

A wise captain steers a strong ship: The role of managerial ability in shaping corporate culture

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Abstract

We examine the role of managerial ability in shaping corporate culture, emphasizing how leadership skills influence organizational norms and values. While prior research often treats these constructs separately, we bridge this gap by analyzing how skilled managers cultivate cultural frameworks that foster innovation, collaboration, and resilience. Using a robust empirical approach, we find that high-ability managers embed core values that align with long-term strategic goals, reinforcing corporate identity. Our findings contribute to corporate governance literature by highlighting the managerial role in cultural formation. This research has implications for stakeholders assessing leadership effectiveness beyond financial performance.

Keywords: Managerial Ability; Corporate Culture; Leadership Effectiveness; Corporate Governance

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1. Introduction

Does managerial ability impact corporate culture? This question lies at the heart of contemporary discussions on corporate strategy and organizational success. In an era where firms navigate the challenges of globalization, rapid technological advancements, and evolving stakeholder expectations (Gao and Chou, 2015), the role of managers extends beyond traditional decision-making to shaping the very essence of an organization's identity. As firms strive to maintain a competitive edge, managerial ability emerges as a fundamental force in influencing corporate culture, which in turn affects strategic direction, employee engagement, and long-term sustainability. Understanding the mechanisms through which managerial ability shapes corporate culture is therefore critical for both academics and practitioners.

Managers develop their abilities through accumulated experience, continuous learning, and exposure to strategic decision-making (Shang, 2021). These abilities are not confined to technical expertise but extend to leadership, resource allocation, and the cultivation of a corporate environment conducive to growth and innovation. As managers advance in their careers, they acquire and refine the skills necessary to enhance firm strategy, drive operational efficiency, and respond effectively to external uncertainties (Wang et al., 2021; Doukas and Zhang, 2021). These managerial competencies do not operate in isolation; rather, they permeate the corporate culture, embedding values, and behavioral norms that define how an organization functions.

Managerial ability is conceptualized as the combination of knowledge, experience, and strategic acumen required to lead an organization effectively (Carrillo and Gaimon, 2004). This encompasses two key dimensions: domain expertise and resource expertise (Helfat and Peteraf, 2015). Domain expertise refers to an in-depth understanding of industry trends, market dynamics, and internal processes, which enables managers to make informed strategic decisions. Resource expertise, on the other hand, involves the ability to allocate financial, human, and operational resources efficiently to sustain competitive advantage. Managers with high ability exhibit a deep understanding of business complexities, proactively addressing risks while identifying opportunities for innovation and growth (Shang, 2021). These managers do not merely react to external pressures; they actively shape the firm's internal environment by fostering collaboration, adaptability, and accountability.

Corporate culture, as the foundation of an organization's identity, is a set of shared values, norms, and behaviors that guide interactions among employees and management (Denison, 1996). Bénabou and Tirole (2002, 2011) emphasize the implicit and explicit agreements that shape intra-organizational relationships, reinforcing the strategic importance of culture.

Historical accounts illustrate how corporate culture influences firm success. For example, former Goldman Sachs executive Greg Smith attributed the firm's past achievements to a culture of teamwork, integrity, and humility (Smith, 2013). However, he linked the firm's cultural decline to structural changes, underscoring how leadership and managerial decisions directly influence cultural evolution.

Corporate culture affects not only internal operations but also external stakeholder perceptions, contributing to reputation and competitive advantage (Karolyi, 2016; Fang et al., 2023). A strong and adaptable culture fosters employee engagement, innovation, and resilience, positioning firms to navigate market challenges effectively (Graham et al., 2022; Li et al., 2021). Despite its intangible nature, corporate culture remains a decisive factor in organizational performance, particularly in the face of evolving industry demands. The question, then, is how managerial ability influences and sustains a corporate culture that aligns with long-term strategic objectives.

Managers with high ability actively shape corporate culture through decision-making, communication, and leadership styles (Demerjian et al., 2012). These individuals embed core principles—such as innovation, accountability, and collaboration—into organizational practices, fostering an environment conducive to strategic alignment (Graham et al., 2012). Through direct interactions with employees, policy implementation, and vision-setting, high-ability managers instill a sense of purpose and cohesion within the organization (John et al., 2017). This alignment strengthens corporate identity, creating a work environment where employees feel supported and motivated to contribute to the firm's success (Guest, 2017).

Moreover, in times of organizational transition or external shocks—such as financial crises or mergers and acquisitions—managers with high ability play a critical role in preserving cultural integrity. By fostering transparency, collaboration, and resilience, these managers mitigate uncertainty and maintain employee engagement, ensuring that corporate culture remains a stabilizing force during periods of change. The ability to adapt and reinforce cultural values in dynamic environments is a hallmark of effective leadership, further highlighting the impact of managerial ability on firm success.

A key framework for analyzing this relationship is the Upper Echelon Theory (Hambrick & Mason, 1984). This theory suggests that firms reflect the traits, characteristics and perspectives of their top executives. The personal experience, values, backgrounds of top executives, shape their strategic decisions and actions, and ultimately the culture within their firm (Neely et al., 2020). As the architects of firm's vision, top executives are instrumental in shaping the vision by determining how fundamental values such as innovation, creativity, transparency, open

communication and collaboration among others, are embedded into the fundamental structure and operations (Luciano et al., 2020). Their decisions and actions serve as a robust framework promotes the adoption of these values across all tiers and ensuring their reflection in daily operations and culture (Jeong and Harrison, 2017). From another theoretical standpoint, the Resource-Based View (RBV) (Barney, 1991) provides a valuable framework for conceptualizing managerial ability as a unique and valuable resource. Their scarcity, inimitability, non-substitutability, and strategic value provide a sustained competitive advantage, and drive firm performance (Eggers and Kaplan, 2013). Within this theoretical perspective, managerial ability is considered as a strategic resource that can directly shape and drive culture (Cao et al., 2017). Through their skills to identify market trends, cultivate talents and influencing firm values, managers with high ability play a crucial role in fostering an environment that supports firm's identity, reinforce resilience, and shaping a distinctive and robust corporate culture, allowing firms to adjust effectively to shifting market conditions and internal challenges (Guan et al., 2018). Further, the competing values framework (CVF) (Quinn and Rohrbaugh, 1983) provides a robust theoretical lens to understand the impact of managerial ability on firm's culture. The CVF suggests that managerial styles define and influence cultural orientation and strategic direction (Wang et al., 2021). Precisely, the framework emphasizes how different managerial styles and behaviors influence distinct cultural dimensions such as flexibility, innovation, control, and stability (Roy et al., 2024). For instance, managers who prioritize adaptability and creativity tend to promote a culture of innovation, whereas those who emphasize structure and consistency foster a culture focused on control and stability. By fostering a culture that aligns with these values, managers with high ability could enhance firm's internal structure and its ability to adjust to external pressures, thereby driving its long-term growth and success. Moreover, the CVF highlights that managers with high competencies are able to foster a culture that aligns with strategic needs, ensuring that cultural practices reinforce long-term goals such as operational efficiency, expansion, and sustained competitiveness (Andreou et al., 2022). Taken together, these theoretical frameworks provide a solid foundation for exploring the impact of managerial ability in influencing corporate culture.

Despite the theoretical significance of both managerial ability and corporate culture, existing research often examines these constructs in isolation (Baik et al., 2020; Datta et al., 2024; Demerjian et al., 2013; Holcomb et al., 2009; Wang et al., 2021; Schoar et al., 2024). The relationship between managerial ability and corporate culture remains an underexplored domain, with limited empirical studies investigating how managerial competencies actively

shape organizational identity. This study aims to bridge this gap by examining the impact of managerial ability on corporate culture within US firms, contributing to the growing discourse on the strategic implications of leadership in contemporary business environments. This study contributes to existing literature in different manners. Firstly, this study contributes to the existing literature in managerial ability by extending its focus beyond conventional financial and operational aspects to explore firm's cultural and behavioral dimensions. Specifically, while existing studies in the literature extensively exploring the impact of managerial ability on risk management (Bonsall IV et al., 2017; Pham et al., (2023) ; Cornaggia et al., 2017), innovation (Yuan and Wen, 2018; Zahra and Filatotchev, 2004; Roberts et al., 2016; Lichtenthaler and Lichtenthaler, 2009), and firm performance (Tasheva and Nielsen, 2022; Holcomb et al., 2009; Peeters et al., 2020), the current work sheds light on exploring the role of managerial ability in shaping corporate culture, emphasizing how managerial skills and competencies can promote a cohesive and adaptive organizational environment. This broader perspective enhances our understanding of managerial ability, emphasizing its role not only in achieving operational success but also in cultivating a positive and resilient corporate culture. Secondly, this work contributes to the field of organizational research by highlighting the importance of managerial ability in influencing and driving a firm's culture and direction. Specifically, as firms navigate in an environment marked by swift technological advancements, evolving market conditions, and shifting employee expectations, exploring the relationship between managerial ability and corporate culture has emerged as a critical area of study within contemporary organizational research. Precisely, this work provides fresh insights by demonstrating how firms can strategically employ managerial expertise, skills, and talent to effectively promote innovation, manage change, and maintain a competitive advantage through the cultivation of cohesive and well-defined firm culture. This work emphasizes the role of managerial competencies in shaping cultural dynamics, providing actionable insights that allow firms to synchronize their internal cultural frameworks with external challenges and opportunities effectively. This contributes to the broader academic and practical discourse of how managers with high competencies, strategic acumen, and culture interact, shedding light on their synergistic role in driving sustained organizational success. Thirdly, from a practical standpoint, this study provides valuable insights for firms seeking to cultivate a strong and cohesive corporate culture. By emphasizing the pivotal role of managerial abilities, this study highlights the need for firms to enhance managerial skills by implementing skill-building programs and establishing a performance evaluation system that ensures alignment with firm's culture. In addition, findings provide valuable insights for top executive managers, highlighting

the role of clear communication, self-awareness, and flexible decision making in establishing a positive and resilient culture.

This study employs a quantitative approach to explore the impact of managerial ability on corporate culture within US firms. By analyzing a large dataset, containing 52,214 firm-year observations over the period spanning from 2002 to 2021 the study uncovers compelling evidence that managerial ability positively influences corporate cultures. This is mostly due to the ability of competent managers to establish and reinforce core values like integrity, teamwork, and innovation. Further findings show that the effect of managerial ability on corporate culture varies across industries. Interestingly, findings demonstrate that the relationship between managerial ability and corporate culture intensify especially in industries characterized by high operational complexity and regulatory scrutiny, (e.g., Energy, Materials, Industrials, and Utilities), where strategic decision-making and stakeholder engagement are crucial. Nevertheless, we report weak or even negative relationships in sectors characterized by standardized operations and regulatory compliance (e.g., Consumer Staples and Health Care). Another interesting finding shows that strong governance structures foster the role of managerial ability in influencing corporate culture. Such evidence highlights the role of corporate governance mechanism in sustaining and institutionalizing cultural values. Moreover, findings show that while managerial competencies reinforce collaboration, encourage creativity, and promote a respectful work environment; their influence on integrity and quality is limited.

The rest of the paper is structured as follows: Section 2 presents the existing literature on the topic while highlighting the theoretical framework of the study. Section 3 presents the methodology and data, while Section 4 reports and discusses the main empirical findings. Finally, Section 5 concludes and presents the implications of our results.

2. Literature review and hypotheses development

This section provides the theoretical foundation and frameworks to understand (i) the impact of managerial ability on firm's culture. In the current work, we relied on the Upper Echelon Theory (UET), the Competing Values Framework (CVF), the Resource-Based View (RBV) to understand the intricate relationship between managerial ability and corporate culture.

2.1. Theoretical framework

2.1.1. The Upper Echelon theory

The Upper Echelon theory (UET) introduced by Hambrick & Mason (1984) suggests that managerial competencies such as personal skills, experiences, values, education, and cognitive

bases significantly influence firm's direction and strategic decisions. Managers personal attributes shape their understanding, perception and reaction to intricate strategic issues, promptly affecting firm's decision-making process and outcomes such as performance, policies, and business practices (Hodgkinson et al., 2023; Papadakis et al., 1998). The Upper Echelon theory suggests also that managers with higher cognitive ability, experience, and leadership skills play a crucial role in shaping and influencing firm's culture (Neely et al, 2020). These competencies are essential in establishing the norms, values, behaviors, and the environment that define firm's culture and function (Li et al., 2021). Precisely, through their behaviors, actions, communications, choices and decision-making approaches, managers with high ability could define firm's priorities and establish a framework for employee interactions and performance. Thus, managers with high competencies are not just decision-makers but also active influencers of the cultural framework that guide firm's behavior towards innovation, transparency, accountability, and fosters sustainable success (Cho et al., 2016). Thus, within the scope of this study, managerial ability refers to the capacity of top executives to effectively allocate resources, establish informed and strategic decisions, and motivate and inspire organizational stakeholders, which serve as a fundamental factor in shaping corporate culture. Based on the Upper Echelon theory (UET), high ability managers could shape a firm's cultural direction, while aligning with strategic goals. (ii) Foster firm's innovation and adaptability to stay competitive. (iii) Influencing cultural dimensions such as performance orientation, employee engagement, values, and behavioral norms that define how firm functions.

2.1.2. Resource-Based View (RBV)

The Resource-Based View (RBV) developed by Barney (1991) argues that organizations can gain a competitive edge by leveraging resources that are unique, valuable and difficult for competitors to replicate or substitute. Within this framework, managerial ability is shown as a key resource as it directly influences strategic decision-making and shaping corporate culture (Freeman et al., 2021). Interestingly, managers with high ability possess expertise, skills, and experience that empower them to guide firm's toward achieving sustainable success. Through these competencies, they could foster innovation, steering the company strategic path, and navigating the challenges in ways that are hard for competitors to duplicate (Miller, 2003). Thus, when managers' ability is used effectively, they can lead to shape and cultivate a corporate culture that aligns with the company's goals, promoting employee commitment and operational efficiency. Further, the Resource-Based View (RBV) considers firm's culture as a key resource characterized by its distinctive value, inimitability, and difficult to substitute (Ann et al., 2021). A cohesive and strong corporate culture could create a sense of shared purpose

among employees, reinforcing teamwork, collaboration, and innovation. This cultural cohesion could in turn reinforce employee involvement, boosts efficiency, resilience, and productivity, and thereby supporting the organization's competitiveness and sustained success. High ability managers are essential to shaping and aligning corporate culture with company's strategic goals by embedding core values into daily practices and decisions, thereby reinforcing desired behaviors, and adjusting the culture to address emerging challenges (Doukas and Zhang, 2021).

2.1.3 Competing Values Framework (CVF)

The competing values framework (CVF) introduced by Quinn and Rohrbaugh (1983) provides a comprehensive approach to better understand, assess, and ultimately transform their cultures. CVF classifies corporate culture into four dimensions, clan, Adhocracy, Market, and Hierarchy (Fiordelisi and Ricci, 2014). Interestingly, the CVF framework allows understanding how managerial ability influences the type of corporate culture that emerges in an organization. Managers with strong competencies, interpersonal skills, and emotional intelligence play a crucial role in establishing and maintaining a clan culture, as they create an environment that emphasizes trust, loyalty, collaboration and employee involvement and development (Park and Mithas, 2020). Adhocracy cultures, characterized by innovation and external adaptability, require managers with strategic vision, creativity, and the ability to drive an environment that promotes innovation and managing uncertainties (Furnari et al., 2021). These abilities are crucial in inspiring and guiding firms' teams to establish a culture that sustains an innovative environment. In market cultures, which prioritize external stability and competitiveness, managers' seeking to achieving high performance and securing competitive success (He et al., 2020). In such an environment, managers demonstrate advancing skills to achieving organizational goals, optimizing resource management, and improving operational performance, therefore reinforcing the firms' ability to maintain and reinforce a competitive position. Finally, hierarchy cultures prioritize internal stability and control, with managerial ability is demonstrated by standardizing processes and ensuring efficient operations and fostering accountability (Lei and Naveh, 2023). These actions demonstrate the influence of managerial competencies in shaping cultural values, therefore enhancing the firms' performance and effectiveness.

2.2. Hypothesis development

Based on the theoretical framework developed above, in this section we aim to develop hypothesis to examine the impact of managerial ability on corporate culture. Managerial ability

characterized by intellectual and personal skills, experience, and strategic vision, is a key determinant in influencing values, norms and behavior that shape firm's culture (Demerjian et al., 2012; Mishra, 2014). These abilities allow managers to develop and define a clear culture that aligns with the firm's strategic goals. Managers with higher ability are often skilled in navigating complex and uncertain environments and formulating the appropriate decisions that align firm's current needs with the long-term strategic goals (Khanagha et al., 2018). Their ability to understand market dynamics and adjust swiftly to market shifts allows them to compel forward-looking vision for firm (Fox et al., 2022). When these managers clearly communicate their visions, they could inspire, motivate and encourage their team to align their actions with the firm's goals. This alignment cultivates a shared purpose, reinforcing firm's culture and driving collective efforts with the aim of reaching strategic goals. Further, managers with high ability are capable to addressing immediate challenges, while also ensuring that daily operations align with the firm's strategic objectives (Demerjian et al., 2012). Their capacity to anticipate future challenges and adjust their decisions to align with firm's evolving strategies and priorities could shape firm's culture by ensuring that the behaviors and attitudes of employees are aligned with the organization's evolving needs (Guest, 2017). This process creates a common understanding among employees of how their individual efforts reinforce the firm's strategic goals, thereby helping to establish a unified and cohesive organizational culture (John et al., 2017). Moreover, managers who possess advanced cognitive skills and effective decision-making capabilities are fundamental in shaping the guiding principles, behavioral standards, and value framework that define firm's culture (Elsbach and Stigliani, 2018). Their decision-making acumen, critical thinking and ability to anticipate potential outcomes helping in establishing a strategic framework that guides the daily operations and the strategic vision of the organization (Jackson et al., 2014). Consequently, this leads managers to cultivate a culture that embodies firm's fundamental standards, beliefs, values, and expectations, promoting an environment where employees are engaged to align with and support these shared values.

In an environment characterized by swift change and heightened uncertainty, the role of managerial competencies is crucial and more pronounced in influencing and shaping corporate culture (Piaskowska and Trojanowski, 2014). More precisely, managers with higher abilities are essential in steering firms in such turbulent environment, ensuring that fundamental values, principles, and behavioral norms remain consistent (Banker et al., 2024). Their communication skills, expertise, and capacity to take strategic and appropriate decisions at the right time help in reinforcing an adaptive and resilient culture, that encourages innovation and proactive

problem solving, while also maintaining consistency in fundamental values and firm's direction.

Overall, highly skilled managers seek to develop a cohesive culture that aligns with firm's strategic goals. Such culture will emphasize key elements such as innovation, transparency, performance, teamwork, and efficiency, which are fundamental for achieving sustained firm's success. In the light of the aforementioned insights we notice that managerial ability is the main driving of firm's culture that promoting growth, ensuring alignment with strategic goals, and positioning firms to achieve success. Therefore, the following hypothesis was formulated to test our expectation:

H1: *Managerial ability has a positive and significant impact on corporate culture.*

3. Research design

3.1. Main variables measurement

3.1.1. Corporate culture

Organizational culture includes values, common organizational beliefs and behaviors, and an essential part of its identity that also impacts corporate strategies and decision-making (Ravasi & Schultz, 2006). The challenge is quantifying such an important element that drives researchers to rely on alternative measures such as sustainability, Environmental, Social, and Governance (ESG), or other indirect indexes. These alternative measures have substantial issues such as inconsistency and legitimacy, as some of these mainly voluntary corporate disclosures do not reflect legitimate and genuine corporate behaviors. Given these limitations, this study considers recent developments in using machine learning and textual analysis techniques to measure corporate culture (Li *et al.*, 2020). Applying the wording model in questionnaire sections of corporate earnings announcements, Li *et al.* (2020) established a modern measure of organizational behavior called corporate culture. Corporate directors communicate in various ways, shaping the perception of an organization's internal culture and values. Among these communication methods, non-scripted dialogue within public announcements uniquely and authentically reflects organizational norms and values. Unlike carefully crafted voluntary disclosures, which are often influenced by strategic intent and regulatory considerations, non-scripted dialogue captures the spontaneous and genuine aspects of leadership communication. Due to the nature of machine learning techniques, the method includes a trained neural network system that considers words and their context that provides a more precise reflection of organizational culture. The corporate culture score is then

computed by analyzing the frequency and contextual usage of these terms within firm-level earnings call transcripts.

This study uses three different alternative measures of corporate culture to improve robustness and further negate any potential model bias concerns. Following prior literature (Hasan *et al.*, 2025), this study considers standardizing the corporate culture score (zCULTURE), a combined z-score of all elements of corporate culture, a simple cumulative score (sCULTURE) and a binary measure (dCULTURE). The binary measure considers a value of 1 for those organizations with a culture score higher than the sample mean and zero otherwise. The methodology for measuring the main variable of this study provides a systematic and balanced method for evaluation by using machine learning and textual analyses that also consider firm-level characteristics that differentiate it from traditional methods.

3.1.2. *Managerial ability*

Effective use of accessible resources to improve productivity is the most important expectation from corporate managers, and managerial ability truly reflects this important goal. Despite the challenges in measuring managerial ability due to its invisible and complex nature, Demerjian *et al.* (2013) have developed a well-known mechanism for measuring managerial ability (M_Ability). Many empirical studies have used this scoring system, focusing on managerial ability and its impact on corporate organizational behavior and decision-making. They use a special non-parametric technique named “Data Envelopment Analysis (DEA)” to predict corporate efficiency after considering similar efficiency in similar industries to improve productivity. The scoring system reflects how effective management uses resources to generate revenue, considering their strategic decision-making, cost, and operational efficiency management. Using key input data (e.g., net property, plant, and equipment; research and development (R&D) expenses; cost of inventory; and sales, general, and administrative expenses), they use revenue as an output in their estimation model. They also consider second-stage estimation to cover the issue with other factors unrelated to M_Ability, such as firm size, market share, or free cash flow. In the end, the residual from this estimation model provides M_Ability score that reflects characteristics related to management skills rather than other firm operational or structural elements. This study uses a similar measure of M_Ability from Demerjian *et al.* (2013) which recommends a reliable and comprehensive scoring assessment of management capabilities, leading us to investigate its impact on corporate culture.

3.2. Data and sample selection

We present the process of organizing the data and its distribution across industries in Panel A of Table 1. Starting with 73,937 observations, we have refined our dataset, removing insufficient dependent variables and further those with missing control variables, resulting in 52,214 firm-year data. Our selection process negates any concerns about sample selection bias. Panel B of Table 1 provides an industry-wide distribution of the final sample. The Information Technology (IT) sector comprises the largest share (22.96%, 11,990 observations), followed by Industrials (16.92%) and Consumer Discretionary (16.77%). Health Care accounts for 15.53%, while Energy (8.44%), Materials (7.77%), and Communication Services (6.05%) have moderate representation. Consumer Staples (4.95%) and Financials (0.32%) are underrepresented, with Utilities (0.17%) and Real Estate (0.12%) contributing minimally. The industry diversity enhances the study's applicability across various corporate structures and economic contexts.

3.3. Empirical models

To evaluate the impact of managerial ability on corporate culture, we estimate the following empirical model:

$$zCULTURE_{i,t} = \beta_0 + (\beta_1 M_{Ability_{i,t}}) + (\sum \beta_k Controls_{i,t}) + Fixed_Effects + \varepsilon_{i,t} \quad (1)$$

The dependent variable in our study is corporate culture (*zCULTURE*), which serves as a standardized measure reflecting the cultural attributes of firms. The key independent variable, managerial ability (*M_Ability*), assesses the efficiency and effectiveness of management in decision-making and resource allocation. To control for firm-level financial and governance characteristics, we include *Size*, which captures firm scale, and *ROA*, a measure of profitability. *Market-to-Book ratio (MTB)* reflects market valuation, while *TANG* represents asset tangibility. *Leverage (LEV)* accounts for firms' financial risk, and *Capex* and *RND* indicate investment intensity in physical and innovation-related assets. *Growth* measures sales expansion, and *OCF* represents operational cash flow availability. Governance factors include *CEO duality (CEO_Dual)*, which indicates whether the CEO also serves as board chair, as well as *Board Size (B_Size)*, *Board Tenure (B_Tenure)*, and *Board Skills (B_Skills)*, which capture board composition and expertise. We incorporate *Fixed Effects (FE)* in our regression analysis to address potential omitted variable bias and unobserved heterogeneity. We consider year-fixed effects (*Y-FE*), firm-fixed effects (*F-FE*), industry-fixed effects (*I-FE*), and state-fixed

effects (S-FE), controlling for economy-wide changes over time, firm and industry characteristics, and finally, regional differences, strengthening our findings.

3.3.1. *Other control variables*

To ensure a robust analysis of the impact of managerial ability on corporate culture, we incorporate several key control variables that account for firm-specific characteristics potentially influencing this relationship (Hasan et al., 2025, Cumming *et al.*, 2024). These controls help isolate the effect of managerial ability by addressing alternative explanations for variations in corporate culture. Firm size (Size) is included as larger firms tend to have more structured corporate cultures, often shaped by formalized policies and governance frameworks. Profitability (ROA) controls financial performance, as more profitable firms may have greater flexibility to invest in cultural initiatives or managerial development (Hasan et al., 2025, Cumming *et al.*, 2024). Market-to-Book Ratio (MTB) captures market valuation and growth expectations, which may shape the strategic priorities of managers and, in turn, corporate culture. Asset tangibility (TANG) is included because firms with higher tangible assets may have more rigid operational structures, potentially influencing cultural adaptability. Leverage (LEV) controls for financial constraints, as firms with higher debt levels may experience managerial pressure to prioritize financial stability over cultural investments. Capital expenditures (Capex) and R&D intensity (RND) are included to account for investment decisions that reflect managerial risk-taking and long-term strategic priorities, which are key components of corporate culture (Hasan et al., 2025). Sales growth (Growth) serves as a proxy for firm expansion, which can introduce cultural shifts due to changes in organizational structure and workforce composition. Operating cash flow (OCF) controls for liquidity, influencing managerial decision-making and the firm's ability to sustain cultural initiatives over time. To capture governance's role in shaping corporate culture, we include CEO duality (CEO_Dual), as CEOs who also chair the board may have greater influence over cultural values and decisions. Board size (B_Size), tenure (B_Tenure), and skills (B_Skills) account for board composition and expertise, affecting managerial oversight and the firm's cultural environment (Cumming *et al.*, 2024). To address unobserved heterogeneity, we include fixed effects (Fixed_Effect) in our regression model, ensuring a more accurate analysis of the relationship between managerial ability and corporate culture while reducing bias and improving reliability.

4. Empirical results

4.1. Overview of descriptive statistics

Panel C of Table 1 presents summary statistics for key variables. The primary dependent variable, corporate culture (zCULTURE), has a mean of 0.0007 and a standard deviation of 0.9721. The second alternative measure, sCULTURE, averages 15.409, with a range of 11.026 to 18.596, indicating variation across firms. The third alternative and binary measure, dCULTURE, has a mean of 0.5001, as expected, with an equal distribution of firms across categories. These are consistent with prior studies that employ similar metrics for evaluating its impact on diverse corporate outcomes (Hasan et al., 2025). Firm size (Size) has a mean of 6.91, while ROA averages 0.0742, with a median of 0.1061, reflecting moderate profitability. Market-to-Book Ratio (MTB) has a mean of 7.11 and a standard deviation of 6.38, showing heterogeneous market valuation. Leverage (LEV) averages 0.5388, suggesting moderate debt levels. Capital expenditures (Capex) and R&D intensity (RND) have median values of 0.0309 and 0.1145, respectively, reflecting varying investment strategies. Corporate governance characteristics also show notable patterns. CEO duality (CEO_Dual) averages 0.6156, meaning over 60% of firms have CEOs who also serve as board chairs. Board size (B_Size) has a mean of 13.07, with slight variation. Board tenure (B_Tenure) averages 17.93 years, reflecting long-standing board compositions, while board skills (B_Skills) average 54.197, with minimal dispersion, indicating consistency in board expertise, consistent with prior literature. The descriptive statistics highlight significant variations in firm size, financial performance, governance structures, and corporate culture. These differences reinforce the importance of controlling for firm-specific characteristics when examining the relationship between managerial ability and corporate culture.

Table 2 presents Pearson's correlation coefficients, highlighting key relationships among the study variables. M_Ability positively correlates with zCULTURE, suggesting that firms with more capable managers tend to have stronger corporate cultures. Among firm characteristics, Size negatively correlates with zCULTURE, indicating that larger firms may face challenges in maintaining a cohesive corporate culture. ROA is positively associated with zCULTURE, suggesting that more profitable firms foster stronger cultural values. Similarly, MTB is positively correlated, reflecting the potential influence of market expectations on corporate culture. Financial variables show mixed relationships. LEV negatively correlates with zCULTURE, implying that firms with higher debt may prioritize financial stability over cultural development. Capex and RND also exhibit negative correlations, suggesting that firms

emphasizing tangible or innovation-driven investments may shape corporate culture differently. Governance variables show weaker associations. CEO_Dual has a slight negative correlation with zCULTURE, suggesting that firms where CEOs hold dual roles may place less emphasis on cultural development. B_Size, B_Tenure, and B_Skills exhibit small negative correlations, indicating that larger or more experienced boards may exert less direct influence on corporate culture. None of the correlations exceed critical thresholds, confirming that multicollinearity is not a concern, ensuring the reliability of the analysis.

[INSERT Table 1 and 2 HERE]

4.2. Main results

4.2.1. Managerial ability and corporate culture

Table 3 presents the results of the panel regression analysis examining the relationship between managerial ability (M_Ability) and corporate culture while controlling for firm-level and governance-related characteristics. Given corporate culture's complex and multidimensional nature, we follow prior literature (Hasan et al., 2025) and employ three alternative measures to ensure robustness and provide a comprehensive assessment. Our primary measure (zCULTURE) is a standardized composite score capturing five cultural dimensions. To validate our findings, we use an aggregated measure (sCULTURE) summing individual cultural values and a binary indicator (dCULTURE) classifying firms as high- or low-culture based on the sample median. This approach minimizes measurement bias and offers deeper insights into how managerial ability affects corporate culture.

The findings demonstrate that M_Ability has a significant positive impact on corporate culture across all three measures. Firms with higher managerial ability exhibit stronger corporate cultures, as reflected in zCULTURE ($\beta = 0.0498$, $p < 0.05$), sCULTURE ($\beta = 0.3042$, $p < 0.10$), and dCULTURE ($\beta = 0.0288$, $p < 0.10$). These results suggest that capable managers establish and reinforce corporate values such as integrity, teamwork, and innovation, contributing to a broader cultural foundation across multiple dimensions. The positive relationship further indicates that managerial leadership plays a fundamental role in shaping corporate culture, influencing both its depth and consistency across organizations. Smith (2013) and Hasan *et al.* (2024) demonstrate that firms with strong cultural values, such as integrity and innovation, exhibit more responsible corporate behavior, reinforcing the idea that capable managers embed these values into organizational practices (Fang *et al.*, 2023). Similarly, Li *et al.* (2021) and Graham *et al.* (2022) find that corporate culture significantly

and positively influences firm outcomes. Moreover, Cole *et al.* (2021) and Zaman (2024) highlight that strong corporate cultures reduce corporate misconduct, further supporting that managerial leadership is fundamental in cultivating ethical and resilient corporate environments. Further, the results suggest that firms with higher leverage (LEV) exhibit weaker corporate cultures, as indicated by negative and significant coefficients across all three measures. This potentially reflects financial constraints limiting investments in cultural development programs. Additionally, CEO-Chairman duality (CEO_Dual) is negatively associated with corporate culture, consistent across all three measures, indicating that firms where the CEO also serves as the board chair may experience weaker cultural reinforcement due to concentrated decision-making power and reduced independent oversight.

Among the control variables, several positively associate with corporate culture, reinforcing the idea that stronger financial health and governance mechanisms contribute to a well-defined organizational culture. ROA is positively associated with corporate culture across zCULTURE and sCULTURE, reinforcing the notion that financially healthy firms may have more resources to invest in cultural initiatives, employee engagement, and ethical governance. Similarly, TANG and MTB are positively related to corporate culture, suggesting that firms with more tangible assets or higher market valuations may prioritize cultural development as part of their long-term strategy. Additionally, sales growth (Growth) is positively linked to corporate culture, implying that firms experiencing higher growth are more likely to reinforce and develop their corporate culture to support expansion. Several factors negatively impact corporate culture. Firm size (Size) exhibits a negative relationship with corporate culture across all three measures, suggesting that larger firms may struggle to maintain a strong, cohesive culture due to operational complexities and hierarchical structures. Additionally, operating cash flow (OCF) negatively impacts corporate culture, with consistently negative coefficients, indicating that firms with higher operating cash flows may prioritize financial flexibility over cultural investments, potentially due to capital allocation decisions or risk management strategies.

These findings support our main hypothesis, confirming that higher managerial ability contributes to a stronger corporate culture. The results align with prior literature (Demerjian *et al.*, 2012; Doukas & Zhang, 2021), suggesting that effective managers influence firm's values, norms and behavior, resulting in shaping firm's culture. These findings contribute to the growing discussion on how leadership quality affects intangible but critical firm attributes, such as ethics, employee engagement, and organizational norms.

4.2.2. Industrial heterogeneity

To extend our findings, we analyze whether the relationship between managerial ability (M_Ability) and corporate culture varies across industries. Table 4 shows panel regression results for eleven sectors, controlling for firm-level financial and governance factors. Adjusted R^2 values range from 0.5359 to 0.7638, indicating strong model explanatory power across industries.

The results reveal significant heterogeneity in the effect of managerial ability on corporate culture across industries. M_Ability exhibits a strong and positive relationship with corporate culture in the Energy ($\beta = 0.2146$, $p < 0.01$), Materials ($\beta = 0.2419$, $p < 0.05$), Industrials ($\beta = 0.2293$, $p < 0.01$), Communication Services ($\beta = 0.2569$, $p < 0.05$), and Utilities sectors ($\beta = 2.5316$, $p < 0.05$). This suggests that in industries characterized by high operational complexity and regulatory scrutiny, managers with greater ability play a crucial role in fostering a strong corporate culture (Mishra, 2014). For instance, in capital-intensive industries such as Energy, Materials, and Utilities, where long-term strategic decisions and stakeholder management are critical, high managerial ability appears to be a key driver of corporate cultural strength. Zaman (2024) highlights that corporate culture's role in shaping firm behavior is particularly strong in industries with high stakeholder pressure and long-term strategic decision-making, such as environmentally sensitive sectors. This aligns with our finding that in capital-intensive industries like Energy, Materials, and Utilities, where long-term planning and stakeholder engagement are crucial, high managerial ability significantly strengthens corporate culture.

However, in contrast, managerial ability negatively influences corporate culture in the Consumer Staples sector ($\beta = -0.3116$, $p < 0.01$) and to a lesser extent in Health Care ($\beta = -0.0982$, $p < 0.1$). The negative effect in the Consumer Staples sector may be due to the industry's emphasis on standardized operations, regulatory compliance, and cost efficiency, where managerial ability alone may not be sufficient to enhance cultural values. Similarly, in the Health Care industry, the complexity of medical regulations and ethical considerations may limit the ability of even highly skilled managers to significantly impact corporate culture. This is consistent with Datta *et al.* (2024) and Zaman (2024), who find that corporate culture's impact on stakeholder violations varies by industry, with stronger effects in firms with weaker external monitoring. Our results extend this by showing that managerial ability's role in shaping corporate culture is also industry-dependent, suggesting that in sectors with less rigid external oversight, capable managers have greater flexibility to embed cultural values.

Across industries, the impact of control variables on corporate culture largely aligns with the main findings, though with some industry-specific variations. MTB positively affects

Materials and Information Technology, suggesting that firms with greater market growth opportunities tend to foster stronger corporate cultures. Similarly, TANG is positively associated with corporate culture in Information Technology and Communication Services, implying that tangible asset investments contribute to cultural stability in these sectors.

Conversely, LEV has a negative impact on corporate culture in Materials, Health Care, and Information Technology, reinforcing the idea that firms with higher leverage may have less flexibility to invest in culture-building initiatives. Similarly, RND is negatively related to corporate culture in Consumer Staples and Health Care, suggesting that an emphasis on research and development may divert managerial attention from cultural initiatives.

Regarding governance factors, CEO_Dual negatively affects Energy and Consumer Discretionary, indicating that leadership concentration may weaken corporate culture in competitive industries. B_Size positively affects corporate culture in Materials, Consumer Discretionary, Health Care, and Information Technology, supporting the notion that larger boards enhance cultural oversight. Meanwhile, B_Tenure and B_Skills show mixed results across industries, with B_Tenure negatively influencing corporate culture in Health Care and Communication Services, and B_Skills negatively affecting Information Technology, suggesting that while governance expertise is valuable, it may not always strengthen corporate culture.

The results confirm that managerial ability's impact on corporate culture varies by industry, aligning with prior research (Datta *et al.*, 2024, Fang *et al.*, 2023). It strengthens culture in capital-intensive sectors but is weaker in highly regulated industries where external constraints limit managerial discretion. This highlights the need for industry-specific strategies to leverage managerial ability and contributes to the broader discussion on how leadership effectiveness and decision-making align with industry-specific cultural priorities. Future research may explore whether industry disruptions, technological advancements, or macroeconomic shifts further influence this relationship.

[INSERT Table 3 and 4 HERE]

4.2.3. Testing underlying mechanisms- Mediating role of corporate governance

We further examine the mechanisms through which managerial ability (M_Ability) influences corporate culture by testing the mediating role of corporate governance (CG) (Bhattacharya *et al.*, 2022; Chi *et al.*, 2020). This analysis is based on prior studies that employ channel analysis techniques to explore whether a third variable significantly alters the strength of the relationship between an independent and a dependent variable. In line with previous

research, we utilize Baron & Kenny (1986) causal step regression, supplemented by Sobel (1982), Aroian (1947), and Goodman (1960) statistical tests, which provide a robust assessment of the mediating effect. The results of these analyses are presented in Table 5. Panel A of Table 5 presents the direct approach using Baron and Kenny's (1986) four-step methodology.

$$Corporate_Culture_{i,t+1} = \beta_0 + \beta_1 M_Ability_{it} + \beta_2 Controls_{it} + Fixed_Effects + \varepsilon_{it} \quad (2a)$$

$$CG_{i,t+1} = \gamma_0 + \gamma_1 M_Ability_{it} + \gamma_2 Controls_{it} + Fixed_Effects + \varepsilon_{it} \quad (2b)$$

$$Corporate_Culture_{i,t+1} = \delta_0 + \delta_1 CG_{it} + \delta_2 Controls_{it} + Fixed_Effects + \varepsilon_{it} \quad (2c)$$

$$Corporate_Culture_{i,t+1} = \sigma_0 + \sigma_1 M_Ability_{it} + \sigma_1 CG_{it} + \sigma_2 Controls_{it} + Fixed_Effects + \varepsilon_{it} \quad (2d)$$

In Column (1), we confirm the baseline relationship between M_Ability and corporate culture ($\beta = 0.0498$, $p < 0.01$), consistent with our previous findings. In Column (2), we establish that managerial ability is positively associated with corporate governance ($\beta = 0.2781$, $p < 0.01$), indicating that firms with highly capable managers tend to exhibit stronger governance structures. Columns (3) and (4) introduce CG as a mediating factor. The results show that corporate governance itself is positively related to corporate culture ($\beta = 0.0249$, $p < 0.01$), while the coefficient for M_Ability remains significant but is slightly reduced ($\beta = 0.0492$, $p < 0.05$). This suggests that corporate governance partially mediates the impact of managerial ability on corporate culture, reinforcing the idea that governance mechanisms serve as an important channel through which managerial ability fosters a strong cultural environment. To validate the statistical significance of this mediating effect, we further conduct indirect path analysis using Sobel (1982), Aroian (1965), and Goodman (1960) tests. As shown in Panel B of Table 5, the p-values for all three tests (Sobel: 0.0009, Aroian: 0.0036, Goodman: 0.0024) confirm that corporate governance significantly mediates the relationship between managerial ability and corporate culture. These findings align with prior literature on underlying mechanism analyses, demonstrating that strong governance structures strengthen managerial ability's positive effect on corporate culture by enhancing transparency, accountability, and ethical leadership (Doukas and Zhang, 2021).

These findings provide strong support for our additional analysis, confirming that corporate governance acts as an important mediating mechanism in the relationship between managerial ability and corporate culture. The results highlight that high managerial ability alone is not always sufficient to establish a strong corporate culture, i.e., effective governance structures further reinforce and institutionalize cultural values, supporting prior research (Dawson et al., 2016, Zahra & Filatotchev, 2004). While managerial ability fosters cultural strength, governance structures institutionalize and sustain cultural values, highlighting their

complementary role in shaping corporate culture. This extends previous studies by empirically demonstrating governance as a mediating mechanism using causal step regression and statistical mediation tests, enhancing the robustness of the findings.

[INSERT Table 5 HERE]

4.2.4. Additional analysis- Corporate culture elements

To further explore the role of managerial ability (M_Ability) in shaping corporate culture, we extend our analysis by examining its impact on five key dimensions of corporate culture: integrity, teamwork, innovation, respect, and quality. These elements are widely recognized as fundamental components of corporate culture, influencing various aspects of firm operations and governance (Li *et al.*, 2020, Li *et al.*, 2021). The results in Table 9 reveal notable variations in the relationship between managerial ability and different cultural dimensions. M_Ability exhibits a significant positive association with teamwork ($\beta = 0.0793$, $p < 0.05$), innovation ($\beta = 0.0307$, $p < 0.05$), and respect ($\beta = 0.1459$, $p < 0.05$). (Abernethy *et al.*, 2024, Cho *et al.*, 2016). The positive association with teamwork aligns with Li *et al.* (2021), who argue that skilled managers enhance collective efficiency by promoting collaboration and effective communication within teams. Likewise, the significant impact on innovation supports prior evidence that competent managers are better positioned to implement strategies that enhance a firm's adaptability and competitiveness in dynamic business environments (Yuan & Wen, 2018). This aligns with Cai *et al.*, (2023), who emphasize that leadership shapes corporate culture through shared norms and values. Similarly, Graham *et al.* (2022) highlights that executives view a strong workplace culture as essential for firm success, reinforcing the role of managerial leadership in fostering teamwork and cultural strength. The strong relationship with respect indicates that managerial ability plays a key role in shaping an organizational culture that values inclusivity, fairness, and ethical behavior, consistent with findings from Roy *et al.* (2024). Interestingly, managerial ability does not exhibit a significant relationship with integrity ($\beta = 0.0009$, $p > 0.10$) or quality ($\beta = 0.0474$, $p > 0.10$). This suggests that while managerial skills contribute to fostering teamwork, innovation, and respect, they may not directly influence cultural attributes related to ethical standards or the pursuit of excellence in product and service quality (Mishra, 2014, Holcomb *et al.*, 2009). This may be attributed to the fact that integrity and quality-related cultural attributes are often shaped by broader governance mechanisms, industry standards, and long-term corporate policies, rather than the individual capabilities of managers.

The control variables support the main findings, reinforcing the link between financial performance, governance, and corporate culture. ROA is positively associated with innovation, respect, and quality, suggesting that financially successful firms invest more in corporate culture. Similarly, MTB correlates with respect and quality, indicating that firms with higher growth opportunities prioritize cultural elements that enhance reputation and sustainability. TANG is positively linked to integrity, innovation, and respect, implying that firms with more tangible assets may have stronger structures that support ethics and innovation. Conversely, financial constraints can weaken corporate culture. LEV is associated with lower respect, suggesting that high debt may limit efforts to foster inclusivity. Capex negatively impacts integrity and teamwork, implying that firms prioritizing capital expenditures may focus more on financial efficiency than cultural growth. OCF is negatively linked to all cultural dimensions, especially innovation and respect, indicating that firms with weaker cash flows may struggle to sustain a strong corporate culture. Governance factors also show mixed effects. CEO_Dual negatively impacts innovation and quality, reinforcing concerns that concentrated leadership structures may weaken cultural development in areas requiring accountability. B_Tenure is negatively related to innovation but positively associated with respect, suggesting that while long-serving board members may resist new ideas, they contribute to a respectful organizational environment.

Overall, these findings highlight the nuanced role of managerial ability in shaping corporate culture. While it strongly enhances teamwork, innovation, and respect, its impact on integrity and quality is limited. This extends our main findings, showing that different cultural elements respond differently to managerial competence and reinforcing the view that corporate culture is a multidimensional construct shaped by both managerial actions and organizational factors.

[INSERT Table 6 HERE]

4.3. Robustness tests

4.3.1. Endogeneity tests

To ensure robustness and address potential endogeneity, we conduct an instrumental variable (IV) regression, following prior studies that highlight the need to control for omitted variable bias and reverse causality (Attig et al., 2013; El Ghouli et al., 2011; Li et al., 2018). Table 7 presents the results of this robustness test, which aims to validate the causal relationship between M_Ability and corporate culture. A key challenge in this analysis is the potential for simultaneity bias, where corporate culture could influence M_Ability rather than vice versa.

To mitigate this, we construct alternative measures of managerial ability based on standardized deviations, ensuring a more precise estimation of the effect.

Following prior literature, we develop two alternative instruments for $M_Ability^{\S}$. Using these industry- and sample-adjusted measures, we implement a two-stage least square (2SLS) regression analysis to test the robustness of our main results. Table 7 reports the findings from our IV approach. Column (1) shows that $Alt_M_Ability$ remains positively and significantly associated with corporate culture ($\beta = 0.0595$, $p < 0.05$). Similarly, Column (2) demonstrates that the industry-adjusted measure, $Alt_M_Ability_In$, has an even stronger positive effect ($\beta = 0.0906$, $p < 0.01$). These results reinforce the conclusion that higher managerial ability is linked to a stronger corporate culture, even after accounting for potential endogeneity. The control variables in Table 7 exhibit consistent patterns with our main findings, with ROA, MTB, and LEV positively influencing corporate culture, while CEO_Dual, B_Size, B_Tenure, and OCF remain negatively associated. The stability of these coefficients across different estimation techniques further supports the robustness of our results.

Using the instrumental variable approach and 2SLS regression, we address endogeneity concerns and confirm the causal effect of managerial ability on corporate culture. The significance of our instruments, especially the industry-adjusted managerial ability measure, indicates that managerial talent shapes corporate culture beyond industry and firm-level factors. These findings contribute to the literature on leadership and culture formation, showing that firms with high-ability managers are more likely to develop strong corporate values. Future research could examine whether these effects persist across different regulatory environments or governance structures, deepening our understanding of leadership's role in shaping corporate culture.

[INSERT Table 7 HERE]

4.3.2. Propensity-Score-Matched Sample

To further validate our findings and address selection bias concerns, we use a propensity score matching (PSM) approach, following prior studies (Ghoul et al., 2017; Gholami et al., 2023). This method compares firms with similar observable characteristics when assessing the impact of managerial ability ($M_Ability$) on corporate culture, reducing the risk of confounding effects from firm heterogeneity.

$\S Alt_M_Ability (sample\ and\ industry\ adj) = \frac{M_Ability - \text{Mean of } M_Ability\ (across\ all\ sample\ and\ industry)}{SD_M_Ability\ (across\ all\ sample\ and\ industry)}$

In the first stage, we estimate propensity scores by performing a logistic regression, where we regress the probability of high M_Ability on firm-specific characteristics, including Size, ROA, MTB, TANG, LEV, Capex, RND, Growth, OCF, CEO_Dual, B_Size, B_Tenure, and B_Skills. The results in Panel A of Table 8 indicate that several firm characteristics significantly influence the likelihood of a firm having high managerial ability. Specifically, ROA, MTB, TANG, Capex, CEO_Dual, and B_Size exhibit positive associations, suggesting that larger, more profitable firms with stronger investment strategies and governance structures tend to have higher managerial ability. Conversely, Size, LEV, OCF, B_Tenure, and B_Skills display negative relationships, indicating that larger, highly leveraged firms with longer board tenure are less likely to have highly capable managers. Once the propensity scores are estimated, we match each firm-year observation with a comparable firm-year from the opposite managerial ability group using the nearest-neighbor matching method, ensuring that our second-stage analysis is based on a balanced sample where firms with high and low M_Ability share similar characteristics.

The second-stage regression in Panel B of Table 8 examines the relationship between the fitted managerial ability scores (Fitted_MA_Ability) and corporate culture within the matched sample. The results confirm that Fitted_MA_Ability remains significantly and positively associated with corporate culture ($\beta = 0.1325$, $p < 0.01$), reinforcing our primary findings. The adjusted R^2 in Panel B (0.4007) remains relatively strong, suggesting that the model's explanatory power persists even after controlling for selection bias. These results indicate that differences in firm characteristics do not drive the relationship between M_Ability and corporate culture but represent a robust and systematic effect.

The PSM results further strengthen the causal interpretation of our findings, confirming that the positive association between managerial ability and corporate culture holds even when firms with similar characteristics are compared. By using a two-stage PSM approach, we mitigate concerns regarding potential biases arising from firm-specific heterogeneity, ensuring that our conclusions are not merely artifacts of sample selection. These findings underscore the role of managerial leadership in shaping corporate culture, independent of firm size, profitability, or governance. Future research could examine how this relationship varies across institutional settings or governance regimes, offering deeper insights into the broader impact of managerial ability on cultural development.

[INSERT Table 8 HERE]

4.3.3. *Entropy balancing*

To enhance the reliability and validity of our results, we use entropy balancing as an additional robustness test. This method, widely applied in empirical research (e.g., Hasan, Lobo, & Qiu, 2021; Arifin, Hasan, & Kabir, 2020), ensures that the mean, variance, and skewness of covariates are balanced between treatment and control groups. Unlike traditional matching techniques, entropy balancing assigns weights to control group observations, thereby minimizing differences between the two groups while retaining the full sample size. This approach helps to eliminate biases caused by sample selection and design choices (Hainmueller, 2012). In this analysis, we first define the treatment and control groups based on whether firms exhibit high managerial ability (M_Ability) or not. We then identify the covariates to be balanced between the two groups, including Size, ROA, MTB, TANG, LEV, Capex, RND, Growth, OCF, CEO_Dual, B_Size, B_Tenure, and B_Skills. Next, we apply entropy balancing to reweight the control group observations, ensuring that the covariates are comparable between treated and baseline firms. Finally, we re-estimate the regression models using the entropy-balanced sample, thereby testing whether the relationship between managerial ability and corporate culture (zCULTURE) remains consistent after correcting for sample imbalances.

Panel A of Table 9 presents the balance of covariates before and after entropy balancing. The unweighted results indicate noticeable differences between the treated and baseline groups regarding mean, variance, and skewness for several covariates. However, these differences are significantly reduced after applying entropy balancing, suggesting that the treatment and control groups become more comparable. The improved balance confirms that potential confounding effects from firm characteristics are minimized, strengthening the validity of our analysis. Panel B of Table 9 presents the regression analysis results using the entropy-balanced sample. The findings confirm that M_Ability remains significantly and positively associated with corporate culture ($\beta = 0.1421$, $p < 0.01$). The adjusted R^2 (0.3984) remains stable, further supporting the robustness of our conclusions. These results suggest that managerial ability plays a significant role in shaping corporate culture even after accounting for potential biases in firm characteristics.

Overall, the entropy balancing results reinforce the validity of our findings, confirming that firm differences do not drive the positive link between managerial ability and corporate culture. This method strengthens the causal interpretation of our results by ensuring covariate balance and reducing selection bias. Future research could extend this approach to different institutional

and governance environments, offering broader insights into the role of managerial leadership in shaping corporate values.

[INSERT Table 9 HERE]

4.3.4. Other Robustness Tests

To further assess the robustness of our findings and examine potential nonlinearities or heterogeneous effects, we conduct a subsample analysis by stratifying the sample based on Managerial Ability (M_Ability). Specifically, we categorize firms into high (≥ 75 th percentile) and low (≤ 25 th percentile) managerial ability groups and estimate the main regression separately for each subgroup. This percentile-based classification allows us to mitigate the influence of mid-range observations, ensuring that the analysis captures differential effects at the extreme ends of the managerial ability distribution. By employing this approach, we test whether the observed relationship between M_Ability and corporate culture is uniform across firms or whether its magnitude and significance vary depending on the managerial competency level. This method aligns with prior research exploring managerial heterogeneity in corporate decision-making (e.g., Ghoul et al. (2017)) and serves as a robustness check to rule out the possibility that our findings are driven by a particular segment of firms rather than a systematic effect.

Table 10 shows that M_Ability is significantly and positively linked to corporate culture in the high managerial ability group ($\beta = 0.0871$, $p < 0.01$), but this effect weakens and becomes insignificant in the low ability group ($\beta = 0.0375$, n.s.). These results support the study's main conclusion that M_Ability enhances corporate culture, likely because highly capable managers foster values like integrity, teamwork, and innovation. Firm characteristics also differ between the two subsamples. In firms with high M_Ability, larger size, higher profitability, and greater investment intensity are positively linked to corporate culture. Conversely, in the low M_Ability group, firm size, board tenure, and board skills show negative or insignificant effects, suggesting that governance mechanisms and financial constraints impact corporate culture differently based on managerial competence. These results highlight the role of high-ability managers in promoting ethical standards, collaboration, and employee engagement, thereby strengthening organizational values. As corporate culture is key to firm performance, managerial ability influences financial decisions and the broader corporate environment.

[INSERT Table 10 HERE]

5. Conclusion

This study explores the impact of managerial ability on corporate culture, accounting for firm characteristics, governance structures, and industry factors. Our findings show that firms led by competent managers have stronger corporate cultures driven by their ability to establish and reinforce core values like integrity, teamwork, and innovation. This highlights the critical role of managerial leadership in shaping corporate identity, extending beyond financial decision-making to influence the broader corporate environment. Further analysis reveals that the effect of managerial ability on corporate culture varies across industries. The relationship is particularly strong in industries characterized by high operational complexity and regulatory scrutiny, such as Energy, Materials, Industrials, and Utilities, where strategic decision-making and stakeholder engagement are essential. In contrast, sectors like Consumer Staples and Health Care, which emphasize standardized operations and regulatory compliance, show a weaker or even negative relationship. These variations highlight the importance of industry-specific factors in shaping how managerial ability translates into corporate cultural strength. To explore the underlying mechanisms, we examine whether corporate governance serves as a mediating factor in this relationship. The results confirm that strong governance structures enhance and reinforce the cultural influence of managerial ability, acting as an institutional framework that supports ethical leadership, transparency, and accountability. This suggests that while capable managers are key drivers of corporate culture, governance mechanisms play a crucial role in sustaining and institutionalizing cultural values. Additionally, we analyze how managerial ability influences different dimensions of corporate culture, including teamwork, innovation, respect, integrity, and quality. The results indicate that skilled managers foster collaboration, encourage creativity, and promote a respectful work environment. However, their influence on integrity and quality appears to be limited, suggesting that broader governance frameworks, industry norms, and regulatory environments may shape these attributes more than individual managerial leadership. These findings are built on prior research by empirically showing that the impact of managerial ability on corporate culture varies by industry and is mediated by governance structures. While managerial ability enhances cultural dimensions like teamwork and innovation, its influence is limited in areas such as integrity and quality, where external governance plays a stronger role. By combining insights on industry differences and governance mediation, this study offers a deeper understanding of how leadership shapes corporate culture across diverse firm environments.

These findings have important implications for corporate leaders, investors, and policymakers. Hiring and developing capable managers should be a priority for decision-

makers, as they play a key role in shaping corporate culture. This is especially vital in industries with high regulatory scrutiny or environmental and social risks, where strong culture enhances reputation and stakeholder trust. However, managerial ability alone isn't enough—robust governance structures are essential to institutionalize and sustain cultural values over time. For policymakers and regulators, the results highlight the importance of viewing corporate culture as a core element of governance. Just as firms disclose financial and sustainability performance, greater transparency around cultural values and leadership practices could help investors and stakeholders assess long-term sustainability. Industry-specific governance frameworks may also be needed to support firms in sectors where leadership strongly influences culture. For investors and analysts, corporate culture should be seen as a critical intangible asset influencing firm performance. Companies with strong cultural foundations may be better equipped to handle crises, maintain stakeholder trust, and foster innovation. Understanding the link between managerial ability and corporate culture can provide deeper insights into a firm's long-term value-creation potential. From a theoretical perspective, this study extends existing research by demonstrating that managerial ability's impact on corporate culture is both industry-dependent and mediated by governance structures. These findings provide a more nuanced understanding of how leadership shapes corporate culture across different business environments.

Despite its contributions, this study has certain limitations. First, while we establish a strong association between managerial ability and corporate culture, we do not directly address causality. Future research could employ natural experiments or instrumental variable approaches to strengthen causal inferences. Second, our analysis focuses on publicly listed firms, which may limit the generalizability of our findings to small and privately held firms. Future studies could examine how managerial ability influences corporate culture across different ownership structures. Additionally, while we identify corporate governance as a mediating factor, other potential mechanisms—such as leadership styles, organizational structures, or cultural diversity—could be explored. Overall, this study contributes to the growing discourse on the role of managerial ability in shaping corporate culture. Future research could investigate how technological advancements, sustainability initiatives, or global market dynamics influence this relationship, providing deeper insights into how firms can leverage managerial talent to build resilient and adaptive corporate cultures.

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Tables

Table 1

Sample selection and industry distribution

Panel A: Sample selection		Observations			
Number of observations for the 2001-2021 period (after removing duplicates)		73,937			
Less: Insufficient dependent variables observations		2,867			
Total observation data available 2001–2021		58,203			
Less: Missing observations for control variables		356			
Final data 2001-2021		52,214			
Panel B: Industry distribution		Obs	%		
Information Technology (IT)		11,990	22.96		
Industrials		8,835	16.92		
Consumer Discretionary		8,755	16.77		
Health Care		8,111	15.53		
Energy		4,409	8.44		
Materials		4,058	7.77		
Communication Services		3,157	6.05		
Consumer Staples		2,582	4.95		
Financials		166	0.32		
Utilities		88	0.17		
Real Estate		63	0.12		
Total		52,214	100.00		
Panel C: Summary statistics					
Variables	Mean	Std. Dev.	p25	Median	p75
zCULTURE	0.0007	0.9721	-0.7179	-0.1810	0.5221
sCULTURE	15.409	6.1048	11.026	14.303	18.596
dCULTURE	0.5001	0.5000	0.000	0.000	1.0000
M_Ability	-0.0019	0.1434	-0.0867	-0.0315	0.0413
Size	6.9098	2.0096	5.5415	6.8659	8.2213
ROA	0.0742	0.1759	0.0473	0.1061	0.1588
MTB	7.1098	6.379	1.5542	2.7748	6.7857
TANG	0.0949	0.1606	0.0096	0.0321	0.0939
LEV	0.5388	0.2802	0.3402	0.5199	0.6854
Capex	0.0492	0.0554	0.0152	0.0309	0.0606
RND	0.2260	0.2179	0.0207	0.1145	0.4989
Growth	1.0918	1.0004	-0.1168	0.1143	0.6474
OCF	0.0755	0.1722	0.0469	0.1053	0.1580
CEO_Dual	0.6156	0.0413	0.5547	0.6250	0.6891
B_Size	13.070	2.0781	11	13	14
B_Tenure	17.926	5.0618	15.343	16.531	17.231
B_Skills	54.197	4.1766	54.376	54.429	56.156

This table presents the sample selection process, industry distribution, and summary statistics. Panel A details the sample selection steps, Panel B reports the industry distribution, and Panel C provides summary statistics, including the mean, standard deviation, and key percentiles for the study variables.

Table 2

Correlation matrix

Variables	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)
(1) zCULTURE	1.000														
(2) M_Ability	0.069*	1.000													
(3) Size	-0.237*	0.130*	1.000												
(4) ROA	0.253*	0.163*	0.214*	1.000											
(5) MTB	0.098*	0.104*	0.142*	-0.047*	1.000										
(6) TANG	0.181*	0.121*	-0.119*	-0.197*	0.010*	1.000									
(7) LEV	-0.045*	-0.028*	0.206*	-0.054*	0.238*	-0.135*	1.000								
(8) Capex	-0.178*	0.047*	0.095*	0.159*	0.021*	0.042*	0.026*	1.000							
(9) RND	-0.068*	-0.031*	-0.021*	-0.047*	-0.012*	-0.026*	0.114*	0.184*	1.000						
(10) Growth	0.030*	0.008	-0.148*	-0.074*	0.036*	0.011*	-0.025*	0.049*	0.035*	1.000					
(11) OCF	-0.258*	0.155*	0.215*	0.192*	-0.043*	-0.196*	-0.046*	0.174*	-0.038*	-0.078*	1.000				
(12) CEO_Dual	-0.060*	0.031*	0.096*	0.099*	-0.018*	-0.086*	0.029*	0.037*	-0.016*	-0.022*	0.098*	1.000			
(13) B_Size	-0.075*	-0.044*	-0.174*	-0.051*	0.057*	-0.069*	-0.017*	0.056*	0.057*	0.108*	-0.054*	0.035*	1.000		
(14) B_Tenure	-0.060*	-0.070*	-0.303*	-0.068*	0.055*	-0.042*	-0.074*	0.057*	0.081*	0.116*	-0.071*	0.050*	0.134*	1.000	
(15) B_Skills	-0.031*	-0.056*	-0.168*	-0.048*	0.045*	-0.017*	-0.033*	0.026*	0.027*	0.064*	-0.048*	-0.001	0.243*	0.289*	1.000

This table presents the Pearson correlation coefficients between key variables. Asterisks (*) indicate statistical significance.

Table 3
Regression results- Managerial ability and corporate culture

	(1)	(2)	(3)
M_Ability	0.0498** (0.0274)	0.3042* (0.1671)	0.0288* (0.0171)
Size	-0.0135** (0.0060)	-0.0825** (0.0367)	-0.0111*** (0.0037)
ROA	0.4919*** (0.1312)	0.0028*** (0.1008)	0.0431 (0.0817)
MTB	0.0009* (0.0005)	0.0056* (0.0029)	0.0001 (0.0003)
TANG	0.0767*** (0.0269)	0.4680*** (0.1643)	0.0365** (0.0168)
LEV	-0.0500** (0.0197)	-0.3053** (0.1204)	-0.0225* (0.0123)
Capex	0.1298 (0.0819)	0.1921 (0.4998)	-0.0184 (0.0510)
RND	-0.0094 (0.0361)	-0.0577 (0.2203)	-0.0219 (0.0225)
Growth	0.0029** (0.0011)	0.0178** (0.0069)	0.0011 (0.0007)
OCF	-0.7790*** (0.1369)	-0.7559*** (0.8355)	-0.1683** (0.0853)
CEO_Dual	-0.0332** (0.0160)	-0.2028** (0.0979)	-0.0368*** (0.0100)
B_Size	0.0076** (0.0031)	0.0466** (0.0188)	0.0033* (0.0019)
B_Tenure	0.0000 (0.0015)	0.0000 (0.0092)	-0.0004 (0.0009)
B_Skills	-0.0009 (0.0008)	-0.0055 (0.0048)	-0.0008 (0.0005)
Constant	0.0865 (0.0653)	0.9372*** (0.3989)	0.6280*** (0.0407)
Y/F/I/S FE	Yes	Yes	Yes
Observations	52,214	52,214	52,214
Adjusted R ²	0.7092	0.7091	0.5511

This table presents the results of panel regression analyses examining the relationship between managerial ability and corporate culture. Columns (1), (2), and (3) correspond to zCULTURE, sCULTURE, and dCULTURE, respectively, which are three alternative measures of corporate culture. Robust standard errors are presented in parentheses, with ***, **, and * indicating statistical significance at the 1%, 5%, and 10% levels (two-tailed), respectively. Y: Year; F: Firm; I: Industry; S: State. FE: Fixed Effects.

Table 4
Industrial heterogeneity analyses

	Energy	Materials	Industrials	Consumer Discretionary	Consumer Staples	Health Care	Financials	Information Technology (IT)	Communication Services	Utilities	Real Estate
M_Ability	0.2146*** (0.0622)	0.2419** (0.0951)	0.2293*** (0.0781)	0.0406 (0.0796)	-0.3116*** (0.1095)	-0.0982* (0.0544)	0.3722 (0.1179)	0.0652 (0.0697)	0.2569** (0.1198)	2.5316** (1.2019)	0.0536 (0.7311)
Size	0.0188 (0.0152)	0.0216 (0.0204)	-0.0490*** (0.0151)	-0.0603*** (0.0159)	-0.0071 (0.0265)	-0.0407*** (0.0157)	0.1525 (0.1741)	0.0086 (0.0136)	0.1300*** (0.0260)	-0.1219 (0.4723)	-0.3629 (0.2165)
ROA	0.0452 (0.1288)	-0.1360 (0.4289)	0.0305 (0.7098)	0.2701 (0.5042)	-1.7094 (3.4498)	0.1830 (0.5428)	5.2123 (14.2510)	3.9030*** (0.7401)	-0.0859 (0.6711)	4.5432 (3.4853)	1.9367 (1.5064)
MTB	0.0016 (0.0012)	0.0040*** (0.0015)	0.0007 (0.0011)	-0.0015 (0.0011)	0.0005 (0.0020)	0.0018 (0.0012)	-0.0041 (0.0094)	0.0029** (0.0012)	0.0013 (0.0020)	-0.0148 (0.0154)	0.0056 (0.0109)
TANG	-0.0647 (0.0953)	0.0057 (0.1389)	0.0697 (0.0892)	0.1272 (0.0994)	-0.4393** (0.2067)	-0.0934* (0.0507)	0.3545 (0.5901)	0.1612*** (0.0537)	0.3775** (0.1469)	3.0293 (2.1015)	-0.2822 (0.7743)
LEV	-0.0638 (0.0554)	-0.2952*** (0.0730)	-0.0231 (0.0523)	0.0514 (0.0470)	-0.0083 (0.0996)	-0.1264*** (0.0453)	0.6224 (0.7040)	-0.1419*** (0.0430)	0.0457 (0.1024)	0.5043 (0.6895)	-0.4633 (0.6708)
Capex	0.0322 (0.1359)	0.0364 (0.2318)	0.1036 (0.1962)	-0.0724 (0.2109)	0.9981*** (0.3872)	0.2480 (0.2856)	2.7600 (2.1193)	0.2951 (0.2387)	-0.8057* (0.4405)	-0.9827 (5.7660)	-0.0403 (1.2788)
RND	-0.1368 (0.0886)	0.0470 (0.0935)	0.1447* (0.0867)	0.0644 (0.0819)	-0.2647** (0.1087)	-0.2162** (0.1082)	-0.6801 (0.9101)	0.3052*** (0.1121)	-0.0465 (0.1352)	-1.0336 (0.8055)	-10.4925 (13.2801)
Growth	0.0048* (0.0027)	-0.0046 (0.0033)	0.0041 (0.0028)	-0.0044 (0.0030)	0.0005 (0.0049)	0.0103*** (0.0028)	-0.0033 (0.0218)	0.0027 (0.0025)	-0.0033 (0.0054)	0.0204 (0.0400)	0.0663 (0.0439)
OCF	-0.2711* (0.1638)	-0.2103 (0.4523)	-0.2759 (0.7179)	-0.5964 (0.5145)	1.9090 (0.4463)	-0.3702 (0.5479)	-0.8232 (1.1078)	-0.2262*** (0.7423)	-0.3925 (0.7052)	-0.1143 (0.7840)	-0.2009 (1.8098)
CEO_Dual	-0.1036** (0.0444)	-0.0305 (0.0433)	-0.0316 (0.0327)	-0.0810** (0.0380)	-0.0329 (0.0640)	0.0310 (0.0430)	-0.1004 (0.5966)	-0.0292 (0.0390)	0.0411 (0.0948)	-0.0127 (0.0040)	-0.1040 (0.2229)
B_Size	-0.0001 (0.0081)	0.0230** (0.0093)	-0.0014 (0.0063)	0.0141* (0.0075)	-0.0083 (0.0114)	0.0175** (0.0089)	-0.0498 (0.0802)	0.0149** (0.0075)	0.0230 (0.0152)	0.3085 (0.0223)	-0.0598 (0.0533)
B_Tenure	-0.0007 (0.0040)	0.0003 (0.0043)	0.0026 (0.0030)	-0.0026 (0.0037)	0.0052 (0.0050)	-0.0087** (0.0042)	-0.0003 (0.0416)	-0.0026 (0.0040)	-0.0145** (0.0070)	-0.0335 (0.0087)	-0.0287 (0.0260)
B_Skills	-0.0016 (0.0023)	-0.0010 (0.0018)	-0.0008 (0.0015)	-0.0006 (0.0020)	-0.0009 (0.0023)	0.0041* (0.0024)	0.0114 (0.0105)	-0.0045** (0.0021)	-0.0018 (0.0045)	-0.0577 (0.0025)	0.0036 (0.0094)
Constant	-0.5279*** (0.1904)	-0.8930*** (0.2072)	0.1141 (0.1495)	0.3431** (0.1708)	-0.1472 (0.2841)	0.3468** (0.1731)	-0.8577 (1.4569)	0.4021*** (0.1494)	-0.4238 (0.3445)	-6.5579 (5.5600)	6.1811 (4.7122)
Y/F/S FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	4,409	4,058	8,835	8,755	2,582	8,111	166	11,990	3,157	88	63
Adjusted R ²	0.5779	0.5359	0.6451	0.6587	0.6259	0.5950	0.7638	0.7175	0.7241	0.6805	0.6592

This table presents the results of panel regression analyses examining the relationship between managerial ability and corporate culture across different industries. Robust standard errors are presented in parentheses, with ***, **, and * indicating statistical significance at the 1%, 5%, and 10% levels (two-tailed), respectively. Y: Year; F: Firm; S: State. FE: Fixed Effects.

Table 5

Channel analysis- Managerial ability and corporate culture

Panel A: Baron and Kenny's (1986) causal step regression – Mediating role of corporate governance (direct approach)				
	Corporate culture	CG	Corporate culture	Corporate culture
	(1)	(2)	(3)	(4)
M_Ability	0.0498*** (0.0273)	0.2781*** (0.0101)		0.0492** (0.0274)
CG			0.0249*** (0.0125)	0.0218* (0.0125)
All controls	Yes	Yes	Yes	Yes
Constant	0.0864*** (0.0653)	2.5383*** (0.0242)	0.0327*** (0.0726)	0.0312 (0.0727)
Y/F/I/S FE	Yes	Yes	Yes	Yes
Observations	52,214	52,214	52,214	52,214
Adjusted R ²	0.7092	0.7735	0.7092	0.6726
Panel B: Mediating role of corporate governance (Indirect path analysis)				
M_Ability → CG → Corporate culture				
Sobel test p-value			0.0009***	
Aroian test p-value			0.0036***	
Goodman test p-value			0.0024***	

This table reports on the mediation regression results of corporate governance on the relationship between managerial ability and corporate culture. Panel A1 presents Baron and Kenny's (1986) causal step regression results (direct approach). Panel A2 reports the result of indirect path effects using three approaches, i.e., Sobel-, Aroian-, and Goodman tests. Detailed definitions of variables are provided in the Appendix. All regressions control for industry, state, and year fixed effects. The t-statistics are based on standard errors clustered by firm and year. The t-statistics are reported in parentheses. ***, **, and * denote significance at the 1%, 5%, and 10% levels, respectively.

Table 6

Regression results- Managerial ability and corporate culture elements

	Integrity	Teamwork	Innovation	Respect	Quality
Alt_M_Ability	0.0009 (0.0445)	0.0793** (0.0531)	0.0307** (0.0772)	0.1459** (0.0613)	0.0474 (0.0462)
Size	-0.0413*** (0.0098)	-0.0322*** (0.0117)	0.1090*** (0.0169)	-0.1022*** (0.0135)	-0.0159 (0.0101)
ROA	0.2782 (0.2135)	0.2356 (0.2544)	1.3774*** (0.3699)	0.7181** (0.2940)	0.3936* (0.2214)
MTB	0.0001 (0.0008)	0.0001 (0.0009)	0.0011 (0.0013)	0.0019* (0.0011)	0.0023*** (0.0008)
TANG	0.1062** (0.0438)	0.0041 (0.0522)	0.1618** (0.0759)	0.1667*** (0.0603)	0.0292 (0.0454)
LEV	0.1094*** (0.0321)	-0.0621 (0.0383)	-0.0710 (0.0556)	-0.2353*** (0.0442)	-0.0462 (0.0333)
Capex	-0.5619*** (0.1333)	-0.5039*** (0.1588)	0.4228* (0.2309)	-0.1267 (0.1835)	1.5618*** (0.1382)
RND	0.1345** (0.0587)	0.1921*** (0.0700)	-0.0696 (0.1018)	-0.1933** (0.0809)	-0.1214** (0.0609)
Growth	-0.0008 (0.0018)	-0.0008 (0.0022)	0.0064** (0.0032)	0.0040 (0.0025)	0.0090*** (0.0019)
OCF	-0.5992*** (0.2228)	-0.8288*** (0.2654)	-1.6083*** (0.3860)	-1.2347*** (0.3068)	-0.4848** (0.2311)
CEO_Dual	-0.0186 (0.0261)	0.0028 (0.0311)	-0.1401*** (0.0452)	0.0026 (0.0359)	-0.0496* (0.0271)
B_Size	-0.0080 (0.0050)	0.0051 (0.0060)	0.0521*** (0.0087)	-0.0012 (0.0069)	-0.0014 (0.0052)
B_Tenure	0.0031 (0.0025)	0.0011 (0.0029)	-0.0125*** (0.0043)	0.0060* (0.0034)	0.0022 (0.0025)
B_Skills	-0.0002 (0.0013)	0.0007 (0.0015)	-0.0033 (0.0022)	-0.0008 (0.0018)	-0.0018 (0.0013)
Constant	2.6622*** (0.1064)	2.7325*** (0.1267)	3.8547*** (0.1843)	3.8752*** (0.1465)	2.8126*** (0.1103)
Y/F/I/S FE	Yes	Yes	Yes	Yes	Yes
Observations	52,214	52,214	52,214	52,214	52,214
Adjusted R ²	0.4984	0.6715	0.7134	0.7000	0.6643

This table presents the results of panel regression analyses examining the impact of managerial ability on different corporate culture elements: integrity, teamwork, innovation, respect, and quality. Robust standard errors are presented in parentheses, with ***, **, and * indicating statistical significance at the 1%, 5%, and 10% levels, respectively. Y: Year; F: Firm; I: Industry; S: State. FE: Fixed Effects.

Table 7
Endogeneity analyses

	(1)	(2)
Alt_M_Ability	0.0595** (0.0282)	
Alt_M_Ability_In		0.0906*** (0.0298)
Size	0.1125*** (0.0055)	0.1128*** (0.0055)
ROA	0.4735*** (0.1349)	0.4645*** (0.1349)
MTB	0.0031*** (0.0005)	0.0031*** (0.0005)
TANG	0.0321 (0.0270)	0.0314 (0.0270)
LEV	0.0489** (0.0201)	0.0494** (0.0201)
Capex	-0.1859** (0.0831)	-0.1891** (0.0831)
RND	0.0173 (0.0372)	0.0148 (0.0372)
Growth	-0.0019* (0.0010)	-0.0019* (0.0010)
OCF	-0.8592*** (0.1409)	-0.8582*** (0.1409)
CEO_Dual	-0.0662*** (0.0165)	-0.0662*** (0.0165)
B_Size	-0.0163*** (0.0031)	-0.0164*** (0.0031)
B_Tenure	-0.0066*** (0.0015)	-0.0066*** (0.0015)
B_Skills	-0.0011 (0.0008)	-0.0011 (0.0008)
Constant	-0.3661*** (0.0657)	-0.3671*** (0.0657)
Y/F/I/S FE	Yes	Yes
Observations	52,214	52,214
Adjusted R ²	0.2163	0.2253

This table presents the results of instrumental variable regression analyses assessing the robustness of the relationship between managerial ability and corporate culture. Robust standard errors are presented in parentheses, with ***, **, and * indicating statistical significance at the 1%, 5%, and 10% levels (two-tailed), respectively. Y: Year; F: Firm; I: Industry; S: State. FE: Fixed Effects.

Table 8
Robustness Tests- Propensity score matching (PSM) analysis

Panel A: First-stage propensity score matching	
Size	-0.0774*** (0.0132)
ROA	0.1041*** (1.2497)
MTB	0.0149*** (0.0016)
TANG	0.9752*** (0.1061)
LEV	-0.3053*** (0.0745)
Capex	1.1902*** (0.3313)
RND	0.1348 (0.1099)
Growth	0.0062 (0.0040)
OCF	-0.7087*** (1.2651)
CEO_Dual	0.3437*** (0.0765)
B_Size	0.0577*** (0.0153)
B_Tenure	-0.0458*** (0.0069)
B_Skills	-0.0064* (0.0034)
Constant	-0.2195 (1.2346)
Y/F/I/S FE	Yes
Observations	52,214
Adjusted R ²	0.4558
Panel B: Second stage regression	
Fitted_MA_Ability	0.1325*** (0.0115)
Constant	0.4626*** (0.0822)
Y/F/I/S FE	Yes
Observations	52,214
Adjusted R ²	0.4007

This table presents the results of propensity score matching (PSM) analysis to test the robustness of the relationship between managerial ability and corporate culture. Panel A reports the results of the first-stage logistic regression used to estimate propensity scores. Panel B presents the second-stage regression results using the fitted propensity scores from Panel A. Robust standard errors are presented in parentheses, with ***, **, and * indicating statistical significance at the 1%, 5%, and 10% levels (two-tailed), respectively. Y: Year; F: Firm; I: Industry; S: State. FE: Fixed Effects.

Table 9**Robustness tests- Entropy balancing**

Panel A: Balance of covariate						
Unweighted						
	Treated group			Baseline group		
Variables	Mean	Variance	Skewness	Mean	Variance	Skewness
Size	6.939	4.895	0.136	6.881	3.18	0.0395
ROA	0.0986	0.0273	-2.124	0.0497	0.0333	-2.453
MTB	10.03	189.8	1.484	8.187	166.5	1.841
TANG	0.1067	0.0276	2.433	0.0830	0.0236	3.316
LEV	0.5232	0.0820	1.064	0.5544	0.0744	0.9282
Capex	0.0520	0.0034	2.31	0.0464	0.0026	2.692
RND	0.2161	0.0446	0.4549	0.2358	0.0501	0.2356
Growth	1.131	7.954	1.086	1.052	7.727	1.19
OCF	0.0986	0.0268	-2.021	0.0522	0.0313	-2.422
CEO_Dual	0.625	0.0596	-0.7585	0.6062	0.0566	-0.8219
B_Size	13.04	4.318	-2.102	13.1	4.317	-2.196
B_Tenure	17.78	26.34	-1.689	18.07	24.86	-1.927
B_Skills	54.1	20.37	-10.22	54.29	14.5	-11.52
Weighted						
	Treated group			Baseline group		
Variables	Mean	Variance	Skewness	Mean	Variance	Skewness
Size	6.939	4.895	0.136	6.94	2.95	0.2857
ROA	0.0986	0.0273	-2.124	0.0986	0.0167	-1.898
MTB	10.03	189.8	1.484	10.04	204.5	1.431
TANG	0.1067	0.0276	2.433	0.1067	0.0309	2.715
LEV	0.5232	0.0820	1.064	0.5232	0.0726	0.8875
Capex	0.0520	0.0034	2.31	0.0520	0.0032	2.436
RND	0.2161	0.0446	0.4549	0.2161	0.0496	0.4089
Growth	1.131	7.954	1.086	1.131	7.615	1.233
OCF	0.0986	0.0268	-2.021	0.0986	0.0167	-1.821
CEO_Dual	0.625	0.0596	-0.7585	0.625	0.0576	-0.799
B_Size	13.04	4.318	-2.102	13.04	4.426	-2.077
B_Tenure	17.78	26.34	-1.689	17.78	27.65	-1.742
B_Skills	54.1	20.37	-10.22	54.1	21.42	-10.03
Panel B: Results from the entropy-balanced sample						
						(4)
Dep. Var.						CC
M_Ability						0.1421*** (0.0121)
Constant						0.4547*** (0.0847)
Y/F/I/S FE						Yes
Observations						52,214
Adjusted R ²						0.3984

This table presents the results of robustness tests using entropy balancing to examine the relationship between managerial ability and corporate culture. Panel A reports the balance of covariates between the treated and baseline groups, both before and after weighting. Panel B presents regression results using the entropy-balanced sample. Robust standard errors are presented in parentheses, with ***, **, and * indicating statistical significance at the 1%, 5%, and 10% levels (two-tailed), respectively. Y: Year; F: Firm; I: Industry; S: State. FE: Fixed Effects.

Table 10
Additional analysis - Heterogeneous effects

	High MA	Low MA
M_Ability	0.0871*** (0.0566)	0.0375 (0.1670)
Size	0.0663*** (0.0138)	-0.0443*** (0.0138)
ROA	0.5868* (0.3405)	0.3116* (0.1791)
MTB	0.0024** (0.0011)	0.0003 (0.0010)
TANG	0.1251** (0.0523)	-0.0347 (0.0598)
LEV	-0.0088 (0.0444)	-0.0662 (0.0420)
Capex	0.2507 (0.1877)	0.3716** (0.1751)
RND	0.1072 (0.0928)	-0.0707 (0.0714)
Growth	0.0077*** (0.0027)	-0.0016 (0.0024)
OCF	-0.7696** (0.3453)	-0.5895*** (0.2004)
CEO_Dual	-0.0349 (0.0320)	-0.0558 (0.0348)
B_Size	0.0226*** (0.0064)	-0.0079 (0.0067)
B_Tenure	-0.0067** (0.0031)	0.0073** (0.0032)
B_Skills	-0.0001 (0.0013)	-0.0032* (0.0016)
Constant	-0.6017*** (0.1472)	0.4892*** (0.1437)
Y/F/I/S FE	Yes	Yes
Observations	12,220	12,062
Adjusted R ²	0.7579	0.7455

This table presents the results of the subsample analysis, testing the robustness of the relationship between managerial ability (M_Ability) and corporate culture. The analysis examines whether this effect differs across managerial ability levels. Robust standard errors are reported in parentheses, with ***, **, and * denoting statistical significance at the 1%, 5%, and 10% levels (two-tailed), respectively. Y: Year; F: Firm; I: Industry; S: State; FE: Fixed Effects.