 measures the influence of a firm's culture around its IPO on its subsequent culture, and β_2 captures the rate at which this influence decays over time.

Panel A of Table 3 reports the results. Columns (1)–(3) use *Culture IPO* as the key explanatory variable. In column (1), the IPO culture score is positively and significantly

related to subsequent culture scores, and the interaction between *Culture IPO* and years since IPO is negative and statistically significant at the 5% level.

In column (2), adding industry fixed effects increases the adjusted R^2 from 0.422 to 0.481, and the interaction is negative and statistically significant at the 10% level. In column (3), after including firm-level controls and year fixed effects, *Culture IPO* remains highly significant, while the interaction loses significance. Among the controls, firm age and market-to-book are positively and significantly associated with culture scores, whereas leverage, ROA, tangibility, and institutional ownership are negatively and significantly associated with culture scores.[16]

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 0.762 standard-deviation increase in subsequent culture scores (0.496 × 8.651 / 5.633, where 8.651 and 5.633 are the standard deviations of *Culture IPO* and *Culture* in this sample, respectively). By comparison, a one-standard-deviation increase in firm age (M/B) corresponds to a 0.191 (0.143) standard-deviation increase in subsequent culture scores; a one-standard-deviation increase in leverage (ROA, tangibility, or institutional ownership) corresponds to a 0.061 (0.043, 0.131, or 0.055) standard-deviation decrease in subsequent culture scores. Thus, initial culture exhibits the strongest standardized relation with subsequent culture among the variables included in the specification. The adjusted R^2 rises from 0.422 in column (1), which includes no industry or firm-level controls, to 0.519 in column (3), which includes both. As robustness checks, we use *Culture first IPO3y* in columns (4)-(6) and *Culture avg IPO3y* in columns (7)-(9) as alternative measures of 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.

Panel B provides a more flexible assessment of how the predictive relation between initial and subsequent culture evolves over time by replacing the continuous interaction term with a

[16]Appendix Table A.2 shows that a firm's initial Glassdoor culture score continues to exert a significant influence on its subsequent culture.

series of firm-age indicators. Across all specifications, the coefficient on the initial culture measure remains positive and highly significant, confirming that culture at the time of the IPO remains a strong predictor of subsequent culture. After controlling for year and industry fixed effects and other firm characteristics, nearly all interaction terms between initial culture and firm-age bin indicators are statistically insignificant. The estimates therefore provide little evidence of systematic attenuation in the predictive relation between initial and subsequent culture as firms age.

One potential concern with the above analysis is that, although culture evolves gradually, IPO-period culture may be far removed from founding and hence not reflect its founding culture. To address this concern, we focus on firms that go public within ten years of founding.[17] Panel C reports the results. Consistent with Panel A, a firm's initial culture remains a significant predictor of its subsequent culture, although 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 that culture scores are available. For some of these firms, founders may still serve as officers or directors. This raises the possibility that the strong explanatory power of initial culture merely reflects ongoing founder involvement rather than the lasting influence of founding values.

To explore this possibility, we 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 D of Table 3 reports the results. The number of firm-year observations drops from 11,262 in the baseline sample (in Panel A) to 10,384, but the strong

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

explanatory power of initial culture for subsequent culture persists, indicating that active founder involvement is not the primary driver of our findings. In the absence of active founder involvement, the influence of initial culture exhibits some decay over time.[18]

In summary, a firm's initial culture remains strongly predictive of its subsequent culture over long horizons, consistent with stable firm-specific cultural baselines.

6 Founder Characteristics and Corporate Culture Formation

We next examine the role of founders in the formation of firms' initial cultures. Unlike subsequently appointed executives, founders are not selected by an existing firm, reducing concerns that founder characteristics merely reflect matching with a pre-existing corporate culture. At the same time, founders choose industries, locations, and organizational forms, which may themselves be related to culture. We therefore examine founder-culture associations using progressively more stringent controls for industry, founding cohort, and founding-location characteristics.

6.1 Baseline results

Panel A of Table 4 examines the relation between founder characteristics and firms' initial culture scores. All continuous variables are standardized to facilitate comparisons of effect sizes. Standard errors are clustered by founding cohort, defined using ten-year bins from $\leq$1879 to $\geq$1960, allowing for correlated unobserved factors among firms founded in the same period, such as common macroeconomic conditions, technological change, and institutional environments at entry. Column (1) includes firm-level controls from Table 3. Column (2) adds Fama–French five-industry fixed effects to absorb systematic differences in technology, regulation, and organizational practices across industries. Column (3) instead includes founding-cohort fixed effects to absorb common macroeconomic and institutional conditions at the time of founding. Column (4) includes both industry and founding-cohort fixed

[18]As an additional robustness check, we examine firms backed by venture capital (VC). VCs often shape business strategies and mentor founders, potentially influencing portfolio firms' initial culture. Using VC investment data from Jay Ritter's VC-backed IPO dataset, we find consistent results for 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.

effects. Column (5) replaces these additive fixed effects with industry-by-founding-cohort fixed effects, thereby absorbing unobserved heterogeneity specific to each industry–cohort pair. Identification in this specification therefore comes from differences in founder characteristics across firms established in the same broad industry and founding period. By comparing firms formed under similar technological, regulatory, and macroeconomic conditions, this specification substantially reduces concerns that the observed founder-culture relations are driven by industry-specific trends, secular changes across founding cohorts, or shocks specific to particular industry-cohort combinations. Combined with the fact that founders are not selected into a pre-existing corporate culture, these increasingly stringent specifications strengthen the interpretation that founder characteristics are associated with the formation of firms' initial cultures.[19]

The results are broadly consistent across specifications. First, a founder's UAI score is positively and significantly associated with her firm's initial culture score. UAI captures the extent to which individuals in a society are uncomfortable with ambiguity and uncertainty (Hofstede, 1980, 2001). This finding is consistent with founders with greater uncertainty avoidance placing more value on a well-defined organizational culture that provides shared principles for navigating uncertain or ambiguous situations. Second, founders born in more racially diverse counties tend to establish firms with stronger initial cultures. This result complements prior work showing that the ethnic composition of a city or region can have long-lasting economic consequences (D'Acunto et al., 2019; Pan et al., 2020). By contrast, we find little association between the historical frontier exposure of founders' birthplaces, measured by TFE, and firms' initial cultures. This null result contrasts with evidence that frontier exposure fostered a lasting culture of rugged individualism (Bazzi et al., 2020). One possibility is that the average frontier exposure of founders' birthplaces in our sample is less

[19]We compare the sample of firms used in Table 4 with the full sample. Although t-tests indicate statistically significant differences for several variables, likely reflecting the large sample size, most differences are economically small, particularly for the culture variables and standard firm controls. Firms in the subsample are somewhat larger and more mature, as reflected in greater total assets and firm age. Overall, the two samples appear broadly comparable.

than ten years, which may be insufficient to generate a detectable association with corporate culture. Another is that frontier exposure affects particular cultural values in different directions, yielding little relation with our aggregate culture measure, which we explore later. Third, founders who entered the labor market during recessions tend to establish firms with weaker initial cultures. This finding is consistent with formative exposure to adverse economic conditions shaping subsequent managerial attitudes and decisions (Schoar and Zuo, 2017; Schoar et al., 2024), potentially placing greater emphasis on caution, resource preservation, and cost discipline. The relations between several founder characteristics and initial culture remain robust to increasingly stringent controls for industry and founding conditions. These findings are consistent with founders' backgrounds and formative experiences playing an important role in the formation of corporate culture.

Liu (2016) provides suggestive evidence that corporate insiders can shape corruption culture. To assess whether the cultural backgrounds of other key insiders are similarly associated with a firm's initial culture, we extend the analysis in Panel A of Table 4 by including cultural-heritage measures for CEOs, the other executives, and directors. Appendix Table A.3 shows that founder UAI remains positively and significantly associated with initial culture after controlling for the UAI scores of the other insiders. The coefficients on the other insiders are also statistically significant but differ in sign: CEO UAI is negatively associated with initial culture, whereas the other executive and board UAI scores are positively associated with initial culture. Thus, the association between founder UAI and initial culture remains robust, while the results also suggest that the cultural backgrounds of the other insiders are related to initial culture.

We next address the possibility that the observed founder-culture associations reflect characteristics of firms' founding locations. For example, a founder born in a racially diverse county may subsequently establish a firm in a similarly diverse location, such as Silicon Valley. We take two approaches. First, among firms with observed founding-locations, we exclude those founded in California (Panel A of Table A.4). Second, using the same subsample, we

directly control for the racial diversity of the firm's founding location (Panel B of Table A.4). The associations of initial culture with founder UAI, birthplace racial diversity, and early-career recession exposure remain robust, while founding-location diversity is not statistically significant. These results suggest that our findings are not simply driven by founders sorting into culturally distinctive founding locations.

6.2 Decomposing the culture score

The aggregate culture score provides a parsimonious summary of the overall strength of corporate culture, but it may mask differences in how founder characteristics relate to particular cultural values. To provide a more granular assessment, we first decompose the aggregate score into two subscores: operations-oriented score and people-oriented score. We then examine each of the five constituent values separately.

Columns (1) and (2) in Panel B of Table 4 report the results for the two culture subscores. Founder UAI and birthplace racial diversity are positively and significantly associated with both subscores. In contrast, founders who entered the labor market during recessions are associated with lower subscores. Founder birthplace exposure to the American frontier (TFE) is not significantly associated with either subscore. Thus, the relations documented for the aggregate culture score generally extend to both broad dimensions of culture rather than being concentrated in either operations- or people-oriented values.

Columns (3) through (7) examine the five individual cultural values: innovation, quality, integrity, teamwork, and respect. The results reveal greater heterogeneity across individual values. Founder UAI is positively associated with innovation, quality, integrity, and respect, but not significantly related to teamwork. Founder birthplace racial diversity is positively associated with innovation, teamwork, and respect, but is not significantly related to quality or integrity. Historical frontier exposure of founders' birthplaces is positively associated with quality, negatively associated with integrity and teamwork, and not significantly related to innovation or respect. These offsetting associations help explain why frontier exposure is not significantly related to the aggregate culture score or either of the two broader subscores.

Finally, founders who entered the labor market during recessions are associated with lower innovation, integrity, and respect scores, while the associations with quality and teamwork are statistically insignificant. Overall, these results show that founder characteristics are associated with different components of firms' initial cultures, with both the strength and direction of these relations varying across specific cultural values.

In summary, we show that firms' initial cultures are systematically associated with founders' cultural heritage, birthplace environments, and formative career experiences. The decomposition further reveals that these associations vary across specific cultural values, helping explain why some relations are more pronounced for particular values than for the aggregate culture measure. These findings complement the managerial style literature by showing that founders' backgrounds and experiences are associated not only with their own preferences and decisions, but also with the values and norms that characterize the firms they establish.

7 The Mechanisms

The literature suggests two primary mechanisms that can sustain firm-specific culture over time. The first is assortative matching, whereby firms and individuals are more likely to form and maintain employment relationships when their values are aligned (Schneider, 1987; Meglino et al., 1989; O'Reilly et al., 1991; Hilary and Hui, 2009; Liu, 2016).[20] The second is a cultural imprinting mechanism, whereby individuals internalize the values and norms of the organizations in which they work, potentially shaping their subsequent behavior (Schein, 1985; O'Reilly et al., 1991; Hackman, 1992; Liu, 2016).

The analyses in this section use complementary empirical designs to examine these two mechanisms. We first study assortative matching among CEOs by examining the formation and durability of firm-CEO matches through appointment and early departure tests. We

[20]Outside 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 financial leverage, consistent with firm-CEO matching based on preferences. Similarly, using psychometric assessments of 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.

then extend the matching analysis to employees by examining whether value alignment is associated with employee retention. Finally, we examine cultural imprinting using mover CEOs, asking whether exposure to a former employer's culture is subsequently reflected in policies at the firm the CEO later leads. Because CEO appointments and employee mobility are not randomly assigned, we interpret these analyses as evidence on patterns consistent with the proposed mechanisms rather than as causal estimates.

7.1 Assortative matching between firms and CEOs

Assortative matching between firms and CEOs may operate along two margins. First, firms and CEOs may be more likely to match when their values are aligned. Such matching can help explain why CEO fixed effects account for relatively little of the variation in corporate culture (Table 2): successive CEOs may differ as individuals but tend to share values that are compatible with the firm's existing culture. Second, conditional on appointment, matches characterized by greater cultural misalignment may be less durable, with misaligned CEOs more likely to depart. We examine these two margins in turns.

Our sample comprises 3,217 CEO turnover events from ExecuComp during 2002–2024 for which both firm culture scores and CEO UAI scores are available. Following the framework in Section 6, we use CEOs' UAI scores as proxies for attitudes toward uncertainty rooted in cultural heritage. If firms and CEOs assortatively match on values, we expect firms with higher culture scores to appoint CEOs with high UAI scores.

We first examine whether the values of incoming CEOs are systematically related to firms' pre-existing cultures using the following OLS regression:

$$\begin{aligned} \textit{Incoming CEO UAI}_{i,t} =& \alpha + \beta_1 \textit{Culture before turnover}_{i,t-1} \\ &+ \beta_2 \textit{Departing CEO UAI}_{i,t-1} + \gamma X_{i,t-1} + \lambda_j + v_t + \varepsilon_{i,t}, \end{aligned} \tag{2}$$

where the dependent variable $\textit{Incoming CEO UAI}_{i,t}$ is the UAI score of the newly appointed CEO in firm i (multiplied by 100). $\textit{Culture before turnover}_{i,t-1}$ is firm i's culture score in the year preceding the CEO turnover, and $\textit{Departing CEO UAI}_{i,t-1}$ is the UAI score of the CEO who just left. $X_{i,t-1}$ includes lagged firm-level controls. λ_j are Fama–French 38

industry fixed effects, and v_t are year fixed effects. Industry and year fixed effects help control for systematic differences across industries in operating environments, organizational practices, and executive labor-market demands, as well as common time-varying factors such as macroeconomic conditions and shifts in the CEO labor market. The coefficient of interest is β_1. A positive β_1 indicates that firms with higher pre-existing culture scores tend to appoint CEOs with higher UAI scores, consistent with assortative matching between firms and CEOs on values.

Panel A of Table 5 presents results. In column (1), we regress incoming CEO UAI scores on firms' pre-turnover culture scores.[21] We find that firms with higher culture scores prior to CEO turnover are significantly more likely to appoint CEOs with higher UAI scores, consistent with assortative matching on values. Column (2) adds firm characteristics measured prior to turnover, and the association remains positive and significant. Column (3) further includes industry and year fixed effects; the result remains unchanged.

In columns (4)–(6), we additionally control for the UAI scores of departing CEOs, which may be related to succession choices and/or capture boards' preferences for particular CEO characteristics (Cronqvist et al., 2012). The UAI scores of departing and incoming CEOs are positively associated, although this relation is statistically insignificant. Importantly, across all specifications, firms' pre-turnover culture scores remain positively and significantly associated with the UAI scores of incoming CEOs. These findings indicate that the relation between pre-existing firm culture and incoming CEOs' values is not simply explained by observable firm characteristics, persistent industry differences, common time-varying conditions, or similarity between departing and incoming CEOs.

Next, we examine the durability of potentially mismatched firm-CEO relationships. If assortative matching contributes to the persistence of corporate culture, CEOs whose values are less aligned with those preferred by the firm should be more likely to depart shortly after appointment. To increase the likelihood of observing such mismatches, we focus on exogenous

[21] Both Liu (2016) and Pan et al. (2017) conduct related analyses but proxy for corporate culture using the preferences of corporate insiders.

CEO turnovers, when boards may have less time and flexibility to identify a closely matched successor (Fee et al., 2013).

We examine whether greater cultural mismatch predicts early CEO departure using the following linear probability model:

$$\begin{aligned} \textit{CEO departure}_{i,t} = \alpha + \beta_1 \textit{Abs diff in UAI quartile}_{i,t} + \beta_2 \textit{Culture before turnover}_{i,t-1} \\ + \gamma X_{i,t-1} + \eta_i + v_t + \varepsilon_{i,t}. \end{aligned} \tag{3}$$

where the dependent variable *CEO departure in 1/2 yr*$_{i,t}$ is an indicator variable that takes a value of one if the newly appointed CEO in firm i departs within one or two years of appointment, and zero otherwise. We measure potential mismatch using the absolute difference between the quartile rank of the incoming CEO's UAI score and that of the departing CEO, *Abs diff in UAI quartile*$_{i,t}$. For exogenous turnover events, we assume that the departing CEO was reasonably well matched to the firm on values, so her UAI score provides a proxy for the firm's preferred cultural profile of a successor. A larger absolute difference therefore indicates greater potential mismatch between the incoming CEO and the firm. Firm fixed effects, η_i, absorb time-invariant firm characteristics that may jointly affect the type of CEOs a firm appoints and the likelihood of subsequent CEO departure, such as persistent organizational practices, governance structures, and underlying corporate culture. Identification therefore comes from comparing multiple CEO succession events within the same firm that differ in how closely the incoming CEO's UAI score aligns with that of the departing CEO.

Panel B reports the results from the linear probability model. Consistent with our conjecture, larger differences between the UAI scores of incoming and departing CEOs are significantly associated with a higher probability that the incoming CEO departs within one or two years of appointment. Thus, firm-CEO matches characterized by greater value misalignment appear to be less durable.

As a complementary analysis, Appendix Table A.5 repeats the departure tests for endogenous turnover events. The estimated coefficients on cultural mismatch are statistically insignificant. Combined with the significant results following exogenous turnovers when

boards typically have less time to select the incoming CEO, this pattern suggests that the relation between cultural mismatch and early departure is concentrated in settings where initial matching is more constrained.

Taken together, these findings provide suggestive evidence that cultural alignment matters both for the formation and durability of firm-CEO matches. The evidence is consistent with assortative matching on values as an important mechanism sustaining corporate culture.

7.2 Assortative matching between firms and employees

We next examine whether assortative matching on values extends to employees. We identify firms' workforces using LinkedIn employment histories from Revelio Labs. Because of data limitations, this analysis focuses on immigrant employees. Following Amanzadeh et al. (2024), we infer an employee's country of origin from her undergraduate education history and proxy her values using those prevailing in that country, measured with the World Values Survey (WVS). Appendix Table A.6 lists the survey questions mapped to each of the five corporate cultural values.

We measure value alignment between an employee and her employer using the cosine similarity between the employee's value vector and the firm's value vector spanning innovation, integrity, quality, respect, and teamwork, with higher values indicating greater alignment. The final sample comprises 1,843,503 immigrant employees at 2,015 S&P 1500 firms from 2002 to 2024, yielding 9,968,467 employee–year observations. On average, each employee contributes 5.41 years of employment data. The sample spans 55 countries of origin.

We examine whether value misalignment between firms and employees predicts employee departure using the following linear probability model:

$$\textit{Employee departure}_{e,i,t} = \alpha + \beta_1 \textit{Culture similarity}_{e,i,t} + \gamma X_{i,t-1} + \eta_i + \upsilon_t + \varepsilon_{e,i,t}, \tag{4}$$

where the dependent variable $\textit{Employee departure}_{e,i,t}$ is an indicator variable that takes a value of one if employee e leaves firm i in year t, and zero otherwise. $\textit{Culture similarity}_{e,i,t}$ is the cosine similarity between firm i's culture vector and employee e's value vector (derived from the World Values Survey based on her country of origin). Higher values indicate greater

alignment between the employee's values and the firm's culture. $X_{i,t-1}$ includes lagged firm-level controls and unemployment rate in firm i's headquarters state. η_i and v_t are firm and year fixed effects, respectively. Identification comes from variation in employee–firm value alignment within firms, across employees and over time, after absorbing time-invariant firm heterogeneity and common year shocks.

Table 6 reports the results. Column (1) presents the baseline specification without fixed effects, while column (2) adds firm and year fixed effects. Columns (3) and (4) further include firm-level controls. Standard errors are two-way clustered by firm and year in columns (2) and (3) and three-way clustered by firm, employee, and year in column (4). Across all specifications, the coefficient on *Cultural Similarity* is negative and statistically significant at the 1% level, indicating that greater alignment between an employee's values and her firm's values is associated with a lower probability of departure.

Overall, employees whose values are more closely aligned with their firm's cultures are less likely to leave. This retention pattern complements the firm-CEO evidence and is consistent with value alignment contributing to the durability of firm-employee matches. More broadly, the results provide additional evidence that assortative matching on values may help sustain corporate culture as organizational membership changes.

7.3 Cultural imprinting on CEOs

We next examine cultural imprinting as a second potential mechanism sustaining corporate culture. Under this mechanism, managers may internalize the values and norms of organizations in which they work, and this exposure may subsequently influence their decision-making even after they move to another firm. Directly testing such internalization is difficult because managers' personal values are rarely observed before and after joining a firm. We therefore use a mover-CEO design to examine whether prolonged exposure to a former employer's culture leaves a transferable influence on policies at the firm the manager subsequently leads. Specifically, we use the culture score of a mover CEO's former employer to measure her prior cultural exposure and examine whether it is associated with policies at her new firm. If

cultural imprinting is important, policies at the new firm should exhibit a positive association with the culture to which the CEO was previously exposed.

To construct the sample, we require a mover CEO to have served for at least three years at her former employer, allowing sufficient exposure to that firm's culture (Schoar and Zuo, 2017; Schoar et al., 2024), and for at least three years at her new employer, providing sufficient time for her influence to be reflected in the new firm's policies. We exclude movers whose former and new employers belong to the same four-digit SIC industry, reducing the possibility that common industry characteristics drive the association between the former firm's culture and the new firm's policies.[22] We retain firm-year observations within a (-3, +3) year window around the CEO appointment.[23]

We examine whether CEOs' prior cultural exposure is reflected in policies at their new firms using the following panel data regression:

$$Y_{i,j,t} = \alpha + \beta_1 \textit{Former employer culture}_{j,pre} \times \textit{Post}_{i,t} + \beta_2 \textit{Culture}_{i,t-1} + \gamma X_{i,t-1} + \eta_i + v_t + \varepsilon_{i,j,t}, \quad (5)$$

where the dependent variable $Y_{i,j,t}$ represents one of firm i's policy outcomes in year t. j denotes the incoming CEO's former employer. $\textit{Former employer culture}_{j,pre}$ is the culture score of employer j during the final year of the incoming CEO's tenure there, capturing the culture to which the incoming CEO was exposed before joining firm i. The indicator $\textit{Post}_{i,t}$ takes a value of one for the first three years following the CEO's appointment at firm i, and zero for the three years preceding the appointment. The interaction $\textit{Former employer culture}_{j,pre} \times \textit{Post}_{i,t}$ captures whether changes in firm i's policies following the CEO appointment vary systematically with the culture of the incoming CEO's former employer. A positive β_1 would therefore be consistent with prior cultural exposure carrying over into the CEO's subsequent decision-making.

We include $\textit{Culture}_{i,t-1}$, firm i's lagged culture score, to account for the relation between the firm's pre-existing culture and its policies, and $X_{i,t-1}$ includes lagged firm-level controls.

[22] Our results are robust to retaining movers whose former and new employers are in the same industry.

[23] This sample differs from that used in Table 2 Panel C, because we do not require the mover CEO (to a new firm) to have served as CEO at her former employer; serving as a top executive is sufficient (for cultural imprinting).

η_i and v_t are firm and year fixed effects, respectively. Identification comes from within-firm policy changes around CEO appointments combined with cross-sectional variation in the culture of incoming CEOs' former employers, net of common year effects. In other words, we ask whether pre- to post-appointment changes differ systematically with CEOs' prior cultural exposure.[24] Standard errors are clustered at the firm level.

Table 7 presents results. Across most of the specifications, the coefficients on the interactions between former-employer culture and the post-appointment indicator have the expected signs but are statistically insignificant. Thus, we find little systematic indication that CEOs' prior cultural exposure is reflected in policies at the firms they subsequently lead.

One possible interpretation is that managerial values and styles contain substantial individual-specific components. Prior work shows that managerial styles can travel across firms and that formative experiences earlier in managers' careers can have long-lasting effects (Bertrand and Schoar, 2003; Schoar and Zuo, 2017). Workplace exposure later in a manager's career may therefore exert a weaker or less transferable influence on subsequent decision-making. It is also possible that cultural exposure requires a longer horizon to be reflected in managerial behavior and organizational policies than the post-appointment window examined here. Overall, the evidence for cultural imprinting is substantially weaker than that for the assortative matching mechanisms documented in Sections 7.1 and 7.2.

Taken together, our findings point to a nuanced role for CEOs in the persistence of corporate culture. CEOs appear to help sustain existing culture because firms tend to match with leaders whose values are aligned with their own.

8 Additional Analyses

In this section, we first conduct a series of robustness checks using alternative samples. We then examine how corporate culture evolves around major corporate events. We also provide

[24]This design differs from a conventional binary-treatment difference-in-differences framework because prior cultural exposure varies continuously across incoming CEOs. In an untabulated test, we examine whether former-employer culture is associated with differential policy changes before the CEO appointment. The corresponding pre-appointment interaction is small and statistically insignificant, providing little evidence of differential pre-trends.

suggestive evidence on the persistence of culture and the predictive role of initial culture among private firms. Finally, we discuss the statistical nature of culture persistence.

8.1 Using alternative samples

One concern is that our evidence of culture persistence may partly reflect sample selection. For example, firms experiencing greater cultural change may be more likely to delist or leave the S&P 1500, so that the baseline sample disproportionately retains larger or more successful firms with relatively stable cultures.

To address this concern, we repeat the variance decomposition using a sample of delisted firms (excluding firms delisted because of M&As) and a sample of firms outside the S&P 1500. Appendix Table A.7 shows that the decomposition results are broadly similar to those in Table 2, with firm-specific differences continuing to account for a substantial share of the variation in corporate culture. These results suggest that our main evidence on cultural persistence is not driven by survivorship or selection into the baseline sample.[25]

8.2 Corporate culture and CEO turnover

As additional evidence on culture persistence, we examine how culture evolves around CEO turnovers. Following Bai and Mkrtchyan (2023), we employ a seven-year event window spanning three years before through three years after the turnover year. To be included, a firm must have at least one culture observation in both the pre- and post-turnover periods. We also require non-overlapping (-3, +3) event windows. The resulting sample comprises 2,457 events from 2002 to 2024.

We compare the evolution of culture around CEO turnovers with that of firms that do not experience a turnover using the following difference-in-differences specification:

$$Culture_{i,t} = \alpha + \sum_{k\in[-3,3],k\neq-1} \delta_k Treat_i \times Year_k + \beta X_{i,t-1} + \eta_i + v_t + \varepsilon_{i,t} \tag{6}$$

where the dependent variable $Culture_{i,t}$ denotes firm i's culture score in year t. The indicator

[25] CEO fixed effects account for a larger share of the variance among delisted firms. One possible explanation is more limited mobility of CEOs across firms in this sample: many CEOs of delisted firms are not observed serving in comparable positions at other firms, making firm and CEO fixed effects more difficult to distinguish empirically.

$Treat_i$ takes a value of one if a firm undergoes a CEO turnover, and zero otherwise. The indicator $Year_k$ denotes event time relative to the turnover year (year 0), with year -1 omitted as the reference period. $X_{i,t-1}$ includes lagged firm-level controls, η_i are firm fixed effects, and v_t are year fixed effects. The event-time coefficients therefore capture how the culture of turnover firms evolves relative to its pre-turnover level and relative to contemporaneous changes among firms without CEO turnover. We plot these coefficients over the event window to assess whether CEO turnover is accompanied by meaningful changes in corporate culture.

Figure A.1 presents the evolution of corporate culture around CEO turnover. For comparability across event horizons, we employ the same CEO turnover sample when examining two different event windows ((-3, +3) and (-3, +6) windows). The sample comprises 2,457 CEO turnover events. Panel A shows little change in culture during the three years preceding turnover, followed by a modest increase immediately afterward. These increases are short-lived, however, with culture attenuating after the first post-turnover year and becoming statistically indistinguishable from the benchmark at longer horizons. Panel B extends the post-turnover window to six years and shows a similar pattern.

Figure A.2 examines the five values underlying the aggregate culture score grouped by operations-oriented values (innovation and quality) in Panel A and people-oriented values (integrity, respect, and teamwork) in Panel B. We observe some short-lived increases in innovation and respect following CEO turnover, but these changes subsequently dissipate. Overall, neither of the five values exhibits a sustained shift following turnover.

Figure A.3 compares cultural dynamics around founder and non-founder CEO turnovers. Panel A shows no significant change in culture following founder CEO turnover. This pattern is consistent with, although does not establish, founder CEOs being succeeded by CEOs whose values are aligned with the firm's existing culture. Panel B shows more pronounced changes following non-founder CEO turnovers, with culture shifting during the first two post-turnover years before returning toward its pre-turnover level by year three.

Motivated by Fee et al. (2013), we next compare exogenous and endogenous CEO turnovers.

Following their classification, we define exogenous turnovers as those associated with death (27 cases), health problems (43 cases), or retirement (1,672 cases), and endogenous turnovers as performance-related departures (505 cases), using turnover reasons from Gentry et al. (2021). Figure A.4 shows little change in culture around exogenous turnovers (Panel A). Endogenous turnovers, by contrast, are associated with more pronounced cultural shifts during the first two post-turnover years, followed by a return toward pre-turnover levels in year three (Panel B). These patterns reinforce the insight of Fee et al. (2013) that distinguishing between exogenous and endogenous turnovers is important when assessing the relation between CEO succession and firm outcomes. In our setting, however, neither type of turnover is associated with a sustained change in corporate culture.

Finally, we examine whether cultural dynamics differ between internal and external CEO successors. Following Bai and Mkrtchyan (2023), we classify a CEO as external if she had served at the firm as an executive or director for no more than one year prior to appointment. Among the 2,457 turnover events, 957 involve external successors and 1,500 involve internal successors. Figure A.5 shows that firms appointing external CEOs exhibit a pronounced increase in culture in the first post-appointment year, while the magnitude declines thereafter, consistent with evidence in Biggerstaff et al. (2015) and Bai and Mkrtchyan (2023) that external CEOs are associated with more substantial operational changes than internal successors.[26] Overall, the evidence suggests that CEO turnover may be accompanied by temporary deviations in corporate culture, but these changes generally dissipate rather than producing lasting shifts in firm-specific culture.

8.3 Corporate culture and other major corporate events

We next examine how corporate culture evolves around other major corporate events. Appendix Figure A.6 examines large M&As and shows little evidence of significant cultural change following these transactions, consistent with prior evidence that cultural compatibility

[26]In untabulated analysis, we focus on CEO turnover events in which at least one-half or three-quarters of the top management team is also replaced. The results are similar: corporate culture exhibits little evidence of sustained change even following substantial management turnover.

is an important consideration in merger activity (Bereskin et al., 2018; Ahern et al., 2015; Li et al., 2021b). Appendix Figure A.7 examines financial distress and similarly shows little evidence of a sustained change in corporate culture around distress events. Appendix Figure A.8 examines firms' emergence from Chapter 11 bankruptcy. Culture declines noticeably following the event, although the estimates are statistically insignificant. Appendix Figure A.9 examines accounting fraud,[27] and shows no significant changes in culture. Taken together, these analyses provide little evidence that major corporate events are accompanied by sustained shifts in firm-specific culture.

8.4 Corporate culture in private firms

Our baseline evidence is based on public firms, raising the question of whether similar patterns hold in private firms. To address this question, we restrict the sample to firms that have never been publicly listed (identified as firms with no match to CRSP) and measure culture using Glassdoor reviews. We relate a private firm's current culture to its initial culture, proxied by the first available Glassdoor culture score, and interact initial culture with years since the first observation to allow its predictive relation with subsequent culture to vary over time. Appendix Table A.8 column (1) shows that initial culture is positively and significantly associated with subsequent culture. Adding industry and industry and year fixed effects in columns (2)–(3), respectively, leaves the main result largely unchanged. Overall, the evidence suggests that the strong relation between initial and subsequent culture documented among public firms extends to private firms.

8.5 Corporate culture and IPOs

We next examine how corporate culture evolves around IPOs among S&P 1500 firms. We match Glassdoor culture scores to IPOs from 2009 to 2024 and study an 11-year event window spanning five years before through five years after the listing. The sample comprises 265 firms with at least one culture observation in both the pre- and post-IPO periods.[28] Appendix

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

[28]Requiring a balanced panel around the IPO would substantially reduce the sample size.

Figure A.10 shows little evidence of significant cultural change around the listing. This pattern suggests that the transition from private to public ownership is not accompanied by a material shift in firms' established cultures.

8.6 Stable firm heterogeneity versus dynamic persistence

Our findings raise an important question about the statistical nature of culture persistence. A high degree of serial correlation in corporate culture can arise for two conceptually distinct reasons. First, firms may differ in stable, firm-specific cultural levels, so that firms with relatively strong or weak cultures tend to remain different from one another over time. Second, deviations from these firm-specific levels may themselves be persistent, so that shocks to culture dissipate only gradually. We refer to the former as stable firm heterogeneity and the latter as dynamic persistence.

To formalize this distinction, we write:

$$Culture_{i,t} = \mu_i + \varepsilon_{i,t}, \tag{7}$$

where μ_i captures a time-invariant firm-specific component and $\varepsilon_{i,t}$ captures deviations from that component. We allow these deviations to follow an autoregressive process (AR(1)):

$$\varepsilon_{i,t} = \rho\varepsilon_{i,t-1} + \epsilon_{i,t}, \tag{8}$$

where $\epsilon_{i,t}$ is a transitory innovation. Stable firm heterogeneity is reflected in dispersion in μ_i across firms, whereas dynamic persistence is captured by ρ: a larger ρ implies that deviations from a firm's cultural baseline dissipate more slowly. Importantly, a pooled AR(1) coefficient may be high even when within-firm deviations are only moderately persistent because stable differences in μ_i also generate serial correlation in observed culture.

Table A.9 directly examines this distinction by estimating autoregressive specifications with and without firm fixed effects. The estimated AR(1) coefficient declines sharply once firm fixed effects are included, indicating that much of the serial correlation in observed culture reflects stable differences across firms rather than slowly decaying within-firm deviations. The remaining within-firm persistence is considerably more modest, suggesting that deviations from a firm's cultural baseline tend to dissipate over time.

This interpretation is reinforced by two earlier findings. First, the variance decomposition in Section 4 shows that firm fixed effects account for 86% of the explained variation in culture in the full sample and up to 95% in the mover sample, while CEO and year fixed effects contribute relatively little. Second, Section 5 shows that a firm's initial culture remains strongly predictive of its subsequent culture, with little evidence that this relation attenuates as the firm ages. Together, these results suggest that the persistence of corporate culture primarily reflects enduring firm-specific differences rather than the slow propagation of short-run disturbances. In this respect, corporate culture resembles persistent corporate policies such as capital structure, where firm-specific targets account for much of the observed persistence (Lemmon et al., 2008).

This distinction also helps interpret the event-study evidence in Section 8. Major corporate events are generally not accompanied by sustained changes in culture, and the temporary movements observed around some CEO turnovers tend to dissipate within a few years. These patterns are consistent with culture fluctuating around relatively stable firm-specific levels rather than short-run deviations becoming permanently embedded. Accordingly, throughout the paper, our use of "persistence" refers primarily to the durability of firm-specific cultural differences over time, rather than to persistence in transitory deviations.

Stable firm-specific culture does not imply that culture never changes. Some firms experience large and sustained cultural shifts, raising the question of when the underlying firm-specific cultural level itself may change. We turn to these episodes in the next section.

9 When Does Corporate Culture Change?

We examine when firms experience large and sustained changes in corporate culture. We focus on firms that exhibit economically meaningful shifts and identify these episodes using a conservative rank-based criterion that requires a substantial movement in a firm's position in the cross-sectional culture distribution with no subsequent reversion. This approach is designed to distinguish durable cultural changes from transitory fluctuations (see Online Appendix C for details).

Two findings emerge. First, large and sustained cultural shifts are relatively rare, consistent with our broader evidence that corporate culture changes little on average around major corporate events. Second, illustrative cases suggest that some episodes coincide with changes in organizational structures, operating environments, or regulatory conditions. However, the predictive analysis shows that these episodes are difficult to explain using observable firm events and characteristics.

Viewed through the framework in Section 8.6, these episodes represent departures from the simple characterization of culture as fluctuations around a fixed firm-specific component. Whereas most short-run deviations dissipate over time, these rare episodes appear to involve a shift to a new cultural baseline. Thus, the overall stability of firm-specific culture can coexist with occasional, economically meaningful changes in the underlying cultural regime.

10 Conclusion

We know relatively little about how corporate culture is formed and how it evolves over time. This paper studies the origins and evolution of corporate culture while distinguishing the values and norms embedded within firms from the preferences of corporate insiders. Our primary culture measure, from Li et al. (2021b), uses machine learning methods applied to earnings call transcripts.

We document substantial persistence in corporate culture. Firm-specific differences account for most of the explained variation in culture, and firms' initial cultures remain strongly predictive of their subsequent cultures over long horizons. These findings are robust to alternative samples and to a culture measure based on Glassdoor employee reviews. Using detailed founder data, we further show that firms' initial cultures are systematically associated with founders' cultural heritage, racial diversity in their birthplaces, and early-career exposure to recessions.

Finally, we examine mechanisms that may sustain firm-specific culture over time. We find evidence of assortative matching: firms tend to appoint CEOs whose values are more closely aligned with their existing cultures, less aligned firm-CEO matches are less durable,

and employees whose values are better aligned with their employers' cultures are less likely to leave. By contrast, we find limited evidence that prior exposure to corporate culture leaves a transferable influence on CEOs' subsequent decision-making. Overall, our findings point to founders' formative influence and assortative matching as important forces underlying the persistence of corporate culture.

Our study also raises several 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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Table 1: Summary Statistics

Panel A: Firm Characteristics

	Mean	Median	SD	P25	P75
Culture	14.487	13.412	5.633	10.476	17.331
Operations-oriented culture	7.089	6.371	3.549	4.625	8.712
People-oriented culture	7.398	6.689	3.388	4.955	9.127
Innovation	4.737	4.042	2.875	2.758	5.933
Quality	2.352	2.030	1.422	1.346	2.991
Integrity	2.295	2.088	1.116	1.527	2.815
Teamwork	2.167	1.834	1.335	1.260	2.701
Respect	2.936	2.404	2.049	1.542	3.727
Firm size	7.170	7.061	1.730	5.941	8.325
Total assets	5941.693	1165.970	15225.038	380.304	4124.002
Firm age	25.089	20.000	19.308	10.000	35.000
Ln(Firm age)	2.953	3.045	0.853	2.398	3.584
Sales growth	0.103	0.067	0.310	-0.014	0.166
Leverage	0.240	0.224	0.187	0.075	0.365
M/B	1.968	1.485	1.439	1.103	2.240
ROA	0.111	0.111	0.108	0.065	0.161
Tangibility	0.240	0.151	0.238	0.058	0.356
Institutional ownership	0.789	0.834	0.212	0.696	0.931
Num M&As	2.333	1.000	3.048	0.000	4.000
Num SEOs	1.352	1.000	1.967	0.000	2.000
Obs.	37,535				
No. of firms	2,950				
No. of CEOs	6,468				

Panel B: Initial Culture Variables

	Obs.	Mean	Median	SD	P25	P75
Culture IPO	1,838	18.365	16.528	8.651	11.895	23.066
Culture first IPO3y	3,066	17.819	16.276	8.196	11.701	22.421
Culture avg IPO3y	3,066	17.533	16.179	7.316	12.065	21.561
Culture first obs	1,023	13.442	12.599	4.815	9.847	16.035

Panel C: Founder Characteristics

	Mean	Median	SD	P25	P75
Founder UAI	0.584	0.650	0.170	0.350	0.750
Founder birthplace racial diversity	0.183	0.161	0.141	0.056	0.282
Founder birthplace TFE	0.897	0.600	1.084	0.000	1.400
Founder work recession	0.275	0.000	0.447	0.000	1.000
Obs.	1,023				

The table presents the summary statistics. The sample comprises 37,535 firm-year observations for 2,950 S&P 1500 firms in the CRSP-Compustat database with non-missing culture scores from 2002 to 2025. 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

Panel A: Corporate Culture and Glassdoor Culture for The Full Sample

	Culture	Culture	Culture	Glassdoor CC	Glassdoor CC	Glassdoor CC
	(1)	(2)	(3)	(4)	(5)	(6)
Firm FE	0.87		0.86	0.79		0.78
CEO FE	0.11		0.13	0.20		0.21
Year FE	0.02	0.26	0.01	0.01	0.17	0.01
Industry FE		0.49			0.60	
Ln(Asset)		0.01	0.00		0.01	0.00
Ln(Firm age)		0.00	0.00		0.01	0.00
Sales growth		0.00	0.00		0.01	0.00
Leverage		0.01	0.00		0.01	0.00
M/B		0.09	0.00		0.06	0.00
ROA		0.06	0.00		0.01	0.00
Tangibility		0.04	0.00		0.09	0.00
Institutional ownership		0.02	0.00		0.01	0.00
Num M&As		0.00	0.00		0.00	0.00
Num SEOs		0.00	0.00		0.00	0.00
Adj. R^2	0.76	0.34	0.77	0.45	0.11	0.45

Panel B: Corporate Culture Subscores for The Full Sample

	Operations-oriented culture	People-oriented culture	Innovation	Quality	Integrity	Teamwork	Respect
	(1)	(2)	(3)	(4)	(5)		
Firm FE	0.87	0.88	0.87	0.88	0.81	0.85	0.89
CEO FE	0.12	0.11	0.12	0.11	0.18	0.14	0.10
Year FE	0.01	0.01	0.01	0.00	0.00	0.00	0.01
Ln(Asset)	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Ln(Firm age)	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Sales growth	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Leverage	0.00	0.00	0.00	0.00	0.00	0.00	0.00
M/B	0.00	0.00	0.00	0.00	0.00	0.00	0.00
ROA	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Tangibility	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Institutional ownership	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Num M&As	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Num SEOs	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Adj. R^2	0.78	0.75	0.77	0.71	0.58	0.68	0.73

Panel C: Corporate Culture for Firms with CEOs Who Have Worked at Two or More Firms

	Culture	Glassdoor CC	Operations-oriented culture	People-oriented culture	Innovation	Quality	Integrity	Teamwork	Respect
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Firm FE	0.95	0.87	0.95	0.96	0.95	0.97	0.96	0.94	0.97
CEO FE	0.02	0.02	0.03	0.02	0.02	0.01	0.02	0.03	0.01
Year FE	0.02	0.08	0.01	0.01	0.02	0.01	0.02	0.02	0.01
Ln(Asset)	0	0	0	0	0	0	0	0	0
Ln(Firm age)	0	0	0	0	0	0	0	0	0
Sales growth	0	0.01	0	0	0	0	0	0	0
Leverage	0	0	0	0	0	0	0	0	0
M/B	0	0.01	0	0	0	0	0	0	0
ROA	0	0	0	0	0	0	0	0	0
Tangibility	0	0	0	0	0	0	0	0.01	0
Institutional ownership	0	0	0	0	0	0	0	0	0
Num M&As	0	0	0	0	0	0	0	0	0
Num SEOs	0	0	0	0	0	0	0	0	0
Adj. R^2	0.78	0.21	0.8	0.76	0.81	0.72	0.54	0.66	0.78

Table 2 – Continued

Panel D: Firm Policies for The Full Sample

	(1) Sales growth	(2) Capex	(3) R&D	(4) ROA	(5) Cash	(6) Book Leverage	(7) Market Leverage
Firm FE	0.70	0.83	0.75	0.86	0.85	0.81	0.81
CEO FE	0.25	0.16	0.24	0.14	0.14	0.17	0.18
Year FE	0.05	0.01	0.01	0.00	0.01	0.02	0.01
Adj. R^2	0.22	0.72	0.76	0.74	0.54	0.75	0.73

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 results for the full sample. The sample for columns (1)-(3) comprises 37,535 firm-year observations for 2,950 S&P 1500 firms in the CRSP-Compustat database with non-missing culture scores from 2002 to 2025. The sample for columns (4)-(6) comprises 22,633 firm-year observations for 2,016 S&P 1500 firms from 2008 to 2025. Panel B presents results for the two subscores and five cultural values for the full sample. Panel C presents results for a sample of firms whose CEOs have worked at two or more firms. The sample comprises 1,813 firm-year observations for 178 CEOs at 342 firms from 2002 to 2025 in columns (1) and (3)–(9). The sample comprises 986 firm-year observations for 148 CEOs at 198 firms from 2008 to 2025 in column (2). Panel D presents results of a variance decomposition of firm policies for the full sample, based on specifications that include only firm, CEO, and year fixed effects. 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	0.750***	0.625***	0.496***						
	(0.041)	(0.042)	(0.043)						
Culture IPO × Ln(Firm age)	-0.062**	-0.056*	-0.035						
	(0.030)	(0.029)	(0.028)						
Culture first IPO3y				0.749***	0.636***	0.485***			
				(0.047)	(0.045)	(0.046)			
Culture first IPO3y × Ln(Firm age)				-0.059**	-0.054**	-0.026			
				(0.029)	(0.027)	(0.027)			
Culture avg IPO3y							0.903***	0.809***	0.677***
							(0.054)	(0.052)	(0.054)
Culture avg IPO3y × Ln(Firm age)							-0.048	-0.043	-0.018
							(0.034)	(0.032)	(0.032)
Ln(Firm age)	2.036***	1.843***	1.259***	1.879***	1.768***	1.016**	1.913***	1.793***	1.094**
	(0.425)	(0.402)	(0.425)	(0.400)	(0.372)	(0.404)	(0.469)	(0.439)	(0.473)
Firm size			0.095			0.054			0.096
			(0.104)			(0.073)			(0.066)
Sales growth			0.096			0.004			-0.054
			(0.108)			(0.076)			(0.073)
Leverage			-1.826***			-2.134***			-1.689***
			(0.537)			(0.407)			(0.360)
M/B			0.558***			0.531***			0.395***
			(0.078)			(0.058)			(0.050)
ROA			-2.232***			-2.513***			-1.626***
			(0.581)			(0.402)			(0.373)
Tangibility			-3.099***			-3.075***			-2.259***
			(0.671)			(0.483)			(0.439)
Institutional ownership			-1.466***			-1.115***			-0.907***
			(0.387)			(0.283)			(0.261)
Num M&As			0.134			0.011			0.021
			(0.152)			(0.077)			(0.068)
Num SEOs			-0.070			-0.089**			-0.077*
			(0.065)			(0.045)			(0.042)
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	1,838	1,838	1,838	3,066	3,066	3,066	3,066	3,066	3,066
Obs.	11,262	11,262	11,262	18,378	18,378	18,378	18,378	18,378	18,378
Adj. R^2	0.422	0.481	0.519	0.386	0.444	0.488	0.497	0.527	0.552

Table 3 – Continued

Panel B: The Full Sample Using Firm Age Bins

	Culture (1)	Culture (2)	Culture (3)	Culture (4)	Culture (5)	Culture (6)	Culture (7)	Culture (8)	Culture (9)
Culture IPO	0.680***	0.562***	0.462***						
	(0.020)	(0.022)	(0.025)						
Culture IPO × Age6_10	-0.064*	-0.061*	-0.045						
	(0.033)	(0.032)	(0.030)						
Culture IPO × Age11_15	-0.157*	-0.142*	-0.116						
	(0.082)	(0.077)	(0.071)						
Culture IPO × Age16_20	-0.127	-0.110	-0.083						
	(0.176)	(0.161)	(0.147)						
Culture IPO × Age21_25	0.119	0.146	0.156						
	(0.655)	(0.625)	(0.594)						
Culture first IPO3y				0.667***	0.562***	0.453***			
				(0.016)	(0.018)	(0.019)			
Culture first IPO3y × Age6_10				-0.053**	-0.054**	-0.038*			
				(0.024)	(0.023)	(0.022)			
Culture first IPO3y × Age11_15				-0.079	-0.059	-0.028			
				(0.052)	(0.048)	(0.046)			
Culture first IPO3y × Age16_20				-0.066	-0.057	-0.021			
				(0.086)	(0.077)	(0.075)			
Culture first IPO3y × Age21_25				0.054	0.014	0.049			
				(0.175)	(0.157)	(0.154)			
Culture avg IPO3y							0.836***	0.750***	0.657***
							(0.016)	(0.018)	(0.022)
Culture avg IPO3y × Age6_10							-0.053**	-0.054**	-0.039
							(0.026)	(0.025)	(0.025)
Culture avg IPO3y × Age11_15							-0.028	-0.012	0.017
							(0.059)	(0.055)	(0.054)
Culture avg IPO3y × Age16_20							-0.049	-0.043	-0.013
							(0.103)	(0.096)	(0.093)
Culture avg IPO3y × Age21_25							0.034	0.019	0.078
							(0.201)	(0.184)	(0.177)
Age6_10	1.582***	1.496***	0.327	1.138***	1.167***	0.369	1.310***	1.300***	0.482
	(0.471)	(0.459)	(0.463)	(0.348)	(0.333)	(0.345)	(0.379)	(0.369)	(0.384)
Age11_15	4.070***	3.706***	1.609	2.484***	2.168***	0.445	2.079***	1.778**	0.085
	(1.043)	(0.999)	(0.982)	(0.678)	(0.636)	(0.666)	(0.775)	(0.723)	(0.755)
Age16_20	4.248**	3.710**	1.272	2.863***	2.655***	0.535	2.915**	2.737**	0.819
	(2.015)	(1.853)	(1.778)	(1.047)	(0.956)	(0.996)	(1.313)	(1.224)	(1.243)
Age21_25	4.083	3.105	0.621	1.635	2.103	0.211	1.995	2.108	0.095
	(7.749)	(7.471)	(7.276)	(2.286)	(2.063)	(2.106)	(2.640)	(2.417)	(2.394)
Firm size			0.089			0.047			0.089
			(0.102)			(0.072)			(0.065)
Ln(Firm age)			0.831***			0.613***			0.636***
			(0.177)			(0.174)			(0.168)
Sales growth			0.085			-0.003			-0.063
			(0.108)			(0.076)			(0.073)

Table 3 – Continued

Leverage			-1.807***			-2.097***			-1.636***
			(0.531)			(0.407)			(0.360)
M/B			0.555***			0.527***			0.390***
			(0.078)			(0.058)			(0.050)
ROA			-2.187***			-2.492***			-1.601***
			(0.579)			(0.401)			(0.373)
Tangibility			-3.081***			-3.077***			-2.269***
			(0.665)			(0.484)			(0.440)
Institutional ownership			-1.451***			-1.094***			-0.877***
			(0.384)			(0.282)			(0.261)
Num M&As			0.129			0.001			0.007
			(0.147)			(0.076)			(0.067)
Num SEOs			-0.069			-0.087*			-0.074*
			(0.064)			(0.045)			(0.042)
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	1,838	1,838	1,838	3,066	3,066	3,066	3,066	3,066	3,066
Obs.	11,262	11,262	11,262	18,378	18,378	18,378	18,378	18,378	18,378
Adj. R^2	0.422	0.481	0.520	0.387	0.445	0.488	0.498	0.528	0.553

Table 3 – Continued

Panel C: 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	0.721***	0.581***	0.447***						
	(0.076)	(0.078)	(0.079)						
Culture IPO × Ln(Firm age)	-0.009	-0.012	-0.005						
	(0.056)	(0.053)	(0.048)						
Culture first IPO3y				0.761***	0.611***	0.469***			
				(0.088)	(0.084)	(0.084)			
Culture first IPO3y × Ln(Firm age)				-0.042	-0.032	-0.012			
				(0.056)	(0.051)	(0.049)			
Culture avg IPO3y							0.859***	0.742***	0.623***
							(0.104)	(0.098)	(0.095)
Culture avg IPO3y × Ln(Firm age)							0.009	0.016	0.030
							(0.067)	(0.061)	(0.057)
Ln(Firm age)	1.894**	1.626**	0.914	2.324***	1.997**	1.240	1.587	1.381	0.889
	(0.857)	(0.827)	(0.852)	(0.859)	(0.790)	(0.846)	(1.028)	(0.943)	(0.942)
Firm size			0.758***			0.422**			0.354**
			(0.239)			(0.187)			(0.168)
Sales growth			0.085			-0.067			-0.064
			(0.197)			(0.125)			(0.119)
Leverage			-4.034***			-4.409***			-3.707***
			(1.015)			(0.763)			(0.629)
M/B			0.434***			0.448***			0.331***
			(0.132)			(0.090)			(0.075)
ROA			-2.311**			-2.606***			-1.475**
			(1.051)			(0.725)			(0.664)
Tangibility			-4.465***			-3.970***			-3.130***
			(1.514)			(1.059)			(0.857)
Institutional ownership			-3.293***			-2.576***			-2.264***
			(0.763)			(0.605)			(0.546)
Num M&As			0.282			0.089			0.051
			(0.322)			(0.198)			(0.165)
Num SEOs			-0.160			-0.105			-0.115
			(0.118)			(0.079)			(0.075)
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	609	609	609	1,113	1,113	1,113	1,113	1,113	1,113
Obs.	3,685	3,685	3,685	6,106	6,106	6,106	6,106	6,106	6,106
Adj. R^2	0.429	0.522	0.567	0.391	0.473	0.516	0.512	0.557	0.585

Table 3 – Continued

Panel D: 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	0.767***	0.643***	0.511***						
	(0.038)	(0.038)	(0.039)						
Culture IPO × Ln(Firm age)	-0.075***	-0.067**	-0.047*						
	(0.027)	(0.026)	(0.025)						
Culture first IPO3y				0.774***	0.661***	0.505***			
				(0.045)	(0.043)	(0.044)			
Culture first IPO3y × Ln(Firm age)				-0.077***	-0.071***	-0.043*			
				(0.028)	(0.026)	(0.025)			
Culture avg IPO3y							0.943***	0.849***	0.711***
							(0.048)	(0.046)	(0.049)
Culture avg IPO3y × Ln(Firm age)							-0.077***	-0.072***	-0.047*
							(0.030)	(0.028)	(0.027)
Ln(Firm age)	2.021***	1.806***	1.325***	1.979***	1.859***	1.174***	2.182***	2.060***	1.416***
	(0.401)	(0.376)	(0.382)	(0.383)	(0.356)	(0.375)	(0.409)	(0.382)	(0.401)
Firm size			0.046			0.022			0.067
			(0.096)			(0.069)			(0.064)
Sales growth			0.102			0.004			-0.049
			(0.111)			(0.078)			(0.074)
Leverage			-1.943***			-2.067***			-1.653***
			(0.510)			(0.399)			(0.360)
M/B			0.511***			0.496***			0.364***
			(0.077)			(0.058)			(0.052)
ROA			-2.035***			-2.447***			-1.631***
			(0.553)			(0.395)			(0.375)
Tangibility			-3.544***			-3.385***			-2.503***
			(0.624)			(0.471)			(0.439)
Institutional ownership			-1.451***			-1.165***			-0.925***
			(0.383)			(0.285)			(0.266)
Num M&As			-0.037			-0.044			-0.017
			(0.094)			(0.060)			(0.059)
Num SEOs			-0.046			-0.087**			-0.071*
			(0.057)			(0.042)			(0.040)
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	1,782	1,782	1,782	2,971	2,971	2,971	2,971	2,971	2,971
Obs.	10,384	10,384	10,384	16,964	16,964	16,964	16,964	16,964	16,964
Adj. R^2	0.439	0.493	0.533	0.394	0.449	0.494	0.498	0.526	0.552

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 results using the full sample and an interaction between firm culture around the IPO and firm age to capture potential decay in the influence of IPO culture on subsequent culture. Panel B presents results using the full sample and interactions between firm culture around the IPO and firm-age bins to allow the influence of IPO culture on subsequent culture to vary nonlinearly with firm age. Panel C presents results using a sample of firms that went public within ten years of their founding. Panel D excludes firm-year observations in which a founder serves as CEO or as a board member.

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	Culture first obs	Culture first obs	Culture first obs	Culture first obs
	(1)	(2)	(3)	(4)	(5)
Founder UAI	0.081***	0.068***	0.078***	0.065***	0.063***
	(0.012)	(0.011)	(0.013)	(0.013)	(0.014)
Founder birthplace racial diversity	0.063***	0.061***	0.065***	0.060***	0.063***
	(0.010)	(0.009)	(0.008)	(0.009)	(0.006)
Founder birthplace TFE	-0.011	-0.010	-0.012	-0.010	-0.012
	(0.011)	(0.010)	(0.011)	(0.011)	(0.011)
Founder work recession	-0.176***	-0.141***	-0.168***	-0.135***	-0.135***
	(0.019)	(0.019)	(0.019)	(0.016)	(0.017)
Firm controls	Yes	Yes	Yes	Yes	Yes
Fixed effects	No	FF5 Ind	Founding cohort	FF5 Ind + Founding cohort	FF5 Ind x Founding cohort
No. of firms	831	831	831	831	831
Obs.	1,023	1,023	1,023	1,023	1,023
Adj. R2	0.133	0.174	0.131	0.170	0.159

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

	Operations-oriented first obs	People-oriented first obs	Innovation first obs	Quality first obs	Integrity first obs	Teamwork first obs	Respect first obs
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Founder UAI	0.054***	0.071***	0.044***	0.044***	0.036**	0.019*	0.085***
	(0.009)	(0.013)	(0.012)	(0.007)	(0.014)	(0.009)	(0.010)
Founder birthplace racial diversity	0.035***	0.067***	0.049***	-0.002	0.016	0.049***	0.066***
	(0.005)	(0.005)	(0.008)	(0.010)	(0.014)	(0.008)	(0.006)
Founder birthplace TFE	0.006	-0.025**	-0.023	0.049***	-0.039**	-0.030***	0.005
	(0.016)	(0.010)	(0.015)	(0.013)	(0.014)	(0.008)	(0.020)
Founder work recession	-0.117***	-0.137***	-0.130***	-0.043	-0.167***	-0.054**	-0.087***
	(0.025)	(0.008)	(0.023)	(0.025)	(0.023)	(0.022)	(0.022)
Firm controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Fixed effects	FF5 Ind x Founding cohort	FF5 Ind x Founding cohort	FF5 Ind x Founding cohort	FF5 Ind x Founding cohort	FF5 Ind x Founding cohort	FF5 Ind x Founding cohort	FF5 Ind x Founding cohort
No. of firms	831	831	831	831	831	831	831
Obs.	1,023	1,023	1,023	1,023	1,023	1,023	1,023
Adj. R2	0.170	0.112	0.126	0.116	0.038	0.144	0.100

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 results using the initial culture score as the dependent variable. Panel B presents results using the operations- and people-oriented initial subscores and initial individual cultural values as the dependent variables. Industry fixed effects are based on the Fama–French 5-industry classification given the relatively small sample size. Variable definitions are provided in Appendix Table A.1. To ease interpretation, all continuous variables in this table have been standardized. The standard errors are clustered at the founding cohort 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	0.137**	0.126**	0.150**	0.136**	0.126**	0.150**
	(0.055)	(0.058)	(0.073)	(0.055)	(0.058)	(0.073)
Departing CEO UAI				0.019	0.016	0.010
				(0.018)	(0.018)	(0.019)
Firm size		0.005	0.151		0.009	0.151
		(0.195)	(0.290)		(0.195)	(0.289)
Ln(Firm age)		-0.382	-0.592**		-0.388	-0.594**
		(0.402)	(0.221)		(0.403)	(0.221)
Sales growth		-0.839	-0.713		-0.822	-0.706
		(1.021)	(1.247)		(1.021)	(1.240)
Leverage		0.098	0.092		0.066	0.086
		(1.798)	(1.930)		(1.799)	(1.922)
M/B		-0.117	-0.124		-0.118	-0.124
		(0.297)	(0.326)		(0.297)	(0.326)
ROA		1.031	-0.199		1.034	-0.178
		(3.258)	(2.858)		(3.258)	(2.884)
Tangibility		-1.761	-1.311		-1.700	-1.282
		(1.468)	(3.497)		(1.470)	(3.478)
Institutional ownership		0.291	0.740		0.248	0.716
		(1.407)	(1.013)		(1.408)	(1.004)
Num M&As		0.181*	0.186**		0.178*	0.184**
		(0.095)	(0.069)		(0.095)	(0.068)
Num SEOs		-0.056	-0.054		-0.059	-0.056
		(0.166)	(0.135)		(0.166)	(0.134)
Fixed effects	No	No	FF38 Ind + Year	No	No	FF38 Ind + Year
No. of firms	1,687	1,687	1,687	1,687	1,687	1,687
Obs.	3,217	3,217	3,217	3,217	3,217	3,217
Adj. R^2	0.002	0.001	0.004	0.002	0.001	0.003

Panel B: Departure of Potentially Mismatched CEOs

	CEO departure in 1yr (1)	CEO departure in 1yr (2)	CEO departure in 2yr (3)	CEO departure in 2yr (4)
Abs diff in UAI quartile	0.018**	0.018**	0.034***	0.034***
	(0.009)	(0.009)	(0.011)	(0.011)
Culture before turnover	-0.005**	-0.005**	-0.007**	-0.008**
	(0.002)	(0.002)	(0.003)	(0.003)
Firm size		0.025		0.049
		(0.023)		(0.034)
Ln(Firm age)		0.044		0.024
		(0.027)		(0.031)
Sales growth		-0.022		-0.053
		(0.033)		(0.038)
Leverage		0.064		0.085
		(0.082)		(0.115)
M/B		0.022*		0.006
		(0.013)		(0.014)
ROA		-0.269		-0.141
		(0.257)		(0.268)
Tangibility		0.151		0.147
		(0.138)		(0.161)
Institutional ownership		-0.003		0.021
		(0.065)		(0.076)
Num M&As		0.004		0.004
		(0.009)		(0.012)
Num SEOs		-0.017		-0.032
		(0.011)		(0.023)
Fixed effects	Firm + Year	Firm + Year	Firm + Year	Firm + Year
No. of firms	448	448	448	448
Obs.	1,010	1,010	1,010	1,010
Adj. R^2	0.046	0.057	0.166	0.169

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 3,217 CEO turnover events from 2002 to 2024. We exclude founder-related turnover events. *Incoming CEO UAI* is the UAI score of the incoming CEO, multiplied by 100. *Culture before turnover* is the culture score of a firm in the year before a CEO turnover event. *Departing CEO UAI* is the UAI score of the CEO who just left a firm, multiplied by 100. *Industry FE* are based on the Fama and French 38-industry classification. The standard errors are clustered at the Fama and French 38-industry level. Panel B examines departure of potentially mismatched CEOs. We employ a linear probability model. We exclude founder-related turnover events. The sample comprises 1,010 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* $1yr(2yr)$ is an indicator variable that takes a value of one if a CEO departs within one year (two years) of appointment, and zero otherwise. *Abs diff in UAI quartile* is the absolute value of the difference between the quartile rank of the incoming CEO's UAI score and that of the departing CEO's UAI score. The standard errors are clustered at the firm level. Variable definitions are provided in Appendix Table A.1. ***, **, * 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	-0.028***	-0.036***	-0.036***	-0.036***
	(0.001)	(0.010)	(0.010)	(0.010)
Ln(Employee age)			-0.123***	-0.123***
			(0.016)	(0.016)
Ln(Tenure)			0.012**	0.012**
			(0.005)	(0.005)
Firm size			0.007**	0.007**
			(0.003)	(0.003)
Ln(Firm age)			0.002	0.002
			(0.007)	(0.007)
Sales growth			-0.034***	-0.034***
			(0.005)	(0.005)
Leverage			0.004	0.004
			(0.009)	(0.009)
M/B			-0.002	-0.002
			(0.001)	(0.001)
ROA			-0.001	-0.001
			(0.019)	(0.019)
Tangibility			-0.011	-0.011
			(0.015)	(0.015)
Institutional ownership			0.013	0.013
			(0.025)	(0.025)
Loss			0.009**	0.009**
			(0.003)	(0.003)
Unemployment rate			0.001	0.001
			(0.001)	(0.001)
Fixed effects	No	Firm + Year	Firm + Year	Firm + Year
No. of firms	2,015	2,015	2,015	2,015
No. of employees	1,843,503	1,843,503	1,843,503	1,843,503
Cluster	No	Firm + Year	Firm + Year	Firm + Employee + Year
Obs.	9,968,467	9,968,467	9,968,467	9,968,467
Adj. R^2	0.000	0.032	0.041	0.041

This table examines firm-employee matching on cultural values. The sample comprises 9,968,467 employee-year observations for 1,843,503 immigrant employees at 2,015 S&P 1500 firms from 2002 to 2024, based on employment history data from Revelio Labs. *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. ***, **, * denote significance at the 1%, 5%, and 10% levels, respectively.

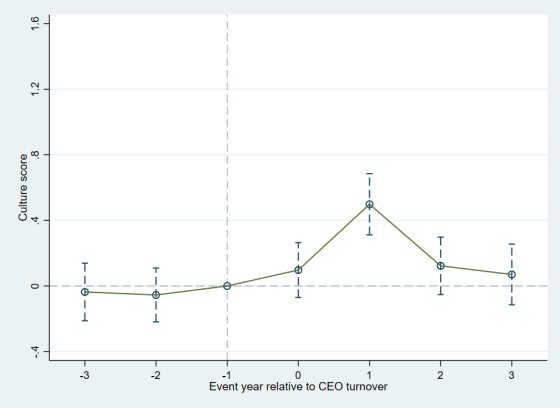
Table 7: Cultural Imprinting on CEOs

	R&D	R&D	Quality score	Quality score	Discretionary accrual	Discretionary accrual	Team patents%	Team patents%	Respect score	Respect score
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
Former employer innovation score × Post	0.030	0.029								
	(0.019)	(0.019)								
Innovation	0.023	0.006								
	(0.037)	(0.032)								
Former employer quality score × Post			0.002	0.001						
			(0.004)	(0.004)						
Quality			-0.002	0.001						
			(0.006)	(0.006)						
Former employer integrity score × Post					-0.220	-0.180				
					(0.137)	(0.129)				
Integrity					-0.188	-0.065				
					(0.267)	(0.256)				
Former employer teamwork score × Post							0.005	0.004		
							(0.006)	(0.006)		
Teamwork							-0.003	-0.002		
							(0.008)	(0.009)		
Former employer respect score × Post									0.003	0.002
									(0.002)	(0.002)
Respect									-0.005*	-0.005
									(0.003)	(0.003)
CEO/Exec UAI	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Firm controls	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes
Year FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Firm FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
No. of events	294	294	325	325	344	344	204	204	250	250
No. of firms	241	241	269	269	287	287	166	166	214	214
Obs.	1,379	1,379	1,435	1,435	1,623	1,623	861	861	1,034	1,034
Adj. R^2	0.886	0.893	0.782	0.794	0.253	0.287	0.342	0.341	0.664	0.668

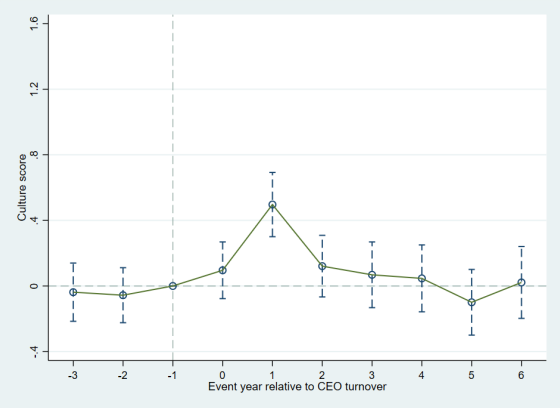
This table examines cultural imprinting on CEOs. We track the career paths of CEOs using the ExecuComp database and use the culture score of a CEO's prior employer as a proxy for the culture imprinted on her. Observations are excluded if the turnover is founder-related or if the CEO's former and current employers belong to the same four-digit SIC industry. Additionally, we require at least one valid observation in each of the pre- and post-turnover periods. *Former employer innovation score* is the innovation score of the incoming CEO's prior employer. Other variables are defined analogously. *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. Quality and respect scores are from LSEG ESG ratings. *Discretionary accrual* is the discretionary accrual variable following the modified-Jones model, multiplied 100. *Teampatents%* is defined as the number of patents with more than one inventor, divided by the total number of patents in a given year. CEO/Exec UAI indicates that the regressions control separately for the UAI score of the incoming CEO and the average UAI score of the other top executives at the destination firm. 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: CEO Turnover and Corporate Culture



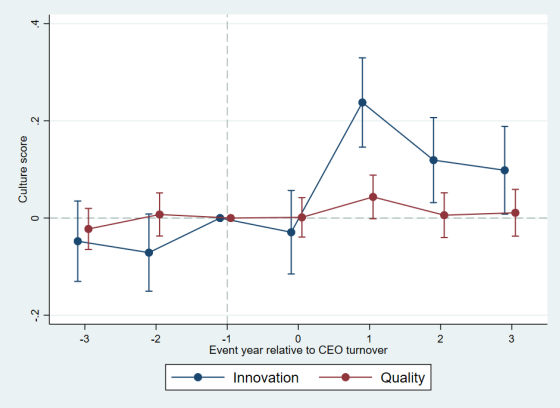
Panel A: The Window of Year (-3, +3)



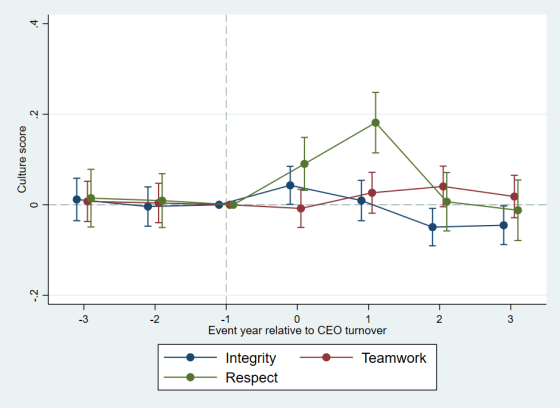
Panel B: The Window of Year (-3, +6)

This figure presents the temporal variation in corporate culture around CEO turnover. CEO turnover events are included only if there is at least one observation in the three-year periods both before and after the event. In addition, we require non-overlapping (-3, +3) event windows. For comparability, we employ the same CEO turnover sample when examining two different event windows ((-3, +3) and (-3, +6) windows). The sample comprises 2,457 CEO turnover events from 2002 to 2024, including 9 founder-to-founder events (i.e., a founder CEO is replaced by another founder), 217 founder-to-non-founder events (i.e., a founder CEO is replaced by a non-founder), 46 non-founder-to-founder events (i.e., a non-founder CEO is replaced by a founder), and 2,185 non-founder-to-non-founder events (i.e., a non-founder CEO is replaced by another non-founder). Panel A presents results examining the temporal variation in corporate culture in the (-3, +3) year window. Panel B presents results examining the temporal variation in corporate culture in the year (-3, +6) window. The extended window in Panel B is unbalanced because observations beyond year +3 are not required for sample inclusion. The solid line represents the parameter estimates. The bars represent 95% confidence intervals.

Figure A.2: CEO Turnover and Corporate Cultural Values



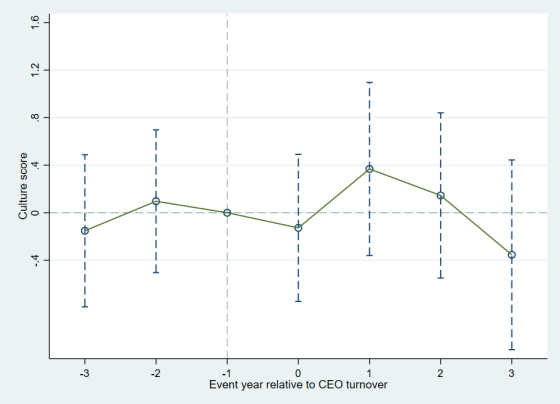
Panel A: Operations-oriented Cultural Values



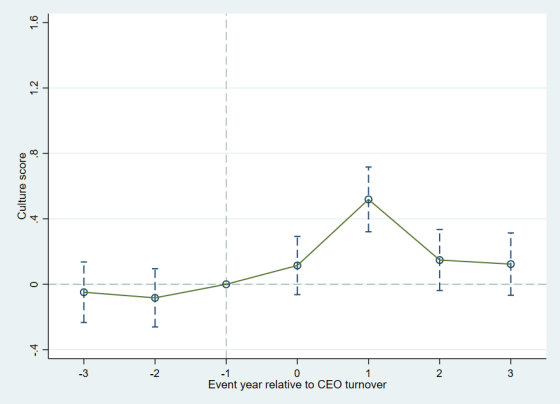
Panel B: People-oriented Cultural Values

This figure presents the temporal variation in different cultural values around CEO turnover. CEO turnover events are included only if there is at least one observation both before and after the turnover. In addition, we require non-overlapping (-3, +3) event windows. The sample comprises 2,457 CEO turnover events from 2002 to 2024, including 9 founder-to-founder events (i.e., a founder CEO is replaced by another founder), 217 founder-to-non-founder events (i.e., a founder CEO is replaced by a non-founder), 46 non-founder-to-founder events (i.e., a non-founder CEO is replaced by a founder), and 2,185 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 (-3, +3) year 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 results using operations-oriented cultural values including innovation and quality. Panel B presents results using people-oriented cultural values including integrity, respect, and teamwork. The solid line represents the parameter estimates. The bars represent 95% confidence intervals.

Figure A.3: Founder CEO vs. Non-founder CEO Turnover and Corporate Culture



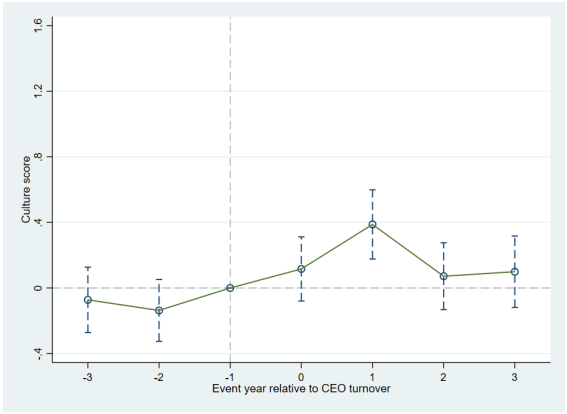
Panel A: Founder CEO Turnover



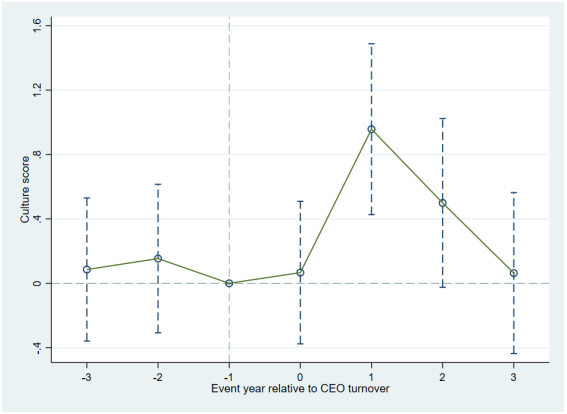
Panel B: Non-founder CEO Turnover

This figure compares the temporal variation in corporate culture around founder CEO vs. non-founder CEO turnover. We plot corporate culture in the (-3, +3) year 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. Starting from the full sample of 2,457 CEO turnover events from 2002 to 2024, we exclude 9 founder-to-founder transitions and 46 non-founder-to-founder transitions. The final sample comprises 2,402 CEO turnover events. Panel A presents results using the founder CEO turnover sample, comprising 217 founder-to-non-founder events (i.e., a founder CEO is replaced by a non-founder). Panel B presents results using the non-founder CEO turnover sample, comprising 2,185 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.4: Exogenous vs. Endogenous CEO Turnover and Corporate Culture



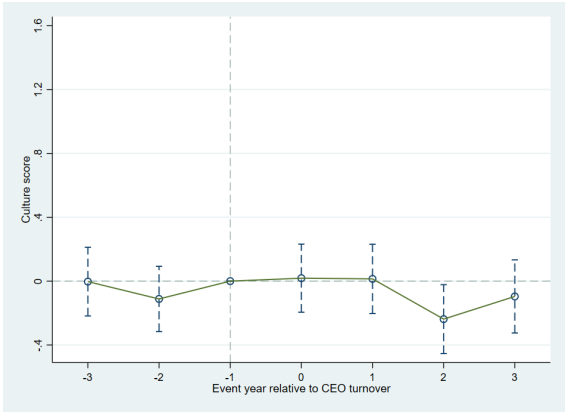
Panel A: Exogenous CEO Turnover



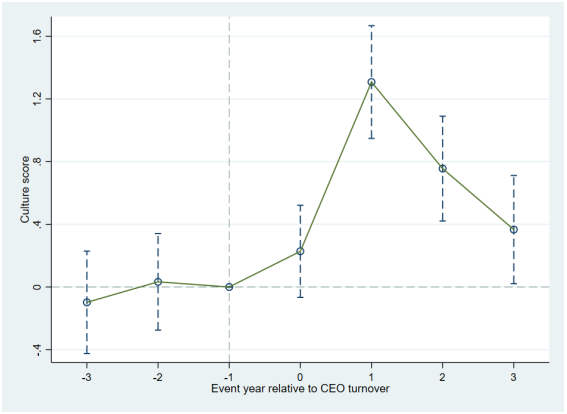
Panel B: Endogenous CEO Turnover

This figure compares the temporal variation in corporate culture around exogenous vs. endogenous CEO turnover events. We obtain reasons behind a CEO turnover from Gentry et al. (2021). Starting with the full sample of 2,457 CEO turnover events from 2002 to 2024, we first exclude 210 events for which the reason for turnover is missing. Following Fee et al. (2013) and Dittmar and Duchin (2016), we then classify the remainder into exogenous turnover events related to death (27 events), health problems (43 events), or retirement (1,672 events) and endogenous turnover events related to poor performance (505 events). We plot corporate culture in the (-3, +3) year 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 results using the exogenous CEO turnover sample, comprising 1,742 events. Panel B presents results using the endogenous CEO turnover sample, comprising 505 events. The solid line represents the parameter estimates. The bars represent 95% confidence intervals.

Figure A.5: Internal vs. External CEO Appointments and Corporate Culture



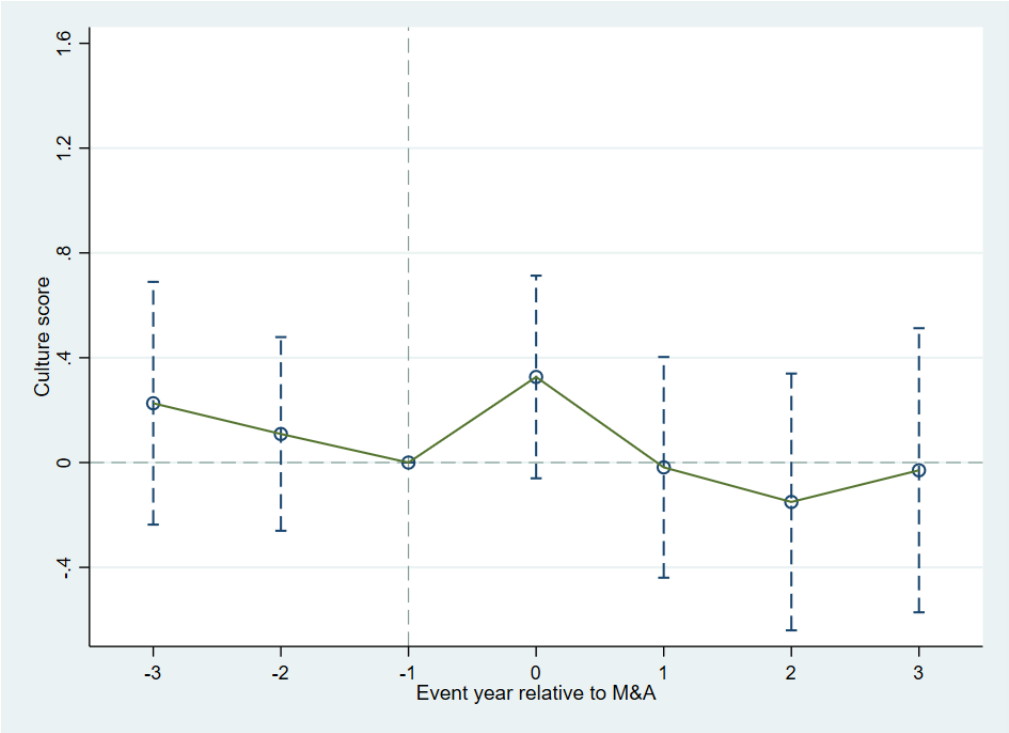
Panel A: Internal CEO Appointments



Panel B: External CEO Appointments

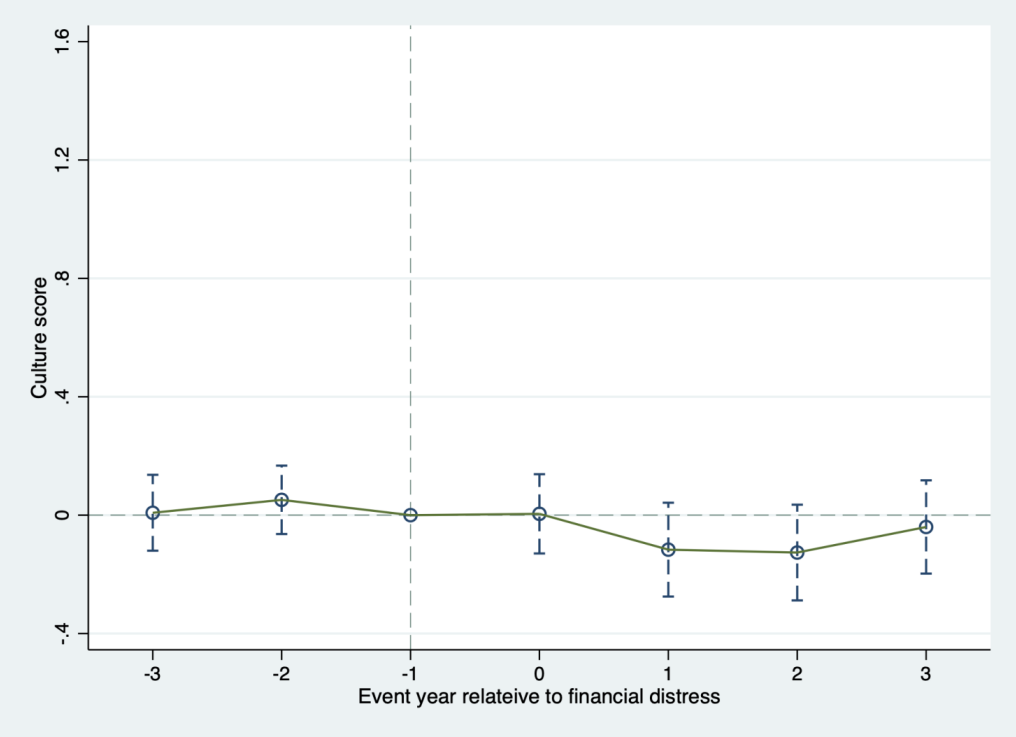
This figure compares the temporal variation in corporate culture around internal vs. external CEO appointments. The sample comprises 2,457 CEO turnover events from 2002 to 2024. Following Bai and Mkrtchyan (2023), a successor is classified as an external CEO if her total tenure at the firm (as an executive or a director) is one year or less at the time of her appointment as CEO. We plot corporate culture in the (-3, +3) year 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 results using the sample of 1,500 turnover events involving incoming internal CEOs. Panel B presents results using the sample of 957 turnover events involving incoming external CEOs. The solid line represents the parameter estimates. The bars represent 95% confidence intervals.

Figure A.6: Large M&As and Corporate Culture



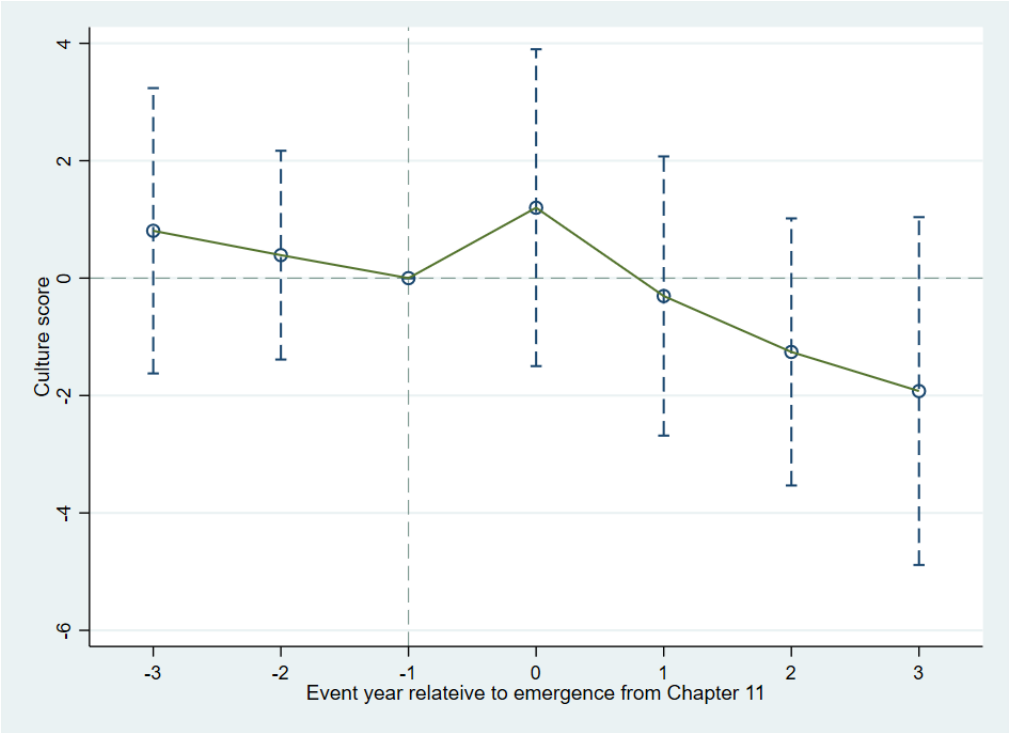
This figure presents the temporal variation in corporate culture around large M&As. We obtain completed M&A deals over the period 2002–2024 from Thomson Reuters' SDC database. The sample selection criteria are as follows: 1) the deal is classified as "Acquisition of Assets (AA)", "Acquisition of Majority 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 855 large M&A events. We plot corporate culture in the (-3, +3) year window around M&A events. Year 0 refers to the year in which an 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.7: Financial Distress and Corporate Culture



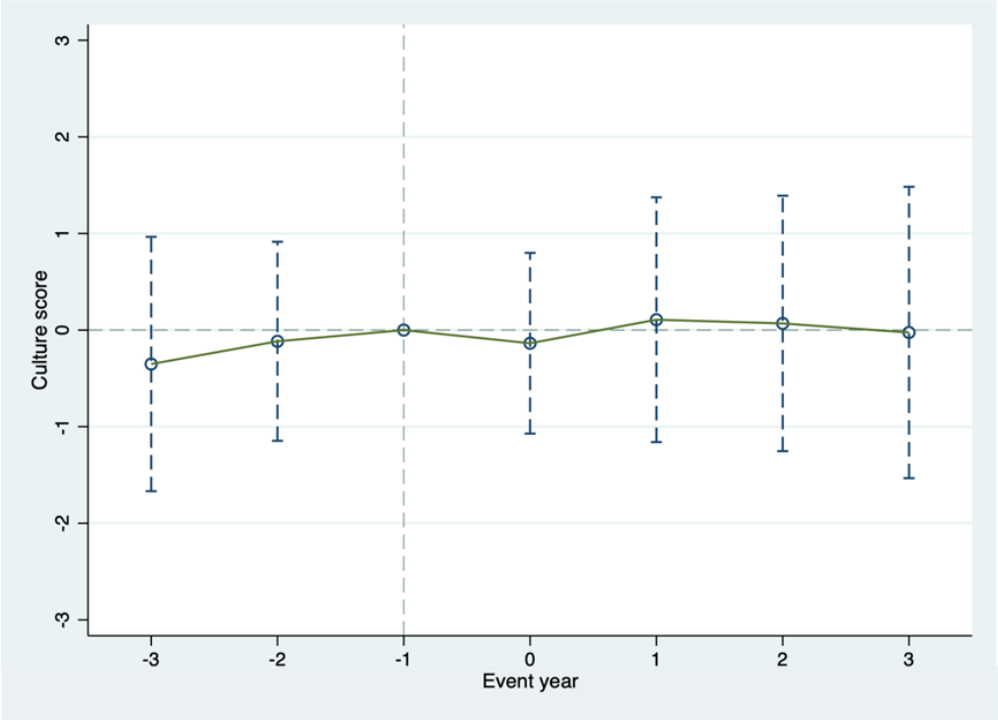
This figure presents the temporal variation in corporate culture around financial distress events. We first calculate the expected default risk (EDF) for each firm every month. If a firm's EDF exceeds the 90th percentile of its firm-month cohort, that firm-month is classified as distressed. If a firm 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 (-3, +3) year 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.8: Bankruptcy and Corporate Culture



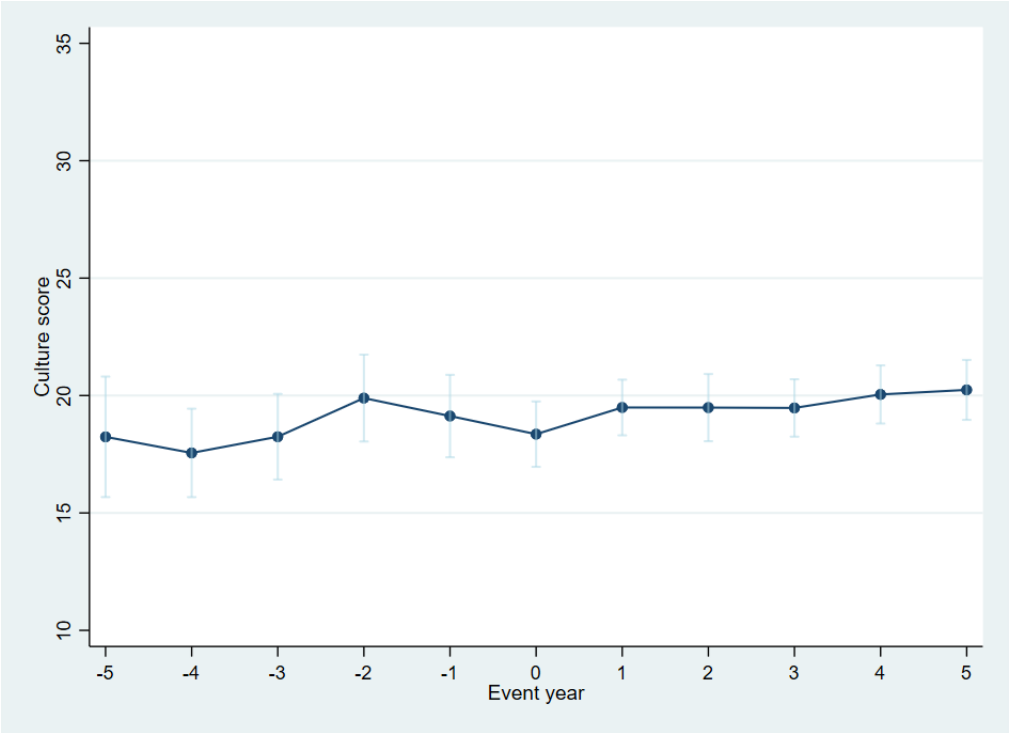
This figure presents the temporal variation in corporate culture around bankruptcy events. We obtain information on firms emerged from Chapter 11 bankruptcy from the Florida-UCLA-LoPucki Bankruptcy Research Database. The sample comprises 231 such events from 2002 to 2023. We plot corporate culture in the (-3, +3) year 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.9: Accounting Fraud and Corporate Culture



This figure presents the temporal variation in corporate culture around accounting fraud. We obtain information on accounting fraud 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 (-3, +3) year 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.10: IPOs and Corporate Culture



This figure presents the evolution of corporate culture around IPOs using Glassdoor culture scores. We require that there is at least one culture observation in both the pre- and post-IPO periods. The sample comprises 265 IPO events among S&P 1500 firms from 2009 to 2024. 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	First non-missing culture score during the first three years following a firm's IPO.	Li et al. (2021b)
Culture first obs	First non-missing culture score for a firm.	Li et al. (2021b)
Former employer cultural value score	Cultural value score of the incomingCEO's prior employer.	Li et al. (2021b)
Glassdoor CC	Glassdoor culture score for a firm in a given year.	Glassdoor
Glassdoor CC IPO	Glassdoor culture score of a firm in the year of its initial public offering.	Glassdoor
Glassdoor CC avg IPO3y	Average Glassdoor culture score over the first three years following a firm's initial public offering.	Glassdoor
Glassdoor CC first IPO3y	First non-missing Glassdoor culture score during the first three years following a firm's initial public offering.	Glassdoor
Glassdoor CC first obs	First non-missing Glassdoor culture score for a firm.	Glassdoor
Innovation	Innovation culture score of a firm in a year.	Li et al. (2021b)
Innovation first obs	First non-missing culture score of innovation for a firm.	Li et al. (2021b)
Integrity	Integrity culture score of a firm in a year.	Li et al. (2021b)
Integrity first obs	First non-missing culture score of integrity for a firm.	Li et al. (2021b)
Operations-oriented culture	The sum of a firm's innovation and quality scores in a year.	Li et al. (2021b)
Operations-oriented first obs	First non-missing subscore of innovation and quality for a firm.	Li et al. (2021b)
People-oriented culture	The sum of a firm's integrity, teamwork, and respect scores in a year.	Li et al. (2021b)
People-oriented first obs	First non-missing subscore of integrity, teamwork, and respect for a firm.	Li et al. (2021b)
Quality	Quality culture score of a firm in a year.	Li et al. (2021b)
Quality first obs	First non-missing culture score of quality for a firm.	Li et al. (2021b)
Respect	Respect culture score of a firm in a year.	Li et al. (2021b)
Respect first obs	First non-missing culture score of respect for a firm.	Li et al. (2021b)
Teamwork	Teamwork culture score of a firm in a year.	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 TFE	The number of decades between 1790 and 1890 during which a founder's birth county was within 100 kilometers of the frontier line and had a population density below six 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 rank of the incoming CEO's UAI score and that of the departing CEO's UAI score.	ExecuComp/Hofstede cultural values
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

Table A.1 – Continued

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 CEO UAI score 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
Departing CEO UAI	The UAI score of the departing CEO around a CEO turnover event.	Hofstede cultural values
CEO departure 1yr (2yr)	An indicator variable that takes a value of one if a CEO departs within one year (two years) of 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 the incoming CEO around a CEO turnover event.	Hofstede cultural values
Firm characteristics		
Discretionary accrual	The discretionary accrual variable following the modified-Jones model, multiplied 100.	Compustat
Firm size	Natural logarithm of a firm's book value of total assets.	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
Quality score	ESG Product Responsibility Score.	LSEG 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
Respect score	ESG Diversity Score	LSEG ESG ratings
Sales growth	Annual growth rate of sales revenue.	Compustat
Tangibility	Property, plant, and equipment divided by book assets.	Compustat
Team patents%	The number of patents with more than one inventor, divided by the total number of patents in a given year.	USPTO
Total assets	Book value of a firm's total 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 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	0.262***	0.222***	0.184***						
	(0.058)	(0.057)	(0.059)						
Glassdoor CC IPO × Ln(Firm age)	-0.081**	-0.073**	-0.071**						
	(0.033)	(0.032)	(0.033)						
Glassdoor CC first IPO3y				0.303***	0.261***	0.233***			
				(0.064)	(0.063)	(0.063)			
Glassdoor CC first IPO3y × Ln(Firm age)				-0.107***	-0.109***	-0.100***			
				(0.032)	(0.031)	(0.030)			
Glassdoor CC avg IPO3y							0.495***	0.407***	0.345***
							(0.081)	(0.084)	(0.084)
Glassdoor CC avg IPO3y × Ln(Firm age)							-0.170***	-0.160***	-0.139***
							(0.039)	(0.038)	(0.038)
Ln(Firm age)	0.579	0.580	0.293	0.673	1.149	0.708	2.121**	2.248***	1.562*
	(0.724)	(0.712)	(0.824)	(0.762)	(0.738)	(0.804)	(0.884)	(0.865)	(0.937)
Firm size			-0.088			-0.057			-0.055
			(0.178)			(0.167)			(0.167)
Sales growth			0.563			-0.228			-0.275
			(0.500)			(0.434)			(0.439)
Leverage			-1.322			-2.339**			-2.221**
			(1.175)			(1.099)			(1.079)
M/B			0.671***			0.617***			0.576***
			(0.104)			(0.104)			(0.104)
ROA			-7.810***			-5.011***			-4.680***
			(1.953)			(1.623)			(1.616)
Tangibility			-3.950**			-6.583***			-6.200***
			(1.593)			(1.578)			(1.564)
Institutional ownership			1.647*			1.745*			1.436
			(0.969)			(0.987)			(0.989)
Num M&As			0.010			-0.261			-0.272
			(0.223)			(0.173)			(0.171)
Num SEOs			-0.066			0.057			0.065
			(0.135)			(0.137)			(0.136)
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	849	849	848	1,135	1,135	1,135	1,135	1,135	1,135
Obs.	3,806	3,806	3,805	4,995	4,995	4,995	4,995	4,995	4,995
Adj. R^2	0.038	0.104	0.146	0.033	0.097	0.128	0.057	0.107	0.133

This table examines the relation between a firm's initial culture and its subsequent culture using Glassdoor culture scores. The sample comprises 4,995 firm-year observations for 1,135 firms with non-missing Glassdoor culture scores in the CRSP-Compustat database from 2008 to 2025. *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.3: The Determinants of A Firm's Initial Culture: Founders vs. Insiders

	Culture first obs (1)	Culture first obs (2)	Culture first obs (3)	Culture first obs (4)	Culture first obs (5)
Founder UAI	0.107***	0.093***	0.100***	0.088***	0.087***
	(0.013)	(0.012)	(0.014)	(0.013)	(0.013)
CEO UAI culture first obs	-0.052***	-0.050***	-0.050**	-0.047**	-0.048**
	(0.015)	(0.014)	(0.016)	(0.015)	(0.015)
Exec UAI culture first obs	0.032*	0.029**	0.032**	0.028**	0.026*
	(0.014)	(0.012)	(0.013)	(0.011)	(0.013)
Board UAI culture first obs	0.096***	0.092***	0.092***	0.089***	0.094***
	(0.025)	(0.021)	(0.021)	(0.018)	(0.024)
Founder birthplace racial diversity	0.082***	0.074***	0.084***	0.075***	0.073***
	(0.012)	(0.012)	(0.011)	(0.011)	(0.009)
Founder birthplace TFE	0.030*	0.030**	0.029**	0.029**	0.026***
	(0.013)	(0.011)	(0.013)	(0.011)	(0.007)
Founder work recession	-0.230***	-0.187***	-0.232***	-0.189***	-0.187***
	(0.024)	(0.027)	(0.018)	(0.020)	(0.021)
Firm controls	Yes	Yes	Yes	Yes	Yes
FE	No FE	FF5 Ind	Founding cohort	Founding cohort + FF5 Ind	Founding cohort x FF5 Ind
No. of firms	606	606	606	606	606
Obs.	760	760	760	760	760
Adj. R^2	0.147	0.194	0.143	0.190	0.183

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.4: The Determinants of A Firm's Initial Culture: Founding Location

Panel A: Excluding Firms Founded in California

	Culture first obs (1)	Culture first obs (2)	Culture first obs (3)	Culture first obs (4)	Culture first obs (5)
Founder UAI	0.098***	0.079***	0.096***	0.078***	0.080***
	(0.013)	(0.013)	(0.013)	(0.014)	(0.013)
Founder birthplace racial diversity	0.060***	0.052***	0.062***	0.051***	0.052***
	(0.013)	(0.010)	(0.012)	(0.011)	(0.008)
Founder birthplace TFE	-0.013	-0.008	-0.015	-0.009	-0.010
	(0.011)	(0.012)	(0.012)	(0.013)	(0.013)
Founder work recession	-0.164***	-0.132***	-0.154***	-0.124***	-0.128***
	(0.018)	(0.020)	(0.014)	(0.014)	(0.013)
Firm controls	Yes	Yes	Yes	Yes	Yes
Fixed effects	No FE	Ind FF5	Founding corhort FE	Ind FF5 + Founding corhort FE	Founding cohort x Ind FF5 FE
No. of firms	728	728	728	728	728
Obs.	895	895	895	895	895
Adj. R2	0.113	0.158	0.110	0.154	0.143
Panel B: Add Founding Place Racial Diversity					
	Culture first obs (1)	Culture first obs (2)	Culture first obs (3)	Culture first obs (4)	Culture first obs (5)
Founder UAI	0.063***	0.059***	0.056***	0.054***	0.050***
	(0.014)	(0.011)	(0.014)	(0.012)	(0.015)
Founder birthplace racial diversity	0.038**	0.059***	0.038**	0.054***	0.060***
	(0.015)	(0.015)	(0.014)	(0.015)	(0.012)
Founder birthplace TFE	0.003	-0.000	0.006	0.002	-0.005
	(0.020)	(0.019)	(0.019)	(0.018)	(0.020)
Founder work recession	-0.221***	-0.179***	-0.207***	-0.168***	-0.154***
	(0.040)	(0.040)	(0.038)	(0.033)	(0.043)
Founding place racial diversity	0.039*	0.031*	0.033	0.027	0.032**
	(0.017)	(0.016)	(0.019)	(0.017)	(0.012)
Firm controls	Yes	Yes	Yes	Yes	Yes
Fixed effects	No FE	Ind FF5	Founding corhort FE	Ind FF5 + Founding corhort FE	Founding cohort x Ind FF5 FE
No. of firms	486	486	486	486	486
Obs.	577	577	577	577	577
Adj. R2	0.126	0.159	0.127	0.157	0.142

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. Panel A presents results using a sample that excludes firms for which we have founding-location data and that were founded in California. Panel B presents results for the subset of firms with founding-location data, where we directly control for the racial diversity of the firm's founding location. Industry fixed effects are based on the Fama–French 5-industry classification given the relatively small sample size. Variable definitions are provided in Appendix Table A.1. To ease interpretation, all continuous variables in this table have been standardized. The standard errors are clustered at the founding cohort level. ***, **, * denote significance at the 1%, 5%, and 10% levels, respectively.

Table A.5: Departure of Potentially Mismatched CEOs: Endogenous Turnover Events

	CEO departure in 1yr	CEO departure in 1yr	CEO departure in 2yr	CEO departure in 2yr
	(1)	(2)	(3)	(4)
Abs diff in UAI quartile	-0.014	-0.012	-0.024	-0.032
	(0.016)	(0.018)	(0.022)	(0.025)
Culture	-0.001	0.002	-0.002	0.001
	(0.004)	(0.004)	(0.005)	(0.006)
Firm size		0.014		0.076
		(0.027)		(0.050)
Ln(Firm age)		0.010		-0.002
		(0.033)		(0.047)
Sales growth		0.034		-0.065
		(0.037)		(0.058)
Leverage		-0.075		0.007
		(0.128)		(0.186)
M/B		0.030*		0.035
		(0.017)		(0.032)
ROA		0.164		0.280
		(0.172)		(0.255)
Tangibility		-0.099		0.256
		(0.169)		(0.321)
Institutional ownership		-0.169**		-0.301***
		(0.066)		(0.099)
Num M&As		0.007		0.019
		(0.020)		(0.030)
Num SEOs		0.008		-0.041**
		(0.013)		(0.019)
Fixed effects	Firm + Year	Firm + Year	Firm + Year	Firm + Year
No. of firms	355	301	355	301
Obs.	898	757	898	757
Adj. R^2	-0.083	-0.105	-0.034	-0.027

This table examines departure of potentially mismatched CEOs for endogenous turnover events. We employ a linear probability model. We exclude founder-related turnover events. The sample comprises 898 endogenous CEO turnover events, defined as turnover events other than those associated with death, health problems, or retirement. *CEO departure* $1yr(2yr)$ is an indicator variable that takes a value of one if a CEO departs within one year (two years) of appointment, and zero otherwise. *Abs diff in UAI quartile* is the absolute value of the difference between the quartile of the incoming CEO's UAI score and that of the departing CEO's UAI score. The standard errors are clustered at the firm level. Variable definitions are provided in Appendix Table A.1. ***, **, * denote significance at the 1%, 5%, and 10% levels, respectively.

Table A.6: Mapping National Cultural Values to Corporate Culture Dimensions

Corporate Cultural Value	Definition by Guiso et al. (2015)	World Values Survey Items Used to Proxy Employee National Cultural Values
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.	Q11. Child qualities: imagination. 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. Q181. Accepting a bribe.
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. Child qualities: tolerance and respect for other people. Q19. Neighbours: people of a different race. Q21. Neighbours: immigrants or foreign workers.
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.	Q9. Child qualities: hard work. Q10. Child qualities: feeling of responsibility. Q14. Child qualities: determination and perseverance.
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.	Q16. Child qualities: unselfishness. Q57. Generally speaking, would you say that most people can be trusted or that you need to be very careful in dealing with people?

This table describes the construction of our firm-employee cultural matching measure. We rely on Guiso et al. (2015) to define the conceptual content of the five cultural dimensions used in the paper: innovation, integrity, respect, quality, and teamwork. Specifically, we use the keyword lists developed by Guiso et al. (2015) to delineate the meaning of each dimension. We then provide these conceptual delineations to a large language model (LLM) and ask it to identify World Values Survey (WVS) items that correspond to each dimension. Candidate survey items are restricted to those appearing in at least four of the seven most recent WVS waves to ensure broad cross-country and intertemporal coverage. We review the LLM-identified items and, through iterative screening and discussion, determine the final set of survey items used to measure each cultural dimension. Responses are rescaled so that higher values indicate stronger endorsement of the underlying cultural trait and are aggregated at the country-year level to construct corresponding cultural value scores. Each immigrant worker is assigned the cultural values associated with their country of origin and the relevant year. Our cultural matching measure captures the similarity between the firm's corporate culture vector and the employee's country-year cultural value vector across the five dimensions. Our primary measure is cosine similarity, with higher values indicating greater firm-employee cultural alignment. As a robustness check, we also construct an alternative matching measure based on Euclidean distance.

Table A.7: Variance Decomposition: Delisted Firms and Non-S&P 1500 Firms

	Delisted Firms			Non-S&P 1500 Firms		
	Culture (1)	Culture (2)	Culture (3)	Culture (4)	Culture (5)	Culture (6)
Firm FE	0.72		0.67	0.94		0.93
CEO FE	0.25		0.29	0.05		0.06
Year FE	0.03	0.19	0.04	0.01	0.23	0.01
Industry FE		0.65			0.56	
Ln(Asset)		0.00	0.00		0.01	0.00
Ln(Firm age)		0.00	0.00		0.00	0.00
Sales growth		0.00	0.00		0.00	0.00
Leverage		0.00	0.00		0.03	0.00
M/B		0.02	0.00		0.07	0.00
ROA		0.03	0.00		0.06	0.00
Tangibility		0.06	0.00		0.02	0.00
Institutional ownership		0.00	0.00		0.01	0.00
Num M&As		0.02	0.00		0.01	0.00
Num SEOs		0.00	0.00		0.00	0.00
Adj. R^2	0.75	0.40	0.75	0.73	0.38	0.73

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. The sample of delisted firms (excluding those due to M&As) comprises 2,423 firm-year observations for 265 firms from 2002 to 2025. The sample of non-S&P 1500 firms comprises 18,263 firm-year observations for 3,354 firms from 2002 to 2025. Variable definitions are provided in Appendix Table A.1

Table A.8: The Role of A Firm's Initial Culture: Private Firms

	Glassdoor CC (1)	Glassdoor CC (2)	Glassdoor CC (3)
Glassdoor CC first obs	0.059***	0.057***	0.051***
	(0.009)	(0.009)	(0.009)
Glassdoor CC first obs× Ln(GD year gap)	-0.012**	-0.012**	-0.010**
	(0.005)	(0.005)	(0.005)
Ln(GD year gap)	0.310**	0.306**	-0.315**
	(0.123)	(0.123)	(0.145)
Industry FE	No	Yes	Yes
Year FE	No	No	Yes
No. of firms	19,929	19,929	19,929
Obs.	120,971	120,971	120,971
Adj. R^2	0.002	0.006	0.007

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 120,971 firm-year observations for 19,929 private firms with non-missing Glassdoor culture scores from 2008 to 2025. *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.

Table A.9: Stable Firm Heterogeneity versus Dynamic Persistence

	Culture		Operations-oriented culture		People-oriented culture		Innovation		Quality		Integrity		Teamwork		Respect	
	OLS	FE	OLS	FE	OLS	FE	OLS	FE	OLS	FE	OLS	FE	OLS	FE	OLS	FE
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)
L.Culture	0.821***	0.409***														
	(0.003)	(0.005)														
L.Operations			0.847***	0.441***												
			(0.003)	(0.005)												
L.People					0.786***	0.327***										
					(0.003)	(0.005)										
L.Innovation							0.854***	0.447***								
							(0.003)	(0.005)								
L.Quality									0.790***	0.335***						
									(0.003)	(0.005)						
L.Integrity											0.628***	0.257***				
											(0.004)	(0.005)				
L.Teamwork													0.728***	0.280***		
													(0.004)	(0.005)		
L.Respect															0.789***	0.307***
															(0.003)	(0.005)
Firm FE	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes
No. of firms	2,887	2,887	2,887	2,887	2,887	2,887	2,887	2,887	2,887	2,887	2,887	2,887	2,887	2,887	2,887	2,887
Obs.	35,481	35,481	35,481	35,481	35,481	35,481	35,481	35,481	35,481	35,481	35,481	35,481	35,481	35,481	35,481	35,481
Adj. R^2	0.678	0.212	0.714	0.292	0.631	0.061	0.717	0.307	0.631	0.075	0.403	-0.008	0.544	0.026	0.641	0.053

This table examines the statistical nature of the persistence in corporate culture by estimating autoregressive specifications with and without firm fixed effects. The sample comprises 35,481 firm-year observations associated with 2,887 S&P 1500 firms from 2002 to 2025. In each specification, the dependent variable is a firm's culture measure in year (t), and the key explanatory variable is the corresponding culture measure in year (t-1). Columns (1)–(2) use the overall corporate culture (CC) score as the dependent variable. Columns (3)–(6) examine the Operations- and People-oriented subscores, and columns (7)–(16) examine the five individual cultural values: innovation, quality, integrity, teamwork, and respect. For each culture measure, the first specification reports the pooled OLS estimate, while the second includes firm fixed effects. Variable definitions are provided in Appendix Table A.1. ***, **, * denote significance at the 1%, 5%, and 10% levels, respectively.

Appendix B Using An Alternative Measure of Corporate Culture

To distinguish persistence in corporate culture from persistence that may arise from the consistent format and content of earnings call transcripts, we employ an alternative measure based on Glassdoor employee reviews. As a leading platform where employees anonymously share their workplace experiences, Glassdoor provides a distinct, bottom-up perspective on organizational values. Recent research (e.g., Grennan, 2019; Li et al., 2024, 2026) shows that language in these reviews can effectively capture the shared values and norms of organizational members.

We begin with our full sample and match firms to Glassdoor. 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 from negative sentiment.[29] The final sample comprises 4,760,223 employee reviews from 2,016 S&P 1500 firms, yielding 22,633 firm-year observations from 2008 (the launch year of Glassdoor) to 2025. Appendix Table B.1 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 values of innovation, integrity, quality, respect, and teamwork. We then score each review using value-specific dictionaries and a term frequency–inverse document frequency (tf-idf) weighting scheme and average these scores at the firm-year level.

[29] Our main findings remain when restricting the sample to reviews from current employees only, or using the "cons" section only.

Table B.1: Sample Formation Using Glassdoor Employee Reviews

	# of reviews	# of firms	# of firm-year obs.
Glassdoor employee reviews	43,921,882	2,120,545	6,638,601
Match with CUSIP	12,999,010	35,552	255,287
Obtain culture scores using methodology by Li et al. (2021b)	12,597,543	33,981	227,865
Match with Compustat-CRSP merged data	7,224,234	7,056	70,242
Remove observations with missing control variables	5,450,372	4,843	37,348
S&P 1500 membership	4,760,223	2,016	22,633
Final sample		2,016	22,633

This table describes the sample formation process using Glassdoor employee reviews from 2008 to 2025 to score culture.

Appendix C Large and Persistent Changes in Corporate Culture

Our paper shows that corporate culture is highly persistent: most of its variation is absorbed by time-invariant firm heterogeneity, while relatively little is attributable to the incumbent CEO. At the same time, this aggregate evidence does not imply that culture never changes. The purpose of this appendix is therefore to identify the relatively infrequent cases in which culture shifts materially and persistently, and to characterize the types of firm-level developments associated with such episodes.

C.1 Identifying large cultural changes

To identify economically meaningful cultural changes while limiting sensitivity to measurement noise, we define cultural change using annual cross-sectional quantiles. In each year, we assign firms to 20 quantile groups based on their culture scores and track each firm's quantile position over time. We then define a cultural change episode as a multi-year transition from one stable quantile range to another, rather than as a one-year discontinuity. This construction reflects the view that cultural change is a process and provides a cleaner mapping between cultural changes and firm-level developments.

Our identification procedure imposes three restrictions. First, the firm must move by at least five quantiles over a three-year horizon, so that identified episodes reflect economically large changes in culture rather than modest fluctuations. Second, each episode must have a well-defined beginning year and ending year, which allows us to identify the transition period. Third, we require no reversion over a subsequent five-year horizon, so that the shift is persistent rather than transitory. The identification scheme allows firms to experience multiple non-overlapping episodes.

Using this approach, we identify 44 upward episodes and 33 downward episodes over the sample period. These findings help reconcile the paper's main result of culture persistence with the observation that culture does change meaningfully in some firms over time. Persistence is the dominant pattern in the data, whereas large and lasting changes in culture are relatively infrequent.

C.2 Anecdotal evidence

To provide context for large, sustained changes in culture, we examine several illustrative cases drawn from the set of identified episodes.

Microsoft provides one example of a large upward shift in culture beginning around 2010. The shift coincided with major internal reorganization and a move toward more collaborative operating norms, including the elimination of practices such as stack ranking.[30] This case is consistent with the view that changes in formal management systems can reshape a firm's cultural trajectory.

AIG provides a second example of an upward shift in culture around 2009, following the Global Financial Crisis and the onset of heightened government oversight.[31] This episode is consistent with a setting in which a regulatory and governance shock alters incentives, oversight, and compliance norms in ways associated with a durable change in culture.

Avon provides an example of a large downward shift in culture around 2007, following a deteriorating industry environment and sustained underperformance. This episode is consistent with prolonged operating stress gradually eroding corporate culture.[32]

Taken together, these cases suggest that large changes in culture can be associated with several distinct forces, including changes in internal governance and management systems, persistent shifts in the competitive environment, and regulatory intervention.

C.3 Predicting large cultural changes with LASSO probit

We next complement the anecdotal evidence with a predictive analysis. Specifically, we examine which observable firm events and characteristics are most strongly associated with firm-years that fall within large, persistent cultural-change episodes. The dependent variable is an indicator that takes a value of one if a firm-year falls within an identified change episode, that is, if the year lies between the beginning and ending

[30] https://www.rickyspears.com/technology/microsofts-stack-ranking-how-a-ruthless-employee-system-destroyed-collaboration/

[31] https://www.investopedia.com/why-aig-poster-child-of-2008-crash-is-now-a-wall-street-darling-4588834

[32] https://fortune.com/2015/12/17/avon-us-decline/

years of the transition, and zero otherwise. This specification is appropriate because it captures the period during which the firm is undergoing a sustained cultural change, rather than focusing solely on the initial year of the shift.

The LASSO probit is well suited to this setting because the number of potential predictors is large relative to the number of identified episodes. The method estimates a penalized model that shrinks small coefficients toward zero and sets some exactly to zero, thereby limiting overfitting and yielding a parsimonious specification. We select the penalty parameter using cross-validation, so model selection is driven by out-of-sample predictive performance rather than in-sample fit alone.

The candidate predictors include indicators for major corporate events observed in the firm-year panel, including CEO turnovers, founder turnovers, M&As, SEOs, fraud, and bankruptcy, as well as standard firm characteristics and interactions between events and firm attributes. The full specification comprises 78 candidate covariates, including lags, changes, and interaction terms. We estimate separate models for upward and downward episodes to allow the correlates of positive and negative culture shifts to differ.

Table C.1 reports the results. Columns (1) and (2) present the variables selected by cross-validated LASSO probit models for permanent upward and downward culture changes, respectively, while columns (3) and (4) report estimates from logit models using the selected predictors. Two findings stand out. First, the predictive power of observable firm characteristics and events is limited. Although some selected variables are statistically significant in the post-LASSO models, the improvement in out-of-sample fit relative to an intercept-only benchmark is weak. Likewise, the corresponding logit models exhibit low pseudo R^2s values of 4.9% and 2.3% for upward and downward cultural shifts, respectively. These findings suggest that permanent changes in corporate culture are difficult to predict ex ante, reinforcing the broader conclusion of the paper that corporate culture is highly persistent and that substantial cultural transformations occur only infrequently.

Second, although CEO turnover appears in some selected specifications, it does not emerge as a strong stand-alone correlate of persistent cultural change. Instead, it appears alongside interaction terms and other firm-level attributes, suggesting that any association between leadership change and culture depends on broader organizational circumstances. More generally, the selected predictors point to combinations of factors rather than to any single dominant factor.

We conclude that large, persistent changes in corporate culture do occur, but they are relatively rare. As suggested by the anecdotal evidence, when persistent changes occur, they might be associated with a range of forces, including changes in internal governance and management systems, sustained shifts in the firm's operating environment, and regulatory intervention. Understanding the underlying sources of these cultural changes is an important avenue for future research.

Table C.1: LASSO Probit and Logit Regressions of Cultural Change

	LASSO Probit		Post-LASSO Logit	
	Culture_up	Culture_down	Culture_up	Culture_down
	(1)	(2)	(3)	(4)
L3.Firm size	0.091	-0.034	0.326***	-0.178
			(0.044)	(0.282)
L2.ROA	0.213		1.879	
			(1.704)	
L3.ROA	0.410		3.705**	
			(1.662)	
L1.M2B	-0.010		-0.109	
			(0.195)	
L2.M2B	-0.020		-0.141	
			(0.252)	
L3.M2B	-0.020		-0.245	
			(0.195)	
L1.CEO × L1.ROA	0.556		2.368	
			(1.743)	
L1.CEO × L1.Leverage	0.060		0.283	
			(0.799)	
L1.MA × L1.ROA	0.731		2.229	
			(1.874)	
L1.MA × L1.Leverage	0.249		1.006	
			(0.838)	
L3.MA		0.009		0.442*
				(0.260)
L3.SEO		-0.089		-1.285*
				(0.720)
L1.Firm size		-0.010		-0.027
				(0.286)
L1.ROA		0.019		1.253
				(0.909)
L1.Institutional ownership		0.000		0.684
				(0.458)
L3.Sales growth		-0.059		-0.909**
				(0.427)
L1.SEO × L1.ROA		-0.127		-3.030*
				(1.759)
L1.fraud × L1.Institutional ownership		0.540		1.894**
				(0.761)
Constant	-3.227	-2.373	-7.652***	-4.913***
			(0.439)	(0.521)
Obs.	31,896	31,896	33,192	34,210
Out-of-sample dev. ratio	0.028	0.004		
Pseudo R^2			0.049	0.023

This table examines predictors of large, persistent changes in corporate culture using LASSO probit and standard logit models. Following the procedure described in Appendix C, a cultural change episode is defined as a multi-year transition of at least five quantiles over a three-year horizon without subsequent reversion in the next five years. The dependent variable *Culture_up* (*Culture_down*) is an indicator variable that takes a value of one if a firm-year is classified as part of an upward (downward) episode, and zero otherwise. The sample consists of firm-year observations with non-missing corporate culture scores from 2002 to 2025. Candidate predictors include indicators and their lags (L1–L3) for (non-founder) CEO turnovers, founder-involved CEO turnovers, M&As, SEOs, bankruptcy, and fraud, as well as firm characteristics (size, ROA, market-to-book, leverage, sales growth, institutional ownership) and associated interactions. The LASSO probit selects variables using a cross-validated penalty. Columns (1)–(2) report LASSO coefficients, while columns (3)–(4) present post-LASSO logit estimates based on the selected variables. The out-of-sample deviance ratio measures the proportional reduction in prediction deviance relative to an intercept-only benchmark. ***, **, and * indicate statistical significance at the 1%, 5%, and 10% levels, respectively.