

# Are Ex-military Top Executives more Employee-friendly? Evidence from Around the World

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**ABSTRACT:** Using an international sample covering 52 countries, we find that companies run by top executives with military experience exhibit a significant improvement in employee-friendly strategies, with a particular improvement in workforce health and safety, career development and staff training, employment diversity, and working conditions performance. Notably, the enhanced employee-friendly treatment driven by these ex-military executives translates into higher firm value. Moreover, the positive effect of military-experienced executives on employee-friendly treatment is more prominent when the latitude of action afforded to top executives is stronger or when the firm is subject to weaker external monitoring. Next, we find that non-CEO executives with military experience play a critical role in propelling employee-friendly practices, confirming that active employee engagement is mainly driven by collective endeavor from all executives with military experience rather than solely from military-experienced CEOs. Overall, this article adds new insights to the literature on the role of managers' attributes in corporate decision-making processes by employing the upper echelons and imprinting theoretical perspectives.

**JEL classifications:** G32, G34, M12, M14

**Keywords:** Employee-friendly policies; executive team; firm value; imprinting effects; military experience; upper echelons theory

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*“People – not equipment – make the critical difference. The right people, highly trained and working as a team, will accomplish the mission with the equipment available. On the other hand, the best equipment in the world cannot compensate for a lack of the right people.”*

—SOF Truths, United States Special Operations Command<sup>1</sup>

## **1. Introduction**

This article delves into the impact of top executives with military service experience on employee-friendly treatment, and further examines the value implications of employee-friendly engagements driven by military-experienced executives. The corporate world has witnessed the great value brought by military-experienced executives (Li *et al.* 2023a). A growing body of evidence underscores the transferability of skills and values acquired through military service to the business domain, with potential positive ramifications for corporate strategies. For instance, listed companies such as General Electric and Wal-Mart, recognizing deficiencies in senior executive commitment and leadership, have embarked on appointing young military officers with service backgrounds in Afghanistan and Iraq to address issues pertaining to leadership (O’Keefe 2010).<sup>2</sup> Rigorous military training equips military-experienced executives with valuable leadership skills that lead to effective strategic decisions (Wong *et al.* 2003), such as improved acquisition outcomes (Lin *et al.* 2011) and superior financial performance during periods of industrial distress vis-à-vis firms without military-experienced executives (Benmelech & Frydman 2015). Beyond skills, the military imparts a foundational value system that places a paramount emphasis on human considerations. For example, integrity in the

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<sup>1</sup> <https://www.socom.mil/about/sof-truths#:~:text=Humans%20are%20more%20important%20than%20hardware.&text=The%20right%20people%2C%20highly%20trained,lack%20of%20the%20right%20people.>

<sup>2</sup> In the 1980s, over half of Standard & Poor’s 500 listed companies were headed by chief executives with military service experience, as indicated in Duffy (2006). The proportion of ex-military CEOs among Standard & Poor’s 500 listed entities remained approximately 8.4% in 2006 as World War II and Korean War veterans retired. The 8.4% figure is still substantial, posing positive leadership to the corporate elite (Duffy 2006). In our study sample between 2002 and 2017, approximately 31% of companies have at least one military-experienced executive.

military value system requires individuals to do and say nothing that deceives others, and encourages ethical decisions (Franke 2001). This emphasis on ethics has real-world implications, as research shows that auditors charge firms with military-experienced managers lower audit fees as these firms tend to be more ethical and less likely to engage in financial misconduct (Quan *et al.* 2023). In addition to integrity, the military particularly values respect, teamwork, and good citizenship. Soldiers often undergo rigorous team-building exercises and are trained to prioritize the well-being of their comrades. This sense of camaraderie fosters a strong commitment to the welfare of others. For example, the US Army Values specify:

*“...treat others with dignity and respect while expecting others to do the same...respect is trusting that all people have done their jobs and fulfilled their duty...being able to accomplish tasks as part of a team.”*<sup>3</sup>

Thus, military personnel are trained to cultivate human-centric values, thereby fostering mutual respect and care for one another and promoting enhanced teamwork. This aligns with the notion of corporate employee-friendly treatments, which fosters reciprocity that encourages employees to work diligently and creates an environment centered on teamwork and citizenship (Guo *et al.* 2016; Mao & Weathers 2019). While the motive of developing employee-friendly treatment aligns with military values, existing literature provides limited evidence on the impact of top executives’ military service experience on shaping corporate employee-related policies. We seek to fill this void in the literature by exploring the impact of executives’ military experience on firm employee-friendly strategies.

Economic theories have long perceived human capital as a critical resource for firms to achieve competitive advantages (Douglas 1976). As modern firms are becoming more human capital-intensive, human capital, rather than physical capital, emerged as the most crucial asset of a firm (Zingales 2000). Also, companies are increasingly operating within an institutional

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<sup>3</sup> <https://www.army.mil/values/>.

environment where they must manage crucial relationships with a growing number of labor unions because positive employee relations are key drivers of firm productivity and risk mitigation (Sambharya & Goll 2021). Policies governing employee treatment have raised significant public concerns over their economic and social consequences (Rosen *et al.* 2003; Luo *et al.* 2017). As such, firms increasingly devote resources to employee-friendly treatments to develop their human capital assets. Indeed, studies in this area have found that employee-friendly treatments help the firm to reduce the propensity for employee-related material weakness (Guo *et al.* (2016), recruit and retain valuable human capital (Perotti & Spier 1993; Cao & Rees 2020), encourage employees to discharge their responsibilities (Guo *et al.* 2016), and deter employee shirking (Shapiro & Stiglitz 1984). Thus, assessing the extent to which ex-military executives' values and preferences impact corporate employee-friendly policies may provide valuable insights for firms' long-term success.

We focus on the military experience of top executives for two reasons. First, extant literature has increasingly recognized the important role of executives' attributes in making corporate sustainability decisions (Li *et al.* 2022). The imprinting theory notes that events experienced in late adolescence and early adulthood, especially after leaving home, exert persistent and significant influence on personal characteristics later in life (Roberts *et al.* 2003; Caspi *et al.* 2005). Individuals typically join the military in adolescence or young adulthood; thus, military service experience can significantly shape the values and characteristics of military personnel (Koch-Bayram & Wernicke 2018). As the military value system emphasizes integrity, respect, and teamwork (Franke 2001),<sup>4</sup> it can alter military personnel's behaviors in various ways when they later become corporate executives (Tang *et al.* 2015). Second, the

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<sup>4</sup> When asked by Fortune why one in every four employees at Lockheed Martin Corporation had served in the military, CEO Robert Stevens responded as follows: *We hire veterans because it is good business. They have courage, integrity, honour and character. Moreover, they understand service and sacrifice in the interests of others. All that makes them good for our business. It is the right thing to do, and simply put, it is the very least that we can do.* See details at <https://archive.fortune.com/galleries/2012/fortune/1205/gallery.500-military-ceos.fortune/6.html>.

entire management team plays an extremely important role in modern firms (Ma *et al.* 2019). The theory of dominant coalition (Cyert & March 1963) asserts that the management team, an integral element, is the decision-making unit that determines corporate policies, including people-oriented strategies (Boone & Hendriks 2009). The conceptual perspective of upper echelon researchers argues that the demography-based characteristics such as education and practical experience, cognitive bias, and values of top executives are reflected in their business strategies and decisions (Hambrick & Mason 1984; Hambrick 2007). Thus, it is of vital importance to study the attitudes and values of top executives toward firms' employee-friendly practices. As executives with military experiences may value people-oriented activities, respect, teamwork and citizenship, we expect military executives to be more dedicated to corporate employees, and more likely to initiate efforts to improve workforce health and safety, offer support for employee career development, and maintain diversity and inclusivity.

We recognize that employee-friendly treatment is a global engagement and of interest to firms across the world. For example, by observing Unilever's global approach to employee-friendly treatment, it becomes evident that companies operating in various regions recognize the importance of creating positive and supportive work environments. The challenges and expectations related to employee well-being are not confined to a specific country or culture but are indeed a global concern for firms seeking to attract and retain top talent in a competitive and diverse marketplace. Since employee-friendly treatments can be affected by variations in national conscription policies, economic development, legal origins, and institutional culture, results from a single-country analysis may not be able to be generalized. To achieve our research objective of assessing generalizability, it is essential to consider large cross-sectional variations in our sample. An international cross-country sample allows us to control for extraneous factors and verify whether the variation in employee-friendly treatment is primarily driven by the intrinsic human-centric leadership instilled by military service experience.

Although there might exist sample distribution issues when adopting an international sample, these issues have been addressed by the Weighted Least Square model and a number of sensitivity tests.

Using an international sample comprising observations across 52 countries from 2002 to 2017, we find that companies led by military-experienced executives are linked to significantly higher scores on employee treatment. This positive impact is economically significant, suggesting that the employee treatment rating is 4.86% higher for companies run by military-experienced top executives than for companies without. Also, a positive relationship between the percentage of ex-military executives on the top management team (TMT) and firm employee-friendly treatment is found. Further, we find that the improved overall employee-friendly treatment is driven by workforce health and safety, career development and training, diversity and inclusion, and working environments dimensions. Importantly, we reveal that the employee-friendly practice improvement in companies run by ex-military executives can further translate into higher firm value. We also find that the positive influence of military-experienced executives is more pronounced when the latitude of actions afforded to top managers is stronger or when the firm is subject to weak external monitoring, affirming that the effect is indeed driven by executives.

To mitigate potential endogeneity concerns, we conduct several additional tests. One source of the endogeneity could be reverse causality, as military executives might be more inclined to join firms that have already adopted better employee-friendly treatments. Alternatively, there can be potential “executive-firm matching” as firms may selectively choose military executives to accommodate specific changes in employee-friendly treatment policies. Moreover, observed and unobserved firm heterogeneity correlated with both ex-military executives and employee-friendly treatment scores may influence our results. We address these potential endogeneity concerns in several ways. First, we use firm fixed effects

in additional tests to control for time-invariant firm heterogeneity. Second, we explore the impact of changes in the number of military-experienced top executives on subsequent changes in employee treatment scores to alleviate potential concerns related to executive-firm matching. In addition, we employ a dynamic system GMM estimation to address potential bias related to the dynamic nature of our key independent variable and the dependent variable. Furthermore, we use the number of top managers of each firm who were born before the Korean War or Vietnam War as an instrumental variable in an instrumental variable two-stage least square (IV-2SLS) approach to address concerns caused by unobserved firm heterogeneity. Finally, we employ propensity score matching and entropy balancing approaches to address concerns related to differences in observable firm characteristics between firms with and those without executives. Our main results withstand these analyses and remain robust across various sensitivity tests.

This study offers several important contributions to the literature. First, we update the literature on corporate outcomes of the management team by contributing to the upper echelons theoretical framework (Hambrick & Mason 1984; Buyl *et al.* 2014). Specifically, we are the first to examine how military service experience influences top executives' attitudes toward employee-friendly activities. We also study market reactions to employee-friendly treatments facilitated by military-experienced executives in an international context, with a further look at firms' effectiveness in terms of addressing employee relations, improving workforce health and safety, providing career development support, and maintaining employment diversity and inclusion. Prior studies on the consequences of managerial military experience mainly focus on leadership skills (Wong *et al.* 2003), or consequences influenced by their ethical values, such as financial disclosure styles (Bamber *et al.* 2010), policies conservativeness (Benmelech & Frydman 2015), tax avoidance (Law & Mills 2017), audit fees (Quan *et al.* 2023), firm environmental strategies (Zhang *et al.* 2022), earnings quality (Li *et al.* 2023a), and corporate

violations (Zhang *et al.* 2023). Notably, although Zhang *et al.* (2022) mainly investigate the influence of military-experienced CEOs and chairmen on pollution and environmental innovation, their studies align with the strand of literature studying the importance of ethical values of military executives. Our study, however, focuses on another crucial aspect highly valued by the military - human-centric values of respect, teamwork, and citizenship. We demonstrate that these human-centric values lead to positive outcomes in workforce safety, wage disputes, promotion, anti-discrimination, anti-harassment issues, and other elements related to employment treatment. Our finding is also different from Luo *et al.* (2017), who find a negative link between ex-military executives and corporate donations using the Chinese context. Although executives' military experience may have occurred decades before individuals entered the corporate world, our findings demonstrate that the imprinting effect of military experience is not easily shed, but persists in top executives' decision-making. Most importantly, we argue that military values, such as people orientation, respect, citizenship, and teamwork, are important values that should be cherished by the corporate world. Hence, we enrich the ever-growing literature on the corporate outcomes of military-experienced executives and leadership by providing labor-friendly practice implications of managerial military experience.

Second, we add to the literature on the determinants of employee-friendly treatments and identify the specific employee-friendly policies driven by ex-military executives. Prior research has documented that employee-friendly policies are influenced by industry competition (Chang & Jo 2019), family firms' characteristics (Kang & Kim 2020), and corporate governance (Landier *et al.* 2009). Our study uncovers the managers' military experience as one of the crucial mechanisms that have the potential to facilitate labor-friendly practices.



Third, our study sheds light on the burgeoning research focusing on the valuation of employee-friendly treatments (Fauver *et al.* 2018; Chang & Jo 2019; Gupta & Krishnamurti 2020). Prior literature has established that people-oriented engagement driven by cross-listing (Boubakri *et al.* 2016) or talented insider directors (Bu *et al.* 2021) can further translate into higher firm value. Our evidence demonstrates that companies managed by military-experienced executives embrace better employee treatment, which is positively valued by investors, thereby helping to achieve the economic objectives of a firm.

This study proceeds as follows. Section 2 reviews the literature and develops hypotheses. Section 3 presents the research design. Section 4 discusses the main findings and robustness checks. Section 5 addresses endogeneity concerns, with the final section offering the study's conclusions.

## **2. Literature review and hypothesis development**

### ***2.1 Upper echelons and imprinting theoretical perspectives***

Our study grounds its theoretical framework in the upper echelons theory (UET), which contends that top managers' experience, career backgrounds, skills, and cognitive-oriented values exert significant influence on their business decisions and, ultimately, the company's financial and non-financial performance (Hambrick & Mason 1984; Hambrick 2007). This is because such backgrounds shift top executives' focus, form their values, and affect their interpretations of and sensitivities to the surrounding environment, which in turn affects their decision-making choices (Hambrick & Mason 1984; Parker 2014). Based on this, we posit that demographic backgrounds may also affect executives' social accountability values (Reimer *et al.* 2018) and offer explanations for differential people-oriented strategies across companies.

In a pioneering study, Stinchcombe (1965) formally introduced the notion of imprinting effects to the organizational theory, stimulating studies on imprinting effects that reflect characteristics of the corresponding environment at different levels (Johnson 2007). In their

review of the imprinting theory, Marquis and Tilcsik (2013) note that a focal entity can generally help develop a series of attributes that may reflect prominent features of the external condition, and these attributes persist even when the environment undergoes significant changes over time. Since then, a growing body of psychology and sociology literature, coupled with practical evidence in many countries across the world, suggests that military service experience instils a value system that emphasizes ethics and societal devotion. For example, the US Army Operations Manual defines the core values shaping the character of military personnel as ‘appropriate subordination to political power, allegiance, obligation, selflessness, morality, respect for human rights and a sense of social responsibility (Li *et al.* 2023a). This includes an obligation to protect the country by doing the right thing and to serve the people in times of need, such as helping the poor in rural areas, offering medical support, and aiding in transportation projects. Therefore, the military experience may instil in soldiers a strong sense of social responsibility and devotion to society and human relations. Lin *et al.* (2011) contend that US-acquiring companies run by military-experienced executives are valued more positively by the market because of the military value system that propels individuals to value societal goals and pursue stakeholders’ interests. This phenomenon is also observed in emerging markets. For example, using data from South Korea, Kim *et al.* (2017) find that companies headed by military-experienced senior executives are more likely to pursue ethical conduct. In essence, the characteristics exhibited by military service personnel are evident across the business world, notably influencing the management cultures and governance structures of numerous countries.<sup>5</sup>

However, research on how ex-military executives influence corporate outcomes remains scarce. The existing studies on military executives predominantly concentrate on their

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<sup>5</sup> For instance, top executives from the military are less likely to be involved in tax avoidance (Law & Mills 2017) or corporate financial misconduct (Koch-Bayram & Wernicke 2018) and more likely to help provide a more transparent financial environment (Cao *et al.* 2019), which suggests that military experience may confer on top managers a stricter ethical and moral code.

ethical values. It is important to note that, aside from integrity, military personnel are trained to foster human-centric values like respect, teamwork, and citizenship. The influence of these human-centric values on the behaviors of military executives has not been studied in the current literature. Therefore, additional investigation is needed to offer new insights into how military experience affects the decision-making of top executives regarding human-centric policies, such as employee friendliness.

## ***2.2 How military-experienced top executives might affect employee-friendly treatment***

A few studies have offered evidence on how the demographic backgrounds of top managers affect a firm's sustainability engagement (Lau *et al.* 2016; Reimer *et al.* 2018; Li *et al.* 2022). The UET suggests that top executives' past experiences and values significantly impact their interpretation of the situations they face and, in turn, affect their choices (Hambrick & Mason 1984). However, the impact of the military experience of top executives—an important demographic characteristic, on employee-friendly strategies—is sparse in the literature. As mentioned previously, the military experience may provide a value system different from that of civilian life and can generate long-lasting, life-changing insights. Ex-military top executives may have different motivations and initiatives for employee-oriented engagement than other executives.

First, and most important, the military value system puts humans at its center, and personnel understand the value of human capital. For instance, the United States Special Operations Command (USSOCOM) specifies that humans are more important than hardware, as the right people, working as a team, can accomplish the mission with the equipment available, but not the other way around. Thus, compared to other executives, military-experienced executives may naturally value human capital more. In many countries around the world, the value of respect and loyalty in the military system requires soldiers to commit to their team, and look after and help their team members; in turn, other team members will act the same

way.<sup>6</sup> The human-centric values form citizenship, which aligns with the reciprocal behavior induced by employee-friendly treatment. Specifically, Akerlof (1982) and Rabin (1993) argue that employee-friendly treatment can be considered a ‘gift’ from the firm, and employees who receive more friendly treatment tend to reciprocate with greater efforts. Thus, developing employee-friendly treatment is in line with the respect, loyalty, and teamwork values of the military system.

Equally important, military individuals value duty and pay high regard to fulfill obligations. Better employee-friendly treatments incentivize employees to discharge their responsibilities (Guo *et al.* 2016) and not shirk (Akerlof 1984; Shapiro & Stiglitz 1984), consistent with military executives’ value of duty. Furthermore, the integrity value of the military system requires individuals to adhere to strict ethical codes and standards and values societal goals. Many armed forces worldwide have been paying increasing attention to the ethics education of their soldiers over the last decade (Baker 2015).<sup>7</sup> Managers with military service experience are imbued with ethics, honesty, dedication to society, and ‘doing the right thing’, which tends to significantly influence their decision making, including treating their employees ethically and friendly (Benmelech & Frydman 2015; Luo *et al.* 2017).

In addition, Benmelech and Frydman (2015) and Bamber *et al.* (2010) find that CEOs with military backgrounds value honesty, have a lower level of tolerance for ambiguity, and tend to pursue conservative investment and disclosure styles to mitigate risk. The stakeholder theoretical perspective contends that managers who are more conservative, cautious, and risk-averse are more likely to engage in philanthropic activities as these activities can generate

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<sup>6</sup> The US Army Values states that “*The basic building block of selfless service is the commitment of each team member to go a little further, endure a little longer, and look a little closer to see how he or she can add to the effort.*”, and the British Army Soldier's Values And Standards specify “*Loyalty is about supporting your teammates, looking after and helping them, putting their needs before your own, not letting them down, even when the going gets tough. In return, they will do the same for you.*”. See <https://www.army.mil/values/> and <https://www.army.mod.uk/who-we-are/our-people/a-soldiers-values-and-standards/>.

<sup>7</sup> Most armed forces provide ethics education only at senior levels (e.g., officers and senior non-commissioned officers). However, modern ethics training aims to ensure an ethical leadership and decision-making process across all ranks by targeting entry-level soldiers.

insurance-like moral capital among stakeholders and communities, which can moderate the impact on shareholder value of adverse events and offset firm risk in both the short and long terms (Godfrey 2005; El Ghouli *et al.* 2018). Since promoting the welfare of employees—regarded as important corporate personnel and social capital—can help reduce litigation and management risk (Kang 2013; Sambharya & Goll 2021), military-experienced managers may have incentives to do more to foster employee-friendly activities.

In sum, military-experienced executives can better understand the importance of human capital, respect employees, value citizenship, and emphasize commitment to the broader community; hence, it may instill in military personnel a strong sense of social responsibility to employees (Franke 2001). As positive employee relations are important for firms to develop their human capital and competitiveness (Perotti & Spier 1993) and gain moral legitimacy from employees (Koh *et al.* 2014; Sambharya & Goll 2021), developing employee-friendly treatments is crucial for firms to succeed in the modern business environment (Zingales 2000). Since the military value system overlaps with the motive of developing employee-friendly treatment, top executives who have served in the military may, therefore, possess a heightened sensitivity to employee benefits, making them more likely to champion employee welfare through improvements in employee-friendly treatment.

Hence, we form the following hypothesis to test whether companies run by ex-military top executives perform better in their employee-friendly activities than companies without such executives. More formally:

***Hypothesis 1:*** Companies with ex-military top executives are associated with higher future employee-friendly treatment scores than those without such executives.

### ***2.3 Does the employee treatment dominated by ex-military top executives affect firm value?***

Given that we have anticipated a tendency to facilitate employee-friendly policies on the part of military-experienced executives, a follow-up research question is whether these ex-

military executives enhance the value of employee-friendly strategies for firms. Prior studies reveal that employee-friendly treatments help the firm to recruit and retain talented employees (Perotti & Spier 1993; Cao & Rees 2020), motivate employees to fulfil their duties (Guo *et al.* 2016), deter employee shirking (Shapiro & Stiglitz 1984; Yellen 1995), and encourage high-quality innovation (Mao & Weathers 2019). As a result, firms with better employee-friendly treatments may experience high productivity. In addition, employee-friendly treatments convey positive signals on stakeholder-oriented engagement and, thus, propels stakeholders to continuously support the corporate business (Ferrell *et al.* 2016; Lins *et al.* 2017) as good stakeholder-oriented activities help to retain talented people and attract outsiders' financial support (Deng *et al.* 2013). As a result, the positive impact of employee-friendly treatments may be reflected in the firm's market value.

Arguably, a different perspective may also exist. The agency theory contends that an investment in non-market strategy activities (e.g., firm-level people-oriented practices) may reflect poor incentives among top executives that could impede other prospective investment opportunities (Bhandari & Javakhadze 2017). Broader people-oriented activities may also be utilized as a reputation-building tool at the expense of shareholder wealth (Krüger 2015). However, we posit that employee-friendly strategies advocated by ex-military executives are less likely to result from reputation-building or the pursuit of personal benefit. Ex-military officers may inherently enjoy a higher level of social legitimacy than their peers who lack military experience. For example, as suggested by Wolford and Ritter (2016) and Luo *et al.* (2017), the public may have an inherent respect for military service personnel who play important roles in various public functions, such as maintaining social order and national security. As such, military-experienced top executives may provide companies with unique advantages in terms of social legitimacy, which potentially increments firm value and helps achieve a 'win-win' situation in the long run. Thus, these managers are less likely to employ

employee-friendly strategies opportunistically, which would generate negative investor perceptions. Based on this ‘doing well by doing good’ notion, we hypothesize the following:

***Hypothesis 2:*** Employee-friendly treatment improvement in companies run by military-experienced top executives will be positively associated with higher firm value.

### **3. Research design**

#### ***3.1 Sample and data***

We identify our key variables for executives with military backgrounds using BoardEx, which has compiled a full list of company directors, senior executives, and disclosed earners, providing historical employment information on each of these individuals since 1999. BoardEx data have been widely used in prior studies (Koch-Bayram & Wernicke 2018; Simpson & Sariol 2018; Hegde & Mishra 2019). Executives with the ‘Armed Forces’ label are classified as ex-military executives. To provide a more comprehensive and detailed view of senior executives’ military experience, we manually collected information from corporate filings archived by Bloomberg to supplement information obtained from BoardEx.<sup>8</sup>

We then collect data on corporate employee treatment and its dimension scores from the Thomson Refinitiv ESG database via the WRDS platform. Specifically, the *EMPLOYEE TREATMENT* score (also known as Workforce performance under the ‘Social’ pillar in Refinitiv) is an overall measurement of a company’s effectiveness in terms of providing job satisfaction, a healthy and safe workplace, maintaining diversity, employee relations, equal opportunities, and development opportunities for its workforce. It has the following four dimensions: *HEALTH & SAFETY*, *CAREER DEVELOPMENT*, *DIVERSITY*, and *WORKING CONDITIONS*. More specifically, *HEALTH & SAFETY* measures a firm’s effectiveness in

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<sup>8</sup> For example, Alex Gorsky, the CEO/Chairman of Johnson & Johnson, was a member of the Army’s elite Rangers and served in Europe, the US, and Panama. This West Point graduate served in the Army for six years, eventually achieving the rank of captain. He began his career in sales at the health products giant and rose up the ranks of J&J to become the CEO in 2012. See <https://www.bloomberg.com/profile/person/16239711> and <https://fortune.com/2019/04/17/johnson-johnson-ceo-alex-gorsky-leadership/>.

terms of providing workforce health and safety. *CAREER DEVELOPMENT* measures a firm's effectiveness with respect to providing career development opportunities and training hours for its workforce. *DIVERSITY* measures how well the firm deals with workforce diversity and opportunity (e.g., employee promotion, anti-discrimination, and anti-harassment). *WORKING CONDITIONS* measures a firm's effectiveness in addressing employee relations or wage dispute issues. Higher scores indicate better employee-friendly strategies. We start our analysis from 2002, as it is the first year when Thomson began providing the history record of *EMPLOYEE TREATMENT* performance and its dimensions.

Next, we combine the data on managers' military backgrounds at the firm level with the *EMPLOYEE TREATMENT* data from the Thomson Refinitiv ESG database. This generates an initial sample of 48,957 firm-year observations. We then exclude 9,296 financial industry observations from the sample. Next, we remove firm-year observations in India from all analyses because India is the first and the only country that requires mandatory corporate social responsibility expenditures (Kapoor & Dhamija 2017; Manchiraju & Rajgopal 2017).<sup>9</sup> Including this country in our sample might complicate the assessment of whether the employee treatment decision is driven by ex-military executives themselves or is influenced by country-level policies. This leads to a sample of 39,044 firm-year observations. After requiring non-missing data on military experience, employee treatment score, and control variables, we are left with a final sample of 30,885 firm-year observations, including 4,781 public corporations across 52 countries between 2002 and 2017.

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<sup>9</sup> Mandatory sustainability spending is different from mandatory sustainability disclosure. For example, in 2008, the China Securities Regulatory Commission (CSRC) required specific listed companies on the Shanghai Stock Exchange (SSE) to issue sustainability reports with their annual reports, but this mandatory policy does not require companies to spend on sustainable issues (Xue *et al.* 2022). Similarly, listed companies on the Australian Stock Exchange have been required to make an annual responsibility report since 2001 (Corporations Act 2001), but there are no requirements on sustainability spending. We found many similar cases across the world, including Belgium, Canada, Denmark, France, the Netherlands, Norway, and Sweden (Dhaliwal *et al.* 2014).



### 3.2 Econometric model

To test our conjecture, we follow Dyck *et al.* (2019) to specify the following regression model with year, industry, and country fixed effects.<sup>10</sup>

$$EMPLOYEE\ TREATMENT_{i,t} = \alpha + \beta_1 MILITARY\_D_{i,t-1} (\text{or } MILITARY\_RATIO_{i,t-1}) + \beta_2 CONTROL_{i,t-1} + D_{year} + D_{industry} + D_{country} + \varepsilon_{i,t}, \quad (1)$$

where *EMPLOYEE TREATMENT* is a performance measure of the overall employee-friendly policies of corporation *i* in year *t* and *MILITARY\_D* is a categorical variable equal to one if a company has at least one military-experienced executive on the management team in a given fiscal year, and set to zero otherwise. Specifically, we follow Luo *et al.* (2017), Wiengarten *et al.* (2017), Reimer *et al.* (2018), and Ma *et al.* (2019) to define the management team as comprising senior managers who are directly involved in business strategy decision making, investment and financing activities, including the company's chief executive officer (CEO), executive chairman, chief financial officer (CFO), chief operating officer (COO), vice president, general manager/managing director, deputy general manager, chief accountant, and vice manager. Alternatively, to capture the impact of the proportion of ex-military executives within the company, we employ *MILITARY\_RATIO*, which is measured as the percentage of executives having military experience. According to our theoretical inferences, the estimates on *MILITARY\_D* and *MILITARY\_RATIO* are expected to be positive.

Following prior literature (Ferrell *et al.* 2016; McGuinness *et al.* 2017; Chang & Jo 2019; Dyck *et al.* 2019; Artiga González *et al.* 2022), we control for an array of important variables (*CONTROL*). Specifically, we control for company age (*FIRM\_AGE*), measured as the natural logarithm of one plus the number of years since listing, and size (*FIRM\_SIZE*), measured as the natural logarithm of the book value of total assets, because older and larger companies have sufficient resources which matter in promoting effective employee-friendly

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<sup>10</sup> We follow Brammer and Pavelin (2006) to use the Thomson Refinitiv industry and country categories.

strategies. We account for *TANGIBILITY*, the ratio of property, plant, and equipment to total assets, to measure credit constraints. The *LEVERAGE* ratio is calculated as the book value of total debts scaled by the book value of total assets. Return on assets (*ROA*) is measured as the earnings before interest and taxes (*EBIT*) scaled by the book value of total assets. We predict a positive sign for *ROA*, since more profitable entities may have more financial resources to perform socially responsible initiatives. Tobin's Q (*TOBINQ*) is a proxy for growth opportunities. Free cash flow (*FCF*), the ratio of net operating cash flow over total assets, is included as a control as companies with sufficient financial slack reserves are more able to engage in employee benefit-related practices. A firm's research and development (*R&D*) intensity is important in corporate sustainable development. Companies may choose to expend fewer resources on people-oriented activities if there is a strong inclination toward *R&D* (Pavelin & Porter 2008). According to the resource-based view, *R&D* expenditures and responsible investment may help to generate valuable resources and competitive advantages, leading to a positive link between *R&D* intensity and people-oriented activities (Padgett & Galan 2010). As such, we control for *RD\_INTENSITY*, measured as the *R&D* expenditures divided by total assets.

We also control for the total number of directors (*BOARD\_SIZE*) and board independence (*INDEPENDENCE*). Besides, the size of the executive team plays a part in propelling effective people-oriented actions. We, thus, introduce *TEAM\_SIZE*, measured as the natural logarithm of the total number of executive managers. To account for board heterogeneity, we control for *FEMALE\_DIRECTOR*, measured as the percentage of female independent directors in the boardroom, and *DIRECTOR\_AGE*, the natural logarithm of the average age of firm directors (McGuinness *et al.* 2017). To capture the impact of foreign ownership, we control for *FOREIGN*, measured as a percentage of strategic shareholdings of 5% or more held in a country outside that of the firm since foreign institutional investors tend

to exert a positive effect on social and human issues related to their investee firms (Oh *et al.* 2011). Finally, to account for country-level variations, we include *GDP\_PERCAPITA*, measured as the natural logarithm of the annual GDP (in current US\$) over midyear population to account for the country's level of economic development since people in richer regions or countries often exhibit a heightened concern for social and human issues. Data on firm-level control variables and economic development are collected from Datastream and the World Bank, respectively. All independent variables, except for *FIRM\_AGE* and *GDP\_PERCAPITA*, are lagged by one year. All continuous variables are winsorized at the 1<sup>st</sup> and 99<sup>th</sup> percentiles of their respective distribution to reduce the influence of outliers. See Appendix A for details.

## **4. Empirical results**

### ***4.1 Descriptive statistics***

Table 1 presents the distribution of employee treatment performance and characteristics of ex-military top executives by country/region and by year during the sample period. In Panel A, the average employee treatment scores show significant variation across all 52 countries in the sample. In particular, the countries where companies have scores are broadly European (e.g., Austria, Finland, France, Germany, Hungary, Netherlands, Spain, United Kingdom, etc). The countries where companies' employee treatment ratings are lowest are mainly in Asia and South America. Next, during our sample period, countries exhibiting a higher percentage of companies with military-experienced executives include Canada (16.4%), Denmark (17.7%), France (14.6%), Germany (17%), Israel (57.8%), Saudi Arabia (33.3%), the United Kingdom (13.7%), and the United States (63.3%), This underscores the widespread prevalence of managerial military experience within companies across the world. Panel B shows that overall employee treatment score (and its categories) increases over the years, from approximately 0.510 in 2002 to 0.541 in 2017.

[Table 1]

The summary statistics of all variables are reported in Table 2. First, *EMPLOYEE TREATMENT*, the dependent variable, ranges from a minimum of 0.000 to a maximum of 0.998, with a mean (median) of 0.535 (0.544).<sup>11</sup> Second, regarding military background proxies, *MILITARY\_D* has a mean value of 0.310, suggesting that, on average, 31% of our sample companies have at least one executive with military experience on their management teams. *MILITARY\_RATIO* has a mean value of 0.022, indicating that, on average, the percentage of military-experienced executives on the management team is 2.2% in our sample. Also, 4.1% of our sample firms are run by ex-military CEOs.

[Table 2]

#### **4.2 Main findings**

We estimate Eq. (1) to investigate the impact of ex-military executives on employee treatment performance and its categories and report the results in Table 3. Model 1 presents the result of our baseline model, where the dependent variable is *EMPLOYEE TREATMENT*. *MILITARY\_D* attracts a positive and statistically significant coefficient ( $t = 7.147$ ), suggesting that companies run by ex-military top executives experience an increase in their subsequent employee-friendly performance relative to those without. Importantly, this positive effect is economically significant: for averaged firms in our sample, the employee-friendly performance score is approximately 4.86% higher for companies with ex-military executives than those without.<sup>12</sup> The signs on the coefficients of control variables are largely consistent with prior studies, including Ferrell *et al.* (2016), McGuinness *et al.* (2017), and Li *et al.* (2021). For instance, we find that the company size and age, tangibility, ROA, Tobin's Q, free cash flow, R&D intensity, board and executive team size, percentage of female directors, and GDP per

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<sup>11</sup> When restricting our sample to the timeframe (2002–2013) of Banerjee *et al.* (2019), we find similar firm-level characteristics and number of observations.

<sup>12</sup> In Model 1 of Table 3, the coefficient on *MILITARY\_D* is 0.026 and the mean value of *EMPLOYEE TREATMENT* in Table 2 is 0.535, which indicates that the employee treatment performance for companies with the presence of top executives having military experience will increase by an average of 0.026; thus,  $0.026/0.535=4.86\%$ .

capita are positively associated with employee-friendly practices, while the leverage ratio attracts a negative coefficient estimate.

[Table 3]

To capture the extent of the impact of executives with military experience on employee-friendly strategies, we re-estimate Eq. (1) by replacing *MILITARY\_D* with *MILITARY\_RATIO* as an alternative proxy for military background and present the result in Model 2 of Table 3. *MILITARY\_RATIO* attracts a positive and significant estimate (0.117,  $t = 5.750$ ), suggesting a higher proportion of ex-military executives leads to stronger firm employee-friendly performance.

To scrutinize further the underlying channels of transmission of social benefits of top executives' military experience to employee-friendly treatment, we repeat the tests in Models 1 and 2 of Table 3 using the component scores on each of several specific areas covered by the Thomson Datastream and Refinitiv ESG dataset. This dataset decomposes the workforce/employee treatment ratings into several distinct areas including *HEALTH & SAFETY*, *CAREER DEVELOPMENT*, *DIVERSITY*, and *WORKING CONDITIONS*. We test how ex-military executives affect each dimension by replacing the dependent variable, *EMPLOYEE TREATMENT*, in Eq. (1) with these categories, respectively, and re-estimate the equation. The results are presented in Models 3–10 of Table 3 and we find that both *MILITARY\_D* and *MILITARY\_RATIO* attract a positive and statistically significant coefficient. These results imply that companies managed by ex-military executives perform better in improving employee health and workforce safety, staff development and training, inclusion and diversity practices, and working conditions. Collectively, the results in Table 3 highlight the significance of ex-military executives in enhancing firm employee-friendly performance scores, encompassing all dimensions of employee-friendly treatment. This confirms our

Hypothesis 1 that the strong sense of human-centric value of military-experienced executives promotes more employee-friendly policies.

To test Hypothesis 2 that whether the improved employee-friendly treatment attributable to ex-military top executives can translate into higher firm value, we follow the procedures in Cook *et al.* (2019) to adopt a mediating analysis (also known as the path analysis), with the Tobin's Q ratio being the ultimate explained variable. To make it more straightforward, Figure 1 displays the causal diagram of the mediating effect of employee-friendly treatment (*EMPLOYEE TREATMENT*) on the link between ex-military executives (*MILITARY\_D*) and firm value (*TOBINQ*). Specifically, *MILITARY\_D* is the treatment variable, while *EMPLOYEE TREATMENT* is the mediator and *TOBINQ* is the examined outcome variable. Path ABC represents the total effect of *MILITARY\_D* on *TOBINQ*. Then, the total effect is decomposed into Path A, Path B, and Path C. Path A shows the effect of *MILITARY\_D* on *EMPLOYEE TREATMENT*. Path B corresponds to the effect of *EMPLOYEE TREATMENT* on *TOBINQ*. Path C demonstrates the direct effect of *MILITARY\_D* on *TOBINQ*.

[Figure 1]

Consistent with prior research (Falato *et al.* 2014; Boubakri *et al.* 2016; Ferrell *et al.* 2016; Liang & Renneboog 2017), we control for a series of variables that are known to influence firm value, including *FIRM\_AGE*, *FIRM\_SIZE*, *TANGIBILITY*, *LEVERAGE*, *ROA*, *FCF*, *BOARD\_SIZE*, *INDEPENDENCE*, and *GDP\_PERCAPITA*. Table 4 presents the analysis of the mediating effects of the employee treatment associated with ex-military executives on firm value.

Regression results from the mediating analysis are presented in Table 4. Model 1 of Panel A examines Path A relationship and shows that the treatment variable (*MILITARY\_D*) is found to be positively (0.039,  $t = 10.952$ ) associated with the mediator (*EMPLOYEE TREATMENT*). Model 2 examines Paths B and C by regressing *TOBINQ* on the treatment

variable *MILITARY\_D* and the mediator *EMPLOYEE TREATMENT*. The coefficient on *MILITARY\_D* represents the direct effect of ex-military executives on firm value. The positive and statistically significant coefficient (0.090,  $t = 5.188$ ) indicates that firms led by ex-military executives exhibit higher firm value. Importantly, *EMPLOYEE TREATMENT* in Model 2 attracts a significantly positive coefficient, suggesting that, after taking the direct effect of ex-military executives on firm value into account, employee-friendly strategies indeed increase firm value.

[Table 4]

In Panel B of Table 4, we employ the Baron and Kenny (1986) approach to evaluate the mediating effect. We find that the total effect of *MILITARY\_D* on *TOBINQ* is 0.098. Within this, the mediating effect operating through *EMPLOYEE TREATMENT* is 0.007 ( $= 0.039 \times 0.183$ ), and is statistically significant at the 1% level, thus reflecting a certain portion ( $7.143\% = 0.007/0.098$ ) of the overall enhancement in *TOBINQ*. Panel C of Table 4 reports the results regarding the significance testing of the indirect effect, which includes the estimates from the Delta, Sobel, and Monte Carlo methods. The p-values derived from these three estimations are 0.000, further supporting that the indirect effect that operates through *EMPLOYEE TREATMENT* on firm value is valid. The above tests confirm that the influence of ex-military executives on firm value is partially achieved through improved employee-friendly strategies, suggesting that the enhanced employee treatment driven by ex-military executives can further translate into higher firm value, thereby supporting our second hypothesis.

#### ***4.3 Cross-sectional implications***

According to the UET, whether executives' demographic attributes have a stronger or weaker influence on companies' business plans or outcomes largely depends on how much discretion these executives have (Finkelstein & Boyd 1998). Therefore, if the positive relationship between the presence of ex-military executives and employee-friendly treatment

in the firm is indeed driven by the actions of executives, we would expect the positive relationship to be stronger when executives have greater latitude in shaping firm policies.

A company's age is an important indicator of the managerial latitude of action. Older enterprises are bound by their history and established routines in decision-making (Finkelstein & Hambrick 1990; Li & Tang 2010) since they rely heavily on experience and seldom take innovative actions (Xie 2014). They may have more ossified communication patterns and develop impediments to effective action (Guillén 2002). As such, older companies have greater internal inertia, which constrains managerial flexibility in corporate strategies (Li & Tang 2010). Following this line of logic, ex-military top executives in the older (younger) companies may have a weaker (stronger) influence on employee-friendly policies as the greater (lesser) inertia created by older (younger) companies will reduce (increase) the managerial latitude of action. Thus, the positive effect of management military experience on employee treatment policies may be more salient among young companies than among old ones.

Motivated by the above, we explore whether these factors play a part in the link between military-experienced executives and employee treatment and re-estimate Eq. (1) by introducing the interaction term (*MILITARY\_D*×*FIRM\_AGE*) to Model 1 of Table 5. In Model 1, *MILITARY\_D* attracts a positive and highly significant estimate while *MILITARY\_D*×*FIRM\_AGE* attracts a negative coefficient, meaning that ex-military executives indeed have a positive influence on companies' employee contributions and that such a positive effect is more prominent in younger companies than in old ones.<sup>13</sup> This is mainly due to the greater internal inertia associated with older enterprises, which largely reduces managers' latitude of action in company activities (Li & Tang 2010).

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<sup>13</sup> Specifically, the coefficient on *MILITARY\_D* is 0.033 (t = 7.608) while that on *MILITARY\_D*×*FIRM\_AGE* is -0.013 (t = -2.998). The net effect on *EMPLOYEE TREATMENT* is estimated by  $(0.033 - 0.013 \times FIRM\_AGE) \times MILITARY\_D$ , where the mean of *FIRM\_AGE* (in the form of the natural logarithm) is 1.071. When *MILITARY\_D* equals one, then the scope of the effect of ex-military executives on employee-oriented activities decreases with company age.



[Table 5]

Social responsibility, characterized by a credibility-building and bad-reputation-recovering tool in firms under weak monitoring is essentially important, but it may be underdone (Choi *et al.* 2013). Thus, in firms with weak monitoring, managers do not actively engage in stakeholder protection activities. In this sense, managers' demographic characteristics are likely to play a more influential role in corporate strategies and policies in firms with inferior monitoring (Ma *et al.* 2019) because managers in these firms may not be subject to internal inertia, rules, and governance pressure (Guillén 2002). If the employee-friendly policy enhancement is indeed driven by the 'intrinsic' people-oriented leadership instilled by military service experience, then the improvement in employee-friendly activities driven by military-experienced executives is expected to be more salient in firms with weak monitoring. In contrast, other non-military executives, when subject to less intensive monitoring from external monitors, may opt to engage in activities that primarily benefit themselves rather than prioritizing employee welfare.

To test this conjecture, we examine the influence of military experience on employee treatment in firms with high analyst coverage and firms with low analyst coverage. In doing so, we introduce an interaction term, *MILITARY\_D*×*ANALYST*, to Eq. (1), where *ANALYST* is measured as the natural logarithm of the number of financial analysts following a firm in a given year. Model 2 of Table 5 shows that the coefficient of *MILITARY\_D* is significantly positive and that on the interaction is significantly negative, indicating that the impact of ex-military executives on employee-friendly activities becomes more salient when the firm is monitored by fewer analysts. These findings suggest that ex-military executives are not influenced by the public pressure to engage in employee-friendly activities, but intrinsically and proactively initiate efforts to address employees' concerns and propel employee-friendly strategies.

Collectively, results from Table 6 further strengthen our argument that ex-military executives are imbued with human-centric values from their military service, motivating them to promote positive employee-friendly treatment.<sup>14</sup>

## **4.5 Robustness checks**

### *4.5.1 Adjusted employee treatment score*

Employee-oriented policies may vary considerably across different years, industries, and countries. Thus, it is appropriate to judge a company's employee-friendly strategies relative to those of its peers in the same industry and country, and to control for year effects (Borghesi *et al.* 2014; Ferrell *et al.* 2016). We employ a country–industry–year-adjusted measure, *ET\_ADJ*, which is measured by deducting the overall employee treatment performance of a company from the mean employee treatment score for all listed companies in the same industry and country in a given fiscal year.

We then re-estimate Eq. (1) by employing *ET\_ADJ* as a dependent variable. The regression result displayed in Model 1 of Table 6 shows that *MILITARY\_D* attracts a positive and statistically significant estimate (0.020,  $t = 6.554$ ), suggesting that companies run by top executives having military experience exhibit an increase in country–industry–year-adjusted employee treatment performance.

[Table 6]

### *4.5.2 Variations in the measurement of management military experience*

There is no denying that the CEO is one of the most important characters within a company since s/he is mainly responsible for managing the company's investment affairs, and financial and non-financial policy making (Ma *et al.* 2019; Ma *et al.* 2020). However, the role of the whole management team cannot be underestimated, as the literature has long pointed out the importance of the role of all team members in day-to-day operations, decision-making, and

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<sup>14</sup> The results of cross-sectional analyses still hold when *MILITARY\_D* is replaced by *MILITARY\_RATIO*.

business strategies. The upper echelons theoretical perspective (Hambrick & Mason 1984) argues that it is the positive interaction among all executives that creates a magnified impact on corporate strategies. Our current measure, which includes all ex-military service members on the management team, may bias the results since the positive link may be driven by CEOs. Therefore, it is not clear whether the military experience of general management team members other than CEOs plays a part in improving employee-friendly strategies.

To address this concern and validate the importance of the whole executive team, we repeat our analysis by employing a redefined proxy for managerial military experience; that is, *MILITARY\_D\_EXC\_CEO*, which is a dummy variable set to one if at least one of the executives on the team (e.g., executive chairperson, CFO, COO, vice president, general manager/managing director, deputy general manager, chief accountant, or vice manager) has military experience, and zero otherwise. The result is reported in Model 2 of Table 6 and, unsurprisingly, the redefined key independent variable attracts a positive and highly significant coefficient, confirming that the positive link between management military experience and employee treatment cannot be solely driven by ex-military CEOs, and that non-CEO top executives with military experience indeed play a critical role in propelling employee-friendly strategies.<sup>15</sup>

#### 4.5.3 Other management team attributes

We additionally take the role of common executive characteristics into consideration, such as the percentage of female executives on the TMT (*TEAM\_FEMALERATIO*), the average age of the team (*TEAM\_AGE*), the percentage of top executives who have graduated from the Ivy League (*TEAM\_IVYRATIO*), and the percentage of top executives having financial work experience (*TEAM\_FINANCIAL*). This is because variations of TMT characteristics can shape

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<sup>15</sup> We also introduced *MILITARY\_RATIO\_EXC\_CEO*—measured as the ratio of the number of top executives with military experience to the total number of top executives within the firm, where the CEO is excluded from the executive team—to our model as an alternative proxy for managerial military experience. The result still holds.

executives' perceptions, attitudes, and discretionary power (Hambrick & Mason 1984), which may affect information-processing and decision-making behaviors.

We then augment Eq. (1) with *TEAM\_FEMALERATIO*, *TEAM\_AGE*, *TEAM\_IVYRATIO*, and *TEAM\_FINANCIAL*. The result presented in Model 3 of Table 6 shows that the coefficient on *MILITARY\_D* is significantly positive, again supporting our main hypothesis.

#### 4.5.4 Does conscription policy matter?

We argue that military training emphasizes the commitment to country and people, codes of ethics, and respect for human rights, which may instill a strong sense of social responsibility and devotion to society (Franke 2001); thus, top executives with military backgrounds may be more active in promoting the welfare of corporate personnel. However, an alternative assumption is that people with the above characteristics are those most willing to self-sacrifice and voluntarily join the military. If this conjecture holds, the commitment to social responsibility and the regard for human well-being may not be mainly attributable to experiences gained through military service. To address this concern, we examine the role of country-level military conscription policies in the interplay between military experience and employee-friendly treatment, and split our sample into two groups. Following Asal *et al.* (2017) and Hou *et al.* (2018), we divide countries into those with mandatory conscription policies and those whose military agencies comprise volunteers based on the classification of the Central Intelligence Agency (CIA) World Factbook.<sup>16</sup> If military-experienced executives indeed act in the interests of employees, we should observe a significantly positive link between ex-military executives and employee treatment scores in both subsamples.

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<sup>16</sup> The information for each country is publicly available at <https://www.cia.gov/library/publications/the-world-factbook/fields/331.html>. Asal *et al.* (2017) obtain data on countries' military policy from the Military Recruitment Data Set (Toronto & Toronto 2007), which collects data from multiple sources such as the CIA World Factbook, US State Department country background notes, or Library of Congress Country Studies.

The results are reported in Models 4 and 5 of Table 6. In both models, we find that the coefficient on *MILITARY\_D* is significantly positive, suggesting that military-experienced executives act similarly in both draft countries and volunteer countries. Thus, we reject the alternative explanation that people with good characters are more likely to join the military.

#### 4.5.5 Role of country-level social culture and political environment

We further test whether our main finding is robust to the inclusion of social norms and country-level governance characteristics. First, companies from a civil law society are more likely to exhibit stronger people-oriented behaviors, due to their stricter stakeholder protection and stronger social preferences, than those from common law or socialist countries (Demirbag *et al.* 2017). Second, recent empirical evidence argues that a company's socially responsible investment may be supported or limited by the country's regulatory environment (Liang & Renneboog 2017). We then augment Eq. (1) with *CIVIL*, which is a dummy variable set to one if a company is located in a civil law country, and zero otherwise, and *REGULATORY*, which is a proxy for governmental effectiveness in addressing human rights issues and market externalities when implementing policies and regulations that promote private sector development.<sup>17</sup> Higher values of *REGULATORY* correspond to higher levels of regulatory quality. We report the result in Model 6 of Table 6. Notably, the coefficient on *MILITARY\_D* is still positive and highly significant.

#### 4.5.6 Excluding US companies

Companies in the US market account for a significant proportion (approximately 39.5%) of our sample (12,211 out of 30,885 firm-year observations). To address the potential sample bias and ensure that our results are not driven by US companies, we removed US companies from our sample. This exclusion reduces our sample to 18,674 firm-year observations. The

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<sup>17</sup> The scores of country-level regulatory quality can be accessed through the World Governance Indicators (WGI), World Bank (<https://info.worldbank.org/governance/wgi/>). The WGI evaluates 47 governance-related indicators, such as investment and financial freedom, effectiveness of the anti-monopoly policy, stringency of environmental regulations, regulatory burden, and regulatory enforcement, and constructs the regulatory quality score.

result of the non-US sample is reported in Model 7 of Table 6. Again, the military experience of top managers appears to have a positive and statistically significant relationship with the subsequent employee treatment score, at the 1% significance level. This suggests that the positive influence of managerial military experience on employee-friendly strategies is not driven by sample distribution issues.<sup>18</sup>

#### 4.5.7 Excluding firms from heavily polluting industries

Prior literature shows that top managers in heavy industry firms tend to opportunistically exploit stakeholder-oriented policies, such as socially responsible strategies, to build their reputation and empire (Cai *et al.* 2012). To address the concern that our key finding is driven by firms from heavily polluting industries, we exclude observations with Datastream General Industry Codes of 02 (Energy) and 03 (Transportation) and then re-estimate our baseline model, thereby reducing the sample size to 26,985. The result reported in Model 8 of Table 6 shows that the coefficient on *MILITARY\_D* is significantly positive, conforming to our main conjecture.<sup>19</sup>

#### 4.5.8 Tobit model

Since our key variable, *EMPLOYEE TREATMENT* performance, ranges from 0.000 to 0.998, we adopt the Tobit model as an alternative research design to address the potential estimation concerns, and report the result in Model 9 of Table 6. Our key finding still holds.

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<sup>18</sup> Our sample distributions show that employee treatment performance is likely to be higher in developed countries and that higher ex-military executive proportions in companies and better employee-friendly strategies co-exist in richer developed countries. This may raise the concern that the current results are driven by the combination of ex-military executives and high employee treatment performance in developed countries. In Appendix B1, we divide our sample firms into two groups based on the MSCI country classification—developed market and developing market—and re-estimate our main regression. We find that, in both samples, *MILITARY\_D* attracts significantly positive coefficients. Next, in Appendix B2, we re-estimate the equation to test our second hypothesis by splitting our sample into developed market and developing market sub-samples. In both Models 2 and 4 where the dependent variable is Tobin's Q, we still find that both the coefficients on *MILITARY\_D* and *EMPLOYEE TREATMENT* are positive and statistically significant indicating that, in both markets, the impact of ex-military executives on firm value is partially achieved through the improved employee-friendly treatment.

<sup>19</sup> Since our firm-year observations are not evenly distributed across countries, industries, and years, we have also adopted a Weighted Least Square model to test the validity of our main finding and find that this still holds. The results are available upon request.

#### 4.5.9 Firm fixed effects

One concern of previous regressions is that we can only control for observable firm characteristics, indicating that the observed link between military-experienced executives and employee-friendly strategies may be spurious and attributable to innate heterogeneity that is linked to firm characteristics. To mitigate potential concerns that may arise from time-invariant unknown firm-specific factors, we introduce the firm fixed-effect model and re-estimate Eq. (1). The result is reported in Model 10 of Table 6. In conformity with our main hypothesis, *MILITARY\_D* still attracts a significantly positive coefficient, indicating that companies headed by ex-military executives are linked to stronger employee-friendly performance scores.

#### 4.5.10 Turnover of military-experienced executives

Firms can not only selectively choose military executives to accommodate specific changes in employee-friendly treatment policies but also attract military executives who may be more inclined to join companies with already well-established employee-friendly practices, thus causing the Management Team–Firm matching issue. To address this potential concern, we examine the effect of the change in the number of military-experienced top executives on subsequent employee treatment scores. In Model 11 of Table 6, we compare the employee treatment score for firm-year observations that have new appointments of military-experienced executives with firm-year observations that have no change in the number of ex-military executives on the management team. We define *INCREASE* as a categorical variable set to one if the number of military-experienced executives on the management team this year is greater than that in the previous year, and zero otherwise. The significantly positive coefficient on *INCREASE* indicates that an increase in the number of ex-military top executives leads to a significant improvement in employee-friendly treatment, thus reaffirming our main hypothesis.

#### 4.5.11 Ruling out the influence of agency issues

Prior studies contend that employee-oriented policies may be a manifestation of agency issues (Jensen & Meckling 1976; Cao & Rees 2020). Firms with severe free cash flow agency problems may exhibit higher social performance ratings, because managers could opportunistically use financial slack resources to invest in social reputation building activities to build their empire (Ferrell *et al.* 2016). To address the concern that the positive influence of military-experienced executives is because free cash flows may incentivize executives to over-invest in employee benefits to enhance their reputation, we additionally partition our sample into high and low free cash flow groups based on the respective median value of corporate free cash flow and re-estimate the baseline regression among these two groups. If the positive influence of ex-military executives on employee-friendly strategies is indeed due to the abovementioned issues, then the positive influence is expected to be more pronounced in firms with high free cash flow. The results are displayed in Models 12 and 13 of Table 6, respectively. We can see that the coefficient of *MILITARY\_D* is significantly positive among the two groups, and we further find that there is no systematic difference in the coefficients of *MILITARY\_D* between the two groups ( $z$ -value = 0.017), thereby ruling out the influence of agency issues.

## 5. Endogeneity concerns

### 5.1 Dynamic system GMM

The dynamic relationships between the presence of ex-military executives and employee treatment performance and the lagged values of employee treatment performance may drive common endogeneity issues in empirical studies. To address the estimation bias related to the dynamic nature of our key independent variable and the dependent variable, we include the one-year lagged employee treatment ratings as an independent variable in Eq. (1) to implement the dynamic GMM estimation, taking into consideration the Arellano–Bond



system GMM technique (Arellano & Bover 1995; Blundell & Bond 1998).<sup>20</sup> This estimation method, thus, controls for unobservable heterogeneity, simultaneity, and potential reverse causality in the link between the presence of military-experienced executives and employee-friendly policies.

The result from the dynamic panel system GMM approach presented in Model 1 of Table 7 shows that *MILITARY\_D* attracts a significantly positive coefficient (0.011,  $t = 8.133$ ), supporting our prediction of a positive relationship between ex-military executives and employee-friendly practices.

[Table 7]

## 5.2 IV method

While our baseline results support our hypothesis, a potential concern is that unobserved firm heterogeneity correlated with both ex-military executives and employee-friendly treatment scores may be driving our results. Thus, we adopt an instrumental variable two-stage least square (IV-2SLS) approach to mitigate this concern. Given that the demand for soldiers during wartime exogenously increases the likelihood of individuals serving in the military (Benmelech & Frydman 2015), we follow previous literature and use variations in managers' birth cohorts to instrument military managers. Specifically, as individuals who were born on or before 1935 were more likely to have served in the Korean War (Law & Mills 2017),<sup>21</sup> we use the number of top managers of each firm who were born in this cohort, *NUM\_EXE\_KOREANWAR*, as our instrument for *MILITARY\_D*. Model 1 of Table 8 presents

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<sup>20</sup> First-differencing the dynamic regression helps to address the concerns that unobserved heterogeneity and omitted factors may have an influence on employee-friendly strategies. The system of equations is estimated via GMM using lagged values of the endogenous variables as instruments. The lagged levels are employed as instruments for the differenced equation, and lagged differences are used as instruments for the level equation in the Arellano–Bond system GMM procedure. The GMM estimation could weaken the exogeneity assumption for an array of regressors, hence providing consistent estimates even if the reverse causality issue is present (Leszczensky & Wolbring 2019).

<sup>21</sup> Both the Korean War and the Vietnam War were major worldwide military conflicts with over 50 nations directly or indirectly involved, including major countries in our sample (e.g., the US, the UK, Canada, and Australia). There were no major worldwide military conflicts after the Vietnam War.

the first-stage result and shows a positive and significant relationship between *NUM\_EXE\_KOREANWAR* and *MILITARY\_D*. The second-stage result presented in Model 2 reveals a positive and highly significant coefficient on the predicted value of the military dummy (*PREDICTED\_MILITARY\_D*), supporting our baseline result.

We also explore the birth cohorts of the Vietnam War to construct an additional instrument. *NUM\_EXE\_VIETNAMWAR* in Model 3 of Table 8 is the number of top managers of each firm born on or before 1955 who were more likely to have served in the Vietnam War. The predicted military manager dummy in Model 4 attracts a significantly positive coefficient (0.608,  $t = 7.488$ ). Also, the first-stage Cragg and Donald tests displayed at the bottom of Table 9 show a p-value of 0.000 for both instruments used in the first stage of the IV approach, indicating that the IVs used have passed the weak instrument test. Hence, our results from the IV approach support the causal explanation of our results.

[Table 8]

### **5.3 PSM approach**

The differences in observable firm characteristics between firms with and those without executives with military backgrounds may result in sample selection concerns. We next employ the PSM method to explore the influence of ex-military top executives on subsequent employee-friendly practices. The PSM method is a non-parametric technique that can avoid potential model misspecification in ordinary least squares (OLS) while matching only comparable observations. In principle, the PSM approach estimates the treatment effect of management military experience on employee-friendly policies by comparing the current employee treatment score of companies with ex-military executives with that of companies without. We employ the nearest PSM approach with a caliper set at 0.001 to match companies with ex-military top executives with those without on a vector of control variables employed in our baseline model. In addition, year, industry, and country dummies are used as matching

criteria. We also re-estimate Eq. (1) based on the post-matched sample to examine our main hypothesis.

This analysis is presented in Table 9. Panel A shows that the difference between the employee treatment score of the two groups is statistically significant at the 5% level when the PSM technique is employed with replacement ( $ATT = 0.020$ ). This implies that companies run by ex-military executives experience a significant increase in employee treatment performance relative to companies led by non-military executives. Panel B uses the sample of firm years derived from PSM along with fixed effects. *MILITARY\_D* still attracts a highly significant coefficient, suggesting that our key finding is unlikely to be biased by the sample selection issue. This is in line with the argument that military training promotes employee-oriented values.

[Table 9]

#### ***5.4 Entropy balancing method***

In Table 10, we execute an entropy balancing method to further address the estimation bias linked to an imbalance among matching criteria; this matching technique can effectively incorporate covariate balance into the weight function and ensure that firm-level characteristics across firms with and without ex-military executives are comparable so that latent variables no longer impede our results. Panel A reports the mean values for control variables for the treatment firms ( $MILITARY\_D=1$ ) versus the control firms ( $MILITARY\_D=0$ ) derived before the execution of the entropy balancing method. Panel B shows that a balanced sample is created for the subsequent estimation of the treatment effect, which reveals comparable values for all firm-level characteristics. Panel C displays the multivariate results with entropy balancing weighted on the first (mean) moment; it reveals that the estimate on *MILITARY\_D* is positive and highly significant, reaffirming the positive impact of TMT military experience on employee-friendly engagement.

## 6. Conclusions

This study examines the impact of executives' military experience on firms' employee-friendly treatments in an international context. Using panel data on 4781 public corporations across 52 countries, we find that companies managed by ex-military top executives exhibit higher employee-friendly treatment performance and that a larger fraction of ex-military executives on the executive team leads to better employee-friendly treatments. Economically, companies with ex-military executives exhibit employee-friendly engagement performance ratings approximately 4.86% higher than companies without such executives. Also, investors perceive the presence of military-experienced executives as a credible signal of effective employee benefits, consistent with upper echelons and imprinting theoretical perspectives that highlight the character shaping and military imprint effects (Zhang *et al.* 2022). This positive influence of ex-military executives on employee-friendly treatments is more salient in younger firms or poorly monitored firms. Our finding is robust to various sensitivity and endogeneity tests. Further, our study reveals that the enhancement in employee-friendly treatments is, to a certain extent, attributed to the collective endeavor of the management team members with military experience, consistent with Li *et al.* (2023b) who emphasize the overall effects of the TMT members.

The results have valuable implications for policymakers, investors, and management culture, as we highlight the importance of the intrinsic motivation behind the effect of military experience on top managers' attributes and offer essential human capital management implications regarding the role of military experience. Top managers with military experience may incorporate human-centric values focusing on citizenship into their business activities and strategies, thus facilitating broader employee-friendly governance and economic goals. Top executives with military experience tend to initiate much effort to improve employee benefits

which will, in turn, increase the productivity of human capital and attract and retain talented employees. This is inevitably beneficial for firms' future financial development and business dealings. Hence, investors with different investment horizons could also consider investing in firms managed by ex-military executives.

Our study also opens up avenues for future research. Since the enhancement in employee-oriented policies can address the concerns related to the loss of valuable human capital (Guo *et al.* 2016), whether employee-friendly policies in firms headed by military-experienced CEOs attract financially sophisticated employees to the firms and whether these policies improve labor investment efficiency could be further explored. Overall, our study sheds light on the influence of top executives' military background in shaping employee treatment practices and offers valuable insights for policymakers to set out policies to develop values that focus on human capital and citizenship in modern corporations and international markets.

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## Appendix A: Variable definitions

VARIABLE	DEFINITION
<b>DEPENDENT VARIABLES</b>	
<i>EMPLOYEE TREATMENT</i>	It is an aggregate proxy for the workforce treatment. It measures a firm's effectiveness in terms of providing job satisfaction, a healthy and safe workplace, and maintaining diversity, employee relations, equal opportunities, and development opportunities for its workforce. Thomson Refinitiv ESG scores are available at <a href="https://www.refinitiv.com/en/sustainable-finance/esg-scores#methodology">https://www.refinitiv.com/en/sustainable-finance/esg-scores#methodology</a> .
<i>HEALTH &amp; SAFETY</i>	It measures a firm's effectiveness in terms of providing workforce health and safety. Source: Thomson Refinitiv ESG Platform.
<i>CAREER DEVELOPMENT</i>	It measures a firm's effectiveness with respect to providing career development opportunities and training hours for its workforce. Source: Thomson Refinitiv ESG Platform.
<i>DIVERSITY</i>	It measures how well the firm deals with workforce diversity and opportunity (e.g., promotion, anti-discrimination, and anti-harassment). Source: Thomson Refinitiv ESG Platform.
<i>WORKING CONDITIONS</i>	It measures a firm's effectiveness in addressing employee relations or wage dispute issues. Source: Thomson Refinitiv ESG Platform.
<i>ET_ADJ</i>	A country–industry–year-adjusted employee treatment measure, which is measured by deducting the aggregate employee treatment score of a company from the mean score for all companies in the same industry and country in a given fiscal year.
<b>KEY INDEPENDENT VARIABLES</b>	
<i>MILITARY_D</i>	A categorical variable assigned a value of one if a company has at least one ex-military executive (e.g., an ex-military CEO, chairperson, CFO, COO, vice president, general manager/managing director, deputy general manager, chief accountant, and vice manager) on the management team, and set to zero otherwise. BoardEx provides employment history for each executive in each company around the world from 1999 under the Individual Profile, which ideally indicates 'Armed Force' as one category under the 'Organisation Category'. Source: BoardEx (via WRDS).
<i>MILITARY_RATIO</i>	A continuous variable, measured as the percentage of ex-military executives on the team. Specifically, it is calculated as the number of executives with military experience scaled by the number of the management team. Source: BoardEx (via WRDS).
<i>MILITARY_D_EXC_CEO</i>	A categorical variable set to one if at least one of the executives on the management team (e.g., executive chairperson, CFO, COO, vice president, general manager/managing director, deputy general manager, chief accountant, and vice manager) has military experience, and zero otherwise. Source: BoardEx (via WRDS).
<i>MILITARY_CEO</i>	A dummy variable equal to one if the CEO of the firm in a given year has military experience, and zero otherwise. Source: BoardEx (via WRDS).
<i>INCREASE</i>	A dummy variable set to one if the number of military-experienced executives on the management team this year is greater than that in the previous year, and zero otherwise. Source: Authors' calculation and BoardEx (via WRDS).
<b>CONTROL VARIABLES AND EXTENDED STUDY VARIABLES</b>	
<i>FIRM_AGE</i>	Natural logarithm of one plus the number of years since listing. Source: Datastream
<i>FIRM_SIZE</i>	Natural logarithm of the book value of total assets. Source: Datastream.
<i>TANGIBILITY</i>	Ratio of property, plant, and equipment (PPE) over total assets. Source: Datastream.
<i>LEVERAGE</i>	Book value of total debts scaled by book value of total assets. Source: Datastream.
<i>ROA</i>	EBIT scaled by the book value of total assets. Source: Datastream.
<i>TOBINQ</i>	Book value of total assets minus the book value of equity plus the market value of equity, all scaled by the book value of total assets. Source: Datastream.
<i>FCF</i>	Net operating cash flow (calculated as earnings before interest, taxes and depreciation, or EBITDA, less net capital expenditure) over total assets. Source: Datastream.
<i>RD_INTENSITY</i>	The ratio of research and development expenses to total assets. Source: Datastream.
<i>BOARD_SIZE</i>	Natural logarithm of total number of directors in the boardroom. Source: BoardEx (via WRDS).
<i>INDEPENDENCE</i>	The percentage of independent directors in the boardroom. Source: BoardEx (via WRDS).
<i>TEAM_SIZE</i>	The size of a corporate's executive team is measured as the natural logarithm of the total number of executive managers. Source: BoardEx (via WRDS).
<i>FEMALE_DIRECTOR</i>	The percentage of female independent directors in the boardroom. Source: BoardEx (via WRDS).
<i>DIRECTOR_AGE</i>	The natural logarithm of the average age of all directors of a company. Source: BoardEx (via WRDS).
<i>FOREIGN</i>	The percentage of strategic share holdings of 5% or more held in a country outside that of the issuer. Source: Datastream.
<i>GDP_PERCAPITA</i>	The natural logarithm of the annual GDP divided by midyear population (in current US\$). Source: World Bank.

<i>ANALYST</i>	The natural logarithm of the number of financial analysts following a firm in a given year. Source: Datastream.
<i>TEAM_FEMALERATIO</i>	The percentage of female executives on the management team. Source: BoardEx (via WRDS).
<i>TEAM_AGE</i>	The average age of the management team. Source: BoardEx (via WRDS).
<i>TEAM_IVYRATIO</i>	The percentage of top executives who have graduated from the Ivy League. Source: BoardEx (via WRDS).
<i>TEAM_FINANCIAL</i>	The percentage of top executives having financial working experience. Source: BoardEx (via WRDS).
<i>CIVIL</i>	Civil legal origin. A dummy variable set to one if a company is located in a civil law country, and zero if a company is located in a common law or socialist country. The legal origin of the company law or commercial code of each country in which the focal company is headquartered.
<i>REGULATORY</i>	The ability of the government to implement sound policies and regulations that promote private sector development. Source: World Governance Indicator, World Bank.
<i>NUM_EXE_KOREANWAR</i>	The number of top managers of each firm born on or before 1935. Source: BoardEx (via WRDS).
<i>NUM_EXE_VIETNAMWAR</i>	The number of top managers of each firm born on or before 1955. Source: BoardEx (via WRDS).

## Appendix B: Additional robustness checks

### Appendix B1 Sub-sample analysis for Hypothesis 1

<i>Dep. Var. = EMPLOYEE TREATMENT</i>	Developed market	Developing market
	(1)	(2)
<i>MILITARY_D</i>	0.022*** (6.176)	0.093*** (3.046)
<i>FIRM_AGE</i>	0.006* (1.740)	0.022*** (3.723)
<i>FIRM_SIZE</i>	0.073*** (28.228)	0.035*** (6.529)
<i>TANGIBILITY</i>	0.031*** (3.394)	0.108*** (3.550)
<i>LEVERAGE</i>	-0.070*** (-8.292)	-0.033 (-1.178)
<i>ROA</i>	0.040** (2.251)	0.070 (1.050)
<i>TOBINQ</i>	0.015*** (7.731)	0.013** (2.576)
<i>FCF</i>	0.073** (2.522)	0.208** (2.537)
<i>RD_INTENSITY</i>	0.449*** (7.891)	-0.502 (-0.935)
<i>BOARD_SIZE</i>	0.093*** (7.886)	0.114*** (4.936)
<i>INDEPENDENCE</i>	0.005 (0.489)	-0.102*** (-2.743)
<i>TMT_SIZE</i>	0.017*** (4.115)	-0.013** (-2.481)
<i>FEMALE_DIRECTOR</i>	0.253*** (16.587)	0.228*** (4.978)
<i>DIRECTOR_AGE</i>	-0.004 (-0.717)	0.011 (0.549)
<i>FOREIGN</i>	-0.022 (-1.376)	0.072*** (2.878)
<i>GDP_PERCAPITA</i>	0.094*** (3.669)	0.235*** (5.184)
<i>_CONSTANT</i>	-1.835*** (-6.493)	-2.945*** (-7.252)
<i>Year fixed effects</i>	Yes	Yes
<i>Industry fixed effects</i>	Yes	Yes
<i>Country fixed effects</i>	Yes	Yes
<i>Adj. R2</i>	0.419	0.464
<i>Observations</i>	28,059	2,826

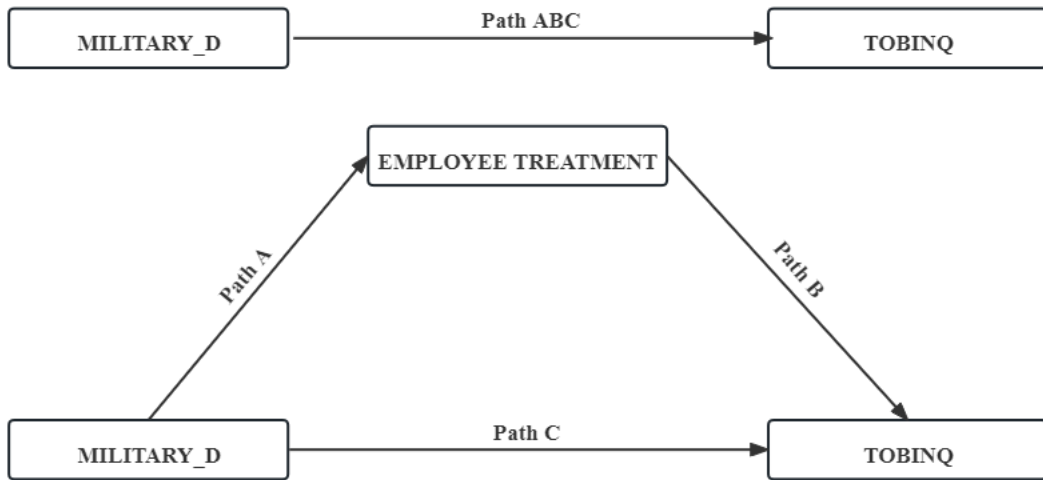
**Appendix B2** Additional test: sub-sample analysis for Hypothesis 2

<i>Dep. Var. =</i>	Developed market		Developing market	
	EMPLOYEE TREATMENT	TOBINQ	EMPLOYEE TREATMENT	TOBINQ
	(1)	(2)	(3)	(4)
<i>MILITARY_D</i>	0.036*** (10.335)	0.048** (2.343)	0.078*** (2.616)	0.227** (2.329)
<i>EMPLOYEE TREATMENT</i>		0.518*** (5.951)		0.228** (2.327)
<i>FIRM_AGE</i>	0.010*** (3.150)	0.021 (1.044)	0.021*** (3.579)	0.067 (1.627)
<i>FIRM_SIZE</i>	0.072*** (26.555)	-0.364*** (-16.704)	0.030*** (5.966)	-0.385*** (-3.146)
<i>TANGIBILITY</i>	0.017** (1.987)	-0.541*** (-13.107)	0.095*** (3.136)	-0.320 (-1.633)
<i>LEVERAGE</i>	-0.088*** (-10.056)	-0.106* (-1.689)	-0.020 (-0.741)	1.176*** (2.610)
<i>ROA</i>	0.033* (1.649)	1.274*** (6.543)	0.116* (1.799)	1.294 (1.055)
<i>FCF</i>	0.098*** (3.055)	2.247*** (6.850)	0.280*** (3.482)	3.638** (2.542)
<i>BOARD_SIZE</i>	0.115*** (8.330)	0.301*** (4.023)	0.123*** (5.558)	-0.063 (-0.619)
<i>INDEPENDENCE</i>	0.020 (1.634)	-0.138 (-1.546)	-0.128*** (-3.490)	-0.733** (-2.081)
<i>GDP_PERCAPITA</i>	0.081*** (3.297)	-0.180 (-1.019)	0.229*** (4.838)	-0.328** (-2.331)
<i>_CONSTANT</i>	-1.682*** (-6.286)	7.624*** (4.114)	-2.755*** (-6.378)	10.574*** (3.854)
<i>Year fixed effects</i>	Yes	Yes	Yes	Yes
<i>Industry fixed effects</i>	Yes	Yes	Yes	Yes
<i>Country fixed effects</i>	Yes	Yes	Yes	Yes
<i>Observations</i>	28,052	28,052	2,826	2,826
<i>Adj. R2</i>	0.401	0.381	0.456	0.405

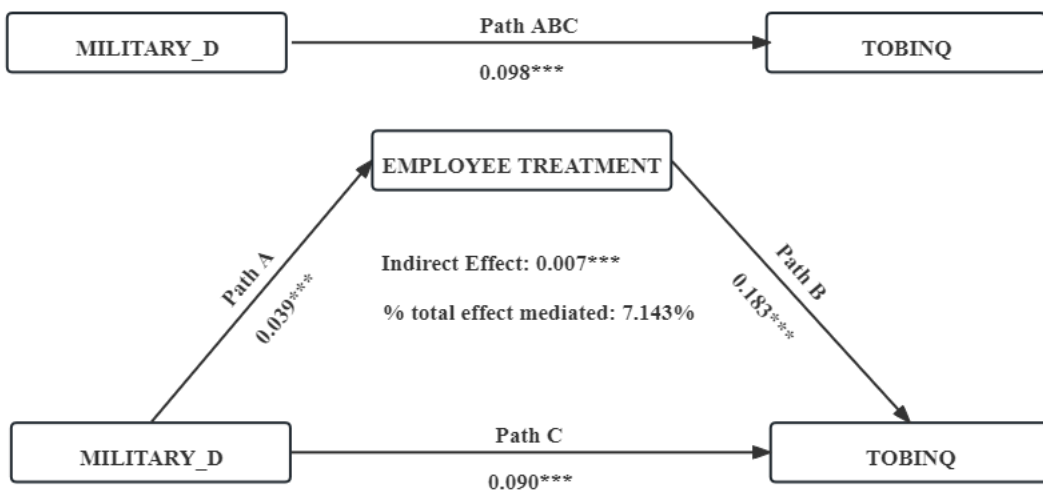
Notes: Appendix B displays additional robustness checks in terms of sample distribution. In Appendix B1, the main regression sample is divided into two groups: developed market sub-sample and developing market sub-sample. Appendix B2 reports the sub-sample analyses for the mediating effects of the improved employee-friendly treatment driven by ex-military executives on future firm value. All independent variables except for *FIRM\_AGE* and *GDP\_PERCAPITA* are one-year lagged. Standard errors are clustered at the country and the year levels and are corrected for heteroscedasticity. The 1%, 5%, and 10% significance levels are denoted by \*\*\*, \*\*, and \* (two-tailed), respectively.

**Figure 1** Causal diagram of the mediating effect

**Panel A**



**Panel B**



Notes: This figure displays the causal diagram of the mediating effect. In Panel A, Path ABC represents the total effect of ex-military executives (*MILITARY\_D*) on firm value (*TOBINQ*). Then, the total effect is decomposed into Path A, Path B, and Path C. Path A shows the effect of *MILITARY\_D* on *EMPLOYEE TREATMENT* (the mediator). Path B corresponds to the effect of *EMPLOYEE TREATMENT* on *TOBINQ*. Path C demonstrates the direct effect of *MILITARY\_D* on *TOBINQ*. Panel B displays the results on the mediating effect of *EMPLOYEE TREATMENT* on the link between *MILITARY\_D* and *TOBINQ*.

**Table 1** Full sample distribution**Panel A** Distribution of the overall employee treatment score and characteristics on ex-military top executives by country/region

Country/Region	Employee treatment score	Fraction of companies with ex-military executives	Percentage of ex-military executives on the management team	No. of observations
Argentina	0.434	0.000	0.000	15
Australia	0.482	0.060	0.014	2,517
Austria	0.697	0.024	0.002	123
Belgium	0.563	0.080	0.008	262
Brazil	0.608	0.025	0.011	358
Canada	0.436	0.164	0.007	2,130
Cayman Islands	0.686	0.000	0.000	1
Chile	0.571	0.000	0.000	97
China	0.416	0.035	0.013	368
Colombia	0.685	0.095	0.025	42
Cyprus	0.241	0.000	9.000	2
Czech Republic	0.392	0.000	0.000	29
Denmark	0.607	0.177	0.023	237
Finland	0.730	0.103	0.008	262
France	0.830	0.146	0.018	1,083
Germany	0.709	0.170	0.017	934
Greece	0.468	0.093	0.009	162
Hungary	0.763	0.000	0.000	15
Indonesia	0.561	0.000	0.000	120
Ireland	0.500	0.030	0.016	134
Israel	0.345	0.578	0.210	90
Italy	0.686	0.083	0.012	375
Japan	0.571	0.031	0.004	1,401
Kenya	0.857	0.000	0.000	3
Kuwait	0.704	0.000	0.000	3
Luxembourg	0.499	0.111	0.021	45
Malaysia	0.568	0.018	0.001	217
Mexico	0.491	0.018	0.002	166
Morocco	0.579	0.000	0.000	10
Netherlands	0.711	0.112	0.018	348
New Zealand	0.454	0.019	0.002	159
Norway	0.566	0.085	0.022	282
Peru	0.364	0.000	0.000	11
Philippines	0.407	0.143	0.018	112
Poland	0.483	0.076	0.005	131
Portugal	0.680	0.000	0.000	100
Qatar	0.122	0.000	0.000	5
Russian Federation	0.520	0.044	0.009	225
Saudi Arabia	0.323	0.333	0.046	15
Singapore	0.431	0.074	0.031	298
Slovenia	0.763	0.000	0.000	1
South Africa	0.761	0.014	0.003	625
South Korea	0.733	0.029	0.003	210
Spain	0.836	0.044	0.009	360
Sri Lanka	0.958	0.000	0.000	2
Sweden	0.679	0.098	0.014	489
Switzerland	0.596	0.146	0.018	583
Thailand	0.792	0.019	0.001	107
Turkey	0.654	0.078	0.003	103
United Kingdom	0.656	0.137	0.026	3,264
United States	0.441	0.633	0.034	12,211
United Arab Emirates	0.421	0.000	0.000	43
Total				30,885

**Panel B** Annual distribution of the overall employee treatment score and its categories

Year	Employee treatment score	Health & Safety	Career development	Diversity	Working conditions
2002	0.510	0.477	0.458	0.478	0.490
2003	0.510	0.484	0.453	0.479	0.481
2004	0.528	0.500	0.464	0.500	0.525
2005	0.542	0.529	0.478	0.508	0.521
2006	0.546	0.530	0.483	0.502	0.528
2007	0.556	0.554	0.533	0.522	0.557
2008	0.542	0.549	0.530	0.517	0.556
2009	0.531	0.546	0.519	0.520	0.542
2010	0.546	0.555	0.530	0.544	0.554
2011	0.541	0.548	0.525	0.536	0.548
2012	0.534	0.549	0.517	0.531	0.542
2013	0.535	0.548	0.521	0.531	0.534
2014	0.532	0.547	0.529	0.539	0.533
2015	0.529	0.544	0.533	0.536	0.530
2016	0.521	0.539	0.526	0.528	0.518
2017	0.541	0.552	0.550	0.553	0.534



**Table 2** Summary statistics

<i>Variable</i>	Obs.	Mean	SD	Min	P25	P50	P75	Max
<i>EMPLOYEE TREATMENT</i>	30,885	0.535	0.280	0.000	0.299	0.544	0.776	0.998
<i>HEALTH &amp; SAFETY</i>	30,929	0.543	0.299	0.011	0.287	0.529	0.858	0.996
<i>CAREER DEVELOPMENT</i>	30,929	0.522	0.319	0.000	0.187	0.575	0.827	0.983
<i>DIVERSITY</i>	30,929	0.530	0.300	0.039	0.249	0.497	0.841	0.988
<i>WORKING CONDITIONS</i>	30,929	0.534	0.303	0.021	0.239	0.546	0.832	0.987
<i>ET_ADJ</i>	30,885	0.008	0.198	-0.675	-0.105	0.000	0.114	0.701
<i>MILITARY_D</i>	30,885	0.310	0.463	0.000	0.000	0.000	1.000	1.000
<i>MILITARY_RATIO</i>	30,885	0.022	0.064	0.000	0.000	0.000	0.026	1.000
<i>MILITARY_D_EXC_CEO</i>	30,885	0.295	0.456	0.000	0.000	0.000	1.000	1.000
<i>MILITARY_CEO</i>	30,885	0.041	0.199	0.000	0.000	0.000	0.000	1.000
<i>INCREASE</i>	30,885	0.052	0.222	0.000	0.000	0.000	0.000	1.000
<i>FIRM_AGE</i>	30,885	1.071	1.255	0.000	0.000	0.000	2.197	4.263
<i>FIRM_SIZE</i>	30,885	15.676	2.337	3.178	14.233	15.352	16.766	26.276
<i>TANGIBILITY</i>	30,885	0.318	0.250	0.000	0.107	0.254	0.492	0.947
<i>LEVERAGE</i>	30,885	0.250	0.182	0.000	0.112	0.237	0.359	0.913
<i>ROA</i>	30,885	0.075	0.126	-0.701	0.038	0.078	0.128	0.404
<i>TOBINQ</i>	30,885	1.950	1.358	0.244	1.135	1.512	2.228	8.831
<i>FCF</i>	30,885	0.096	0.094	-0.494	0.055	0.092	0.139	0.372
<i>RD_INTENSITY</i>	30,885	0.021	0.053	0.000	0.000	0.000	0.016	0.503
<i>BOARD_SIZE</i>	30,885	2.331	0.364	0.693	2.079	2.303	2.639	3.584
<i>INDEPENDENCE</i>	30,885	0.308	0.298	0.000	0.000	0.333	0.571	1.000
<i>TEAM_SIZE</i>	30,885	2.388	1.452	0.000	1.099	2.565	3.497	7.356
<i>FEMALE_DIRECTOR</i>	30,885	0.119	0.108	0.000	0.000	0.111	0.182	0.750
<i>DIRECTOR_AGE</i>	30,885	3.986	0.297	3.258	3.989	4.078	4.148	4.635
<i>FOREIGN</i>	30,885	0.054	0.132	0.000	0.000	0.000	0.050	0.960
<i>GDP_PERCAPITA</i>	30,885	10.615	0.565	7.198	10.595	10.760	10.916	11.685
<i>ANALYST</i>	33,340	2.328	0.765	0.000	1.934	2.471	2.872	4.019
<i>TEAM_FEMALERATIO</i>	23,914	0.122	0.135	0.000	0.000	0.099	0.207	1.000
<i>TEAM_AGE</i>	23,914	50.771	5.923	18.000	47.179	50.737	54.000	91.000
<i>TEAM_IVYRATIO</i>	23,914	0.063	0.100	0.000	0.000	0.026	0.097	1.000
<i>TEAM_FINANCIAL</i>	23,914	0.073	0.097	0.000	0.000	0.048	0.116	1.000
<i>CIVIL</i>	30,648	0.264	0.441	0.000	0.000	0.000	1.000	1.000
<i>REGULATORY</i>	30,648	1.418	0.473	-0.911	1.281	1.532	1.714	2.261

**Table 3** Link between military-experienced top executives and subsequent employee-friendly treatment and policies

<i>Dep. Var. =</i>	EMPLOYEE TREATMENT		HEALTH & SAFETY		CAREER DEVELOPMENT		DIVERSITY		WORKING CONDITIONS	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
<i>MILITARY_D</i>	0.026*** (7.147)		0.034*** (8.939)		0.015*** (3.507)		0.037*** (9.875)		0.023*** (5.437)	
<i>MILITARY_RATIO</i>		0.117*** (5.750)		0.133*** (6.256)		0.041* (1.763)		0.102*** (4.004)		0.045* (1.654)
<i>FIRM_AGE</i>	0.005* (1.723)	0.005* (1.810)	0.004 (1.226)	0.004 (1.345)	0.002 (0.450)	0.002 (0.496)	0.022*** (5.094)	0.023*** (5.157)	0.007 (1.402)	0.007 (1.457)
<i>FIRM_SIZE</i>	0.070*** (28.759)	0.070*** (28.782)	0.059*** (24.451)	0.060*** (24.603)	0.073*** (26.404)	0.073*** (26.379)	0.069*** (21.147)	0.070*** (21.083)	0.058*** (15.228)	0.058*** (15.266)
<i>TANGIBILITY</i>	0.034*** (3.953)	0.033*** (3.869)	0.052*** (6.596)	0.051*** (6.501)	0.058*** (6.498)	0.058*** (6.442)	0.028*** (3.149)	0.027*** (3.029)	0.052*** (5.337)	0.051*** (5.263)
<i>LEVERAGE</i>	-0.070*** (-8.505)	-0.072*** (-8.636)	-0.021* (-1.748)	-0.023* (-1.891)	-0.065*** (-6.825)	-0.066*** (-6.868)	-0.041*** (-3.806)	-0.043*** (-3.923)	-0.041*** (-4.602)	-0.042*** (-4.622)
<i>ROA</i>	0.047*** (2.735)	0.046*** (2.635)	-0.006 (-0.328)	-0.009 (-0.448)	0.037* (1.740)	0.036* (1.698)	-0.022 (-1.025)	-0.025 (-1.132)	0.043* (1.649)	0.042 (1.597)
<i>TOBINQ</i>	0.015*** (8.119)	0.015*** (8.228)	-0.000 (-0.060)	0.000 (0.054)	0.007*** (3.538)	0.007*** (3.573)	0.005** (2.110)	0.005** (2.176)	0.016*** (7.199)	0.016*** (7.249)
<i>FCF</i>	0.089*** (3.081)	0.090*** (3.107)	0.170*** (8.394)	0.172*** (8.414)	0.194*** (6.876)	0.195*** (6.893)	0.152*** (7.556)	0.154*** (7.580)	0.162*** (5.422)	0.163*** (5.476)
<i>RD_INTENSITY</i>	0.451*** (8.064)	0.449*** (8.006)	0.170*** (4.331)	0.167*** (4.273)	0.187*** (3.156)	0.185*** (3.130)	0.318*** (4.680)	0.315*** (4.606)	0.225*** (3.854)	0.222*** (3.801)
<i>BOARD_SIZE</i>	0.103*** (9.584)	0.104*** (9.620)	0.081*** (7.931)	0.083*** (8.015)	0.112*** (8.691)	0.113*** (8.717)	0.120*** (7.629)	0.123*** (7.683)	0.118*** (6.040)	0.120*** (6.035)
<i>INDEPENDENCE</i>	-0.007 (-0.630)	-0.007 (-0.623)	0.038*** (3.677)	0.039*** (3.701)	-0.050*** (-3.574)	-0.050*** (-3.574)	-0.009 (-0.654)	-0.008 (-0.627)	-0.073*** (-4.824)	-0.073*** (-4.832)
<i>TEAM_SIZE</i>	0.014*** (3.646)	0.017*** (4.390)	0.011*** (3.541)	0.015*** (4.832)	0.019*** (4.915)	0.021*** (5.547)	0.018*** (4.317)	0.022*** (5.252)	0.012*** (3.510)	0.015*** (4.049)
<i>FEMALE_DIRECTOR</i>	0.259*** (17.699)	0.261*** (17.755)	0.154*** (10.451)	0.158*** (10.622)	0.212*** (10.917)	0.213*** (11.027)	0.306*** (16.083)	0.310*** (16.238)	0.190*** (12.058)	0.193*** (12.193)
<i>DIRECTOR_AGE</i>	0.002 (0.253)	0.002 (0.321)	0.016*** (3.014)	0.017*** (3.108)	0.021*** (3.800)	0.022*** (3.822)	0.021*** (3.859)	0.021*** (3.936)	0.041*** (6.544)	0.041*** (6.588)
<i>FOREIGN</i>	-0.001 (-0.091)	-0.001 (-0.042)	0.025* (1.937)	0.026** (1.991)	-0.026** (-2.091)	-0.026** (-2.041)	-0.023* (-1.900)	-0.022* (-1.775)	-0.069*** (-4.094)	-0.068*** (-4.017)
<i>GDP_PERCAPITA</i>	0.104*** (4.622)	0.101*** (4.418)	0.060*** (3.185)	0.055*** (2.956)	-0.001 (-0.041)	-0.003 (-0.117)	-0.038 (-1.026)	-0.042 (-1.126)	-0.087*** (-3.110)	-0.089*** (-3.172)
<i>_CONSTANT</i>	-2.109*** (-9.969)	-2.093*** (-9.776)	-1.396*** (-7.859)	-1.377*** (-7.724)	-1.192*** (-5.607)	-1.184*** (-5.545)	-1.161*** (-3.513)	-1.142*** (-3.404)	-0.483* (-1.723)	-0.472* (-1.677)
<i>Year fixed effects</i>	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
<i>Industry fixed effects</i>	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

<i>Country fixed effects</i>	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
<i>Adj. R2</i>	0.411	0.411	0.384	0.383	0.427	0.427	0.390	0.388	0.315	0.315
<i>Observations</i>	30,885	30,885	30,929	30,929	30,929	30,929	30,929	30,929	30,929	30,929

Notes: This table presents the regression results of the influence of military-experienced executives on a firm's effectiveness in addressing employee treatment issues. Particularly, in Models 1 and 2, the dependent variable is *EMPLOYEE TREATMENT*, which is an aggregate performance measurement of the workforce treatment. It measures a firm's effectiveness in terms of providing job satisfaction, a healthy and safe workplace, and maintaining diversity, employee relations, equal opportunities, and development opportunities for its workforce. In Models 3 and 4, the *HEALTH & SAFETY* rating measures a firm's effectiveness in terms of providing workforce health and safety. In Models 5 and 6, the *CAREER DEVELOPMENT* rating measures a firm's effectiveness with respect to providing career development opportunities and training hours for its workforce. In Models 7 and 8, the *DIVERSITY* rating measures how well the firm deals with workforce diversity and opportunity, including employee promotion, anti-discrimination, and anti-harassment. In Models 9 and 10, the *WORKING CONDITIONS* rating reflects a firm's effectiveness in addressing employee relations or wage dispute issues. High scores correspond to better employee-friendly engagement. *MILITARY\_D* is an indicator variable equal to one if a firm has at least one ex-military top executive on the management team in a given fiscal year, and zero otherwise. *MILITARY\_RATIO* is measured as the percentage of the ex-military executives on the management team. All independent variables except for *FIRM\_AGE* and *GDP\_PERCAPITA* are one-year lagged. Standard errors are clustered at the country and the year levels and are corrected for heteroscedasticity. The 1%, 5%, and 10% significance levels are denoted by \*\*\*, \*\*, and \* (two-tailed), respectively.

**Table 4** The mediating analysis: the influence of the improvement in employee treatment driven by military-experienced executives on future firm value

**Panel A** Regressions of the mediating analysis

<i>Dep. Var. =</i>	EMPLOYEE TREATMENT	TOBINQ
	(1)	(2)
<i>MILITARY_D</i>	0.039*** (10.952)	0.090*** (5.188)
<i>EMPLOYEE TREATMENT</i>		0.183*** (6.841)
<i>FIRM_AGE</i>	0.009*** (3.687)	-0.002 (-0.272)
<i>FIRM_SIZE</i>	0.068*** (56.391)	-0.162*** (-41.276)
<i>TANGIBILITY</i>	0.023** (2.785)	-1.005*** (-35.065)
<i>LEVERAGE</i>	-0.087*** (-10.863)	-0.480*** (-12.291)
<i>ROA</i>	0.045** (3.078)	0.840*** (11.179)
<i>FCF</i>	0.116*** (5.876)	2.737*** (27.196)
<i>BOARD_SIZE</i>	0.122*** (22.315)	-0.141*** (-6.138)
<i>INDEPENDENCE</i>	0.003 (0.385)	0.483*** (15.329)
<i>GDP_PERCAPITA</i>	0.094*** (6.494)	-0.159*** (-11.645)
<i>_CONSTANT</i>	-2.024*** (-13.796)	6.322*** (36.991)
<i>Year fixed effects</i>	Yes	Yes
<i>Industry fixed effects</i>	Yes	Yes
<i>Country fixed effects</i>	Yes	Yes
<i>Maximum likelihood estimation</i>	Yes	Yes
<i>Observations</i>	30,878	30,878

**Panel B** Detailed path analysis

<i>Dep. Var. = TOBINQ</i>	Estimate	p-value
<i>Total effect (of MILITARY_D)</i>	0.098	0.000
<i>Direct effect (of MILITARY_D)</i>	0.090	0.000
<i>Indirect effect (of MILITARY_D)</i>	0.007	0.000
<i>% total effect mediated (=The indirect effect/Total effect)</i>	7.143%	/
<i>MILITARY_D ⇒ EMPLOYEE TREATMENT</i>	0.039	0.000
<i>Improved EMPLOYEE TREATMENT ⇒ TOBINQ</i>	0.183	0.000

**Panel C** Significance testing of the indirect effect

<i>Estimate</i>	Delta	Sobel	Monte Carlo
<i>Indirect Effect</i>	0.007	0.007	0.007
<i>Standard Errors</i>	0.001	0.001	0.001
<i>z-value</i>	5.802	5.802	5.779
<i>p-value</i>	0.000	0.000	0.000
<i>Confidence Interval</i>	0.005, 0.010	0.005, 0.010	0.005, 0.010

Notes: This table reports the analysis of the mediating effect of the employee-friendly treatment driven by ex-military executives on a firm's Tobin's Q, which is a proxy for firm value. Panel A reports the regression results of the mediating analysis. We follow prior research to control for a series of variables that are known to influence firm value, including *FIRM\_AGE*, *FIRM\_SIZE*, *TANGIBILITY*, *LEVERAGE*, *ROA*, *FCF*, *BOARD\_SIZE*, *INDEPENDENCE*, and *GDP\_PERCAPITA* in both models. All independent variables are lagged by one year. Year, industry, and country dummies are included in the model specification. Panel B displays the direct, indirect, and total effects of military-experienced executives and shows the detailed path analysis. Panel C presents the significance testing of the indirect effect. The 1%, 5%, and 10% significance levels are denoted by \*\*\*, \*\*, and \* (two-tailed), respectively.

**Table 5** Moderating effects of the firm age and external monitoring on the link between ex-military executives and employee-friendly strategies

<i>Dep. Var. = EMPLOYEE TREATMENT</i>		
	(1)	(2)
<i>MILITARY_D</i>	0.033*** (7.608)	0.055*** (5.333)
<i>MILITARY_D</i> × <i>FIRM_AGE</i>	-0.013*** (-2.998)	
<i>MILITARY_D</i> × <i>ANALYST</i>		-0.013*** (-3.349)
<i>ANALYST</i>		0.050*** (12.216)
<i>FIRM_AGE</i>	0.007** (2.236)	0.006* (1.706)
<i>FIRM_SIZE</i>	0.070*** (28.583)	0.054*** (21.500)
<i>TANGIBILITY</i>	0.035*** (4.057)	0.025*** (2.984)
<i>LEVERAGE</i>	-0.069*** (-8.509)	-0.056*** (-7.664)
<i>ROA</i>	0.048*** (2.758)	0.047*** (2.893)
<i>TOBINQ</i>	0.015*** (8.148)	0.011*** (6.136)
<i>FCF</i>	0.089*** (3.082)	0.047* (1.948)
<i>RD_INTENSITY</i>	0.455*** (8.105)	0.366*** (6.810)
<i>BOARD_SIZE</i>	0.102*** (9.554)	0.104*** (13.265)
<i>INDEPENDENCE</i>	-0.006 (-0.550)	-0.006 (-0.542)
<i>TMT_SIZE</i>	0.014*** (3.720)	0.015*** (4.055)
<i>FEMALE_DIRECTOR</i>	0.258*** (17.551)	0.252*** (16.126)
<i>DIRECTOR_AGE</i>	0.001 (0.148)	0.002 (0.348)
<i>FOREIGN</i>	-0.001 (-0.058)	0.001 (0.050)
<i>GDP_PERCAPITA</i>	0.106*** (4.780)	0.114*** (4.619)
<i>_CONSTANT</i>	-2.132*** (-10.179)	-1.993*** (-8.475)
<i>Year fixed effects</i>	Yes	Yes
<i>Industry fixed effects</i>	Yes	Yes
<i>Country fixed effects</i>	Yes	Yes
<i>Adj. R2</i>	0.412	0.412
<i>Observations</i>	30,885	33,341

Notes: This table reports the regression results in terms of the moderating effects of firm age and external monitoring on the relationship between managerial military experience and employee treatment effects performance. All independent variables except for *FIRM\_AGE* and *GDP\_PERCAPITA* are one-year lagged. Standard errors are clustered at the country and the year levels and are corrected for heteroscedasticity. The 1%, 5%, and 10% significance levels are denoted by \*\*\*, \*\*, and \* (two-tailed), respectively.

**Table 6** Robustness checks

	Adj. employee treatment score	Excluding CEOs from the team	Management team heterogeneity	Conscription policy	Volunteer countries	Social culture and political environment	Non-US firms	Excluding heavy industry firms	Tobit model	Firm fixed effects	Change in the number of ex-military executives	High FCF	Low FCF
<i>Dep. Var. =</i>	ET_ADJ	EMPLOYMENT TREATMENT											
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
<i>MILITARY_D</i>	0.020*** (6.554)		0.013*** (3.784)	0.088*** (6.523)	0.023*** (6.150)	0.026*** (7.121)	0.034*** (5.113)	0.023*** (6.488)	0.026*** (7.148)	0.033** (2.363)		0.027*** (6.560)	0.027*** (3.325)
<i>MILITARY_D_EXC_CEO</i>		0.031*** (8.786)											
<i>INCREASE</i>											0.020*** (3.523)		
<i>TEAM_FEMALERATIO</i>			0.042*** (3.131)										
<i>TEAM_AGE</i>			-0.001*** (-3.829)										
<i>TEAM_IVYRATIO</i>			-0.005 (-0.336)										
<i>TEAM_FINANCIAL</i>			-0.060*** (-3.120)										
<i>CIVIL</i>						0.094** (2.002)							
<i>REGULATORY</i>						0.001 (0.058)							
<i>FIRM_AGE</i>	-0.009*** (-3.352)	0.005* (1.689)	-0.001 (-0.196)	0.009 (1.186)	0.002 (0.531)	0.005* (1.702)	0.013*** (4.193)	0.004 (1.205)	0.005* (1.743)	0.003 (0.345)	0.005* (0.772)	0.003 (0.772)	0.014*** (3.067)
<i>FIRM_SIZE</i>	0.050*** (19.513)	0.070*** (28.951)	0.066*** (32.793)	0.052*** (10.983)	0.073*** (26.599)	0.070*** (28.791)	0.063*** (24.616)	0.068*** (30.544)	0.070*** (28.889)	0.023*** (6.774)	0.070*** (28.682)	0.072*** (28.507)	0.067*** (17.200)
<i>TANGIBILITY</i>	0.028*** (3.684)	0.034*** (3.953)	0.047*** (4.419)	0.025 (0.909)	0.039*** (4.367)	0.035*** (4.093)	0.024** (2.195)	0.038*** (4.556)	0.034*** (4.007)	0.023 (1.400)	0.033*** (3.868)	0.027** (2.561)	0.048*** (3.534)
<i>LEVERAGE</i>	-0.032*** (-3.952)	-0.070*** (-8.486)	-0.065*** (-7.083)	-0.082*** (-3.774)	-0.067*** (-7.931)	-0.069*** (-8.466)	-0.060*** (-5.320)	-0.048*** (-5.265)	-0.070*** (-8.526)	-0.049*** (-4.195)	-0.070*** (-8.405)	-0.075*** (-6.774)	-0.069*** (-5.081)
<i>ROA</i>	0.027** (1.992)	0.048*** (2.790)	0.058*** (2.908)	0.156*** (3.125)	0.030 (1.633)	0.047*** (2.693)	0.059*** (2.745)	0.053*** (2.921)	0.048*** (2.747)	0.056*** (3.291)	0.047*** (2.719)	0.100*** (4.336)	0.052** (2.047)
<i>TOBINQ</i>	0.008*** (4.409)	0.015*** (8.058)	0.014*** (6.140)	0.013*** (2.920)	0.015*** (7.957)	0.015*** (8.230)	0.011*** (6.435)	0.014*** (7.898)	0.015*** (8.146)	0.006** (2.090)	0.015*** (8.202)	0.013*** (5.590)	0.018*** (8.260)
<i>FCF</i>	0.041* (1.865)	0.088*** (3.074)	0.005 (0.172)	0.168*** (2.615)	0.078** (2.552)	0.087*** (3.027)	0.167*** (6.383)	0.078** (2.490)	0.089*** (3.089)	0.051** (2.034)	0.089*** (3.107)		
<i>RD_INTENSITY</i>	0.256*** (5.617)	0.450*** (8.036)	0.387*** (6.927)	-0.221* (-1.661)	0.485*** (7.670)	0.456*** (8.090)	0.336*** (3.358)	0.423*** (7.589)	0.451*** (8.095)	0.024 (0.345)	0.446*** (7.947)	0.467*** (7.284)	0.308*** (4.569)
<i>BOARD_SIZE</i>	0.053*** (4.384)	0.103*** (9.573)	0.082*** (6.681)	0.124*** (8.547)	0.092*** (7.304)	0.104*** (9.709)	0.078*** (7.482)	0.101*** (9.533)	0.103*** (9.622)	0.043*** (3.621)	0.105*** (9.566)	0.096*** (8.718)	0.107*** (8.333)
<i>INDEPENDENCE</i>	0.003 (0.306)	-0.006 (-0.606)	-0.022* (-1.814)	-0.060*** (-3.423)	0.005 (0.355)	-0.007 (-0.607)	-0.033*** (-2.947)	-0.014 (-1.156)	-0.007 (-0.634)	-0.006 (-0.230)	-0.006 (-0.556)	-0.006 (-0.547)	0.002 (0.095)
<i>TEAM_SIZE</i>	0.017*** (4.976)	0.013*** (3.663)	0.041*** (9.017)	-0.000 (-0.086)	0.018*** (4.042)	0.014*** (3.658)	-0.000 (-0.133)	0.018*** (4.715)	0.014*** (3.669)	-0.002 (-0.531)	0.017*** (4.413)	0.016*** (4.403)	0.011* (1.898)
<i>FEMALE_DIRECTOR</i>	0.134*** (11.009)	0.259*** (17.835)	0.251*** (13.730)	0.195*** (5.023)	0.271*** (16.257)	0.257*** (17.636)	0.257*** (15.017)	0.257*** (17.006)	0.259*** (17.767)	0.034 (1.408)	0.261*** (17.792)	0.262*** (15.074)	0.234*** (9.419)
<i>DIRECTOR_AGE</i>	-0.005 (-1.116)	0.001 (0.226)	-0.002 (-0.358)	0.058*** (2.624)	-0.002 (-0.347)	0.001 (0.232)	0.019** (2.324)	0.002 (0.349)	0.002 (0.253)	0.005 (0.818)	0.002 (0.339)	0.003 (0.397)	0.000 (0.008)
<i>FOREIGN</i>	0.015 (1.561)	-0.001 (-0.072)	0.004 (0.234)	-0.114*** (-3.595)	0.042*** (3.365)	-0.001 (-0.076)	-0.011 (-0.706)	-0.012 (-0.837)	-0.002 (-0.120)	-0.031 (-1.466)	-0.000 (-0.021)	-0.004 (-0.289)	-0.006 (-0.289)
<i>GDP_PERCAPITA</i>	0.123*** (6.621)	0.105*** (4.666)	0.094*** (5.195)	-0.021 (-0.563)	0.132*** (4.824)	0.107*** (4.190)	0.167*** (7.427)	0.105*** (4.639)	0.104*** (4.637)	0.111*** (3.076)	0.103*** (4.498)	0.121*** (5.515)	0.079** (2.402)
<i>_CONSTANT</i>	-2.094***	-2.113***	-1.888***	-0.676*	-2.365***	-2.236***	-2.562***	-1.976***	-2.110***	-1.226***	-2.108***	-2.225***	-2.060***

	(-9.893)	(-9.994)	(-10.872)	(-1.804)	(-9.166)	(-8.857)	(-11.833)	(-9.084)	(-9.999)	(-3.294)	(-9.819)	(-10.532)	(-6.668)
<i>Year fixed effects</i>	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
<i>Firm fixed effects</i>	No	No	No	No	No	No	No	No	No	Yes	No	No	No
<i>Industry fixed effects</i>	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No	Yes	Yes	Yes
<i>Country fixed effects</i>	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No	Yes	Yes	Yes
<i>Adj./Within/Pseudo R2</i>	0.168	0.412	0.448	0.424	0.428	0.413	0.396	0.412	/	0.132	0.411	0.421	0.425
<i>Observations</i>	30,885	30,885	23,914	4,265	26,620	30,648	18,674	26,985	30,885	30,885	30,885	20,126	10,759

Notes: In Model 1, the dependent variable, *ET\_ADJ*, is a country–industry–year and mean-level adjusted employee treatment score. Model 2 displays the regression result of an alternative measure of managerial military experience. Model 3 additionally controls for common management team characteristics. Models 4 and 5 report the regression results of the influence of the management military experience on employee-friendly treatment using firm-years from countries with mandatory conscription policies and firm-years from volunteer countries, respectively. Model 6 displays the result of the inclusion of effects of the social norm (*CIVIL*) and country-level regulatory quality (*REGULATORY*). Model 7 presents the result by employing a non-US sample. Model 8 reports the regression result excluding firms operating in heavily polluting industries. Model 9 displays the result using a Tobit model. Model 10 reports the result of a firm fixed effect model. Model 11 displays the result of a change in the number of military-experienced executives on the management team, where *INCREASE* is a dummy variable set to one if the number of military-experienced executives on the management team this year is greater than that in the previous year, and zero otherwise. Models 12 and 13 report the regression result of the influence of ex-military executives on employee-oriented policies between high and low free cash flow groups. The 1%, 5%, and 10% significance levels are denoted by \*\*\*, \*\*, and \* (two-tailed), respectively.

**Table 7** Dynamic system GMM approach

<i>Dep. Var. = EMPLOYEE TREATMENT</i>	Dynamic panel-data system GMM
	(1)
<i>MILITARY_D</i>	0.011*** (8.133)
<i>LAG_EMPLOYEE TREATMENT</i>	0.490*** (301.303)
<i>FIRM_AGE</i>	0.001* (1.724)
<i>FIRM_SIZE</i>	0.020*** (27.611)
<i>TANGIBILITY</i>	0.051*** (12.485)
<i>LEVERAGE</i>	-0.071*** (-19.389)
<i>ROA</i>	0.036*** (12.808)
<i>TOBINQ</i>	0.004*** (16.471)
<i>FCF</i>	0.038*** (8.196)
<i>RD_INTENSITY</i>	-0.108*** (-5.722)
<i>BOARD_SIZE</i>	0.031*** (15.950)
<i>INDEPENDENCE</i>	-0.036*** (-8.338)
<i>TEAM_SIZE</i>	0.004*** (7.452)
<i>FEMALE_DIRECTOR</i>	0.003 (0.669)
<i>DIRECTOR_AGE</i>	-0.005*** (-2.663)
<i>FOREIGN</i>	-0.050*** (-20.318)
<i>GDP_PERCAPITA</i>	0.076*** (41.340)
<i>_CONSTANT</i>	-0.169 (-0.145)
<i>Year fixed effects</i>	Yes
<i>Industry fixed effects</i>	Yes
<i>Country fixed effects</i>	Yes
<i>Sargan test over-identification (p-value)</i>	0.000
<i>Hansen test over-identification (p-value)</i>	1.000
<i>Observations</i>	27,594
<i>No. of Companies</i>	4,439

Notes: This table displays the result from the dynamic GMM approach. The results of the test of over-identification restrictions and Hansen test of over-identification restrictions are displayed at the bottom of this table. Z-statistics are displayed in parentheses. The 1%, 5%, and 10% significance levels are denoted by \*\*\*, \*\*, and \* (two-tailed), respectively.



**Table 8** IV-2SLS approach

<i>Dep. Var. =</i>	MILITARY_D	EMPLOYEE TREATMENT	MILITARY_D	EMPLOYEE TREATMENT
	First stage of IV	Second stage of IV	First stage of IV	Second stage of IV
	(1)	(2)	(3)	(4)
<i>PREDICTED_MILITARY_D</i>		0.278*** (5.069)		0.608*** (7.488)
<i>NUM_EXE_KOREANWAR</i>	0.073*** (12.452)			
<i>NUM_EXE_VIETNAMWAR</i>			0.006*** (10.568)	
<i>FIRM_AGE</i>	0.014*** (3.860)	0.001 (0.460)	0.010*** (2.597)	-0.004 (-1.133)
<i>FIRM_SIZE</i>	0.017*** (7.949)	0.065*** (37.466)	0.016*** (7.593)	0.059*** (25.491)
<i>TANGIBILITY</i>	-0.028** (-2.209)	0.041*** (4.644)	-0.028** (-2.238)	0.050*** (4.501)
<i>LEVERAGE</i>	-0.019 (-1.534)	-0.064*** (-7.410)	-0.018 (-1.418)	-0.056*** (-5.129)
<i>ROA</i>	-0.059** (-2.576)	0.061*** (3.821)	-0.057** (-2.463)	0.079*** (3.882)
<i>TOBINQ</i>	0.007*** (3.462)	0.013*** (9.687)	0.007*** (3.438)	0.011*** (6.346)
<i>FCF</i>	0.051 (1.631)	0.077*** (3.599)	0.050 (1.592)	0.062** (2.289)
<i>RD_INTENSITY</i>	-0.085 (-1.501)	0.471*** (12.062)	-0.078 (-1.376)	0.499*** (10.117)
<i>BOARD_SIZE</i>	0.064*** (7.349)	0.086*** (12.407)	0.063*** (7.280)	0.064*** (6.968)
<i>INDEPENDENCE</i>	0.014 (1.044)	-0.008 (-0.906)	0.007 (0.547)	-0.011 (-0.938)
<i>TEAM_SIZE</i>	0.118*** (45.148)	-0.016** (-2.390)	0.113*** (42.033)	-0.056*** (-5.596)
<i>FEMALE_DIRECTOR</i>	0.071*** (3.244)	0.238*** (15.381)	0.072*** (3.314)	0.211*** (10.644)
<i>DIRECTOR_AGE</i>	0.015** (1.992)	-0.003 (-0.618)	0.018** (2.360)	-0.009 (-1.447)
<i>FOREIGN</i>	0.050*** (3.154)	-0.014 (-1.221)	0.049*** (3.076)	-0.030** (-2.103)
<i>GDP_PERCAPITA</i>	-0.113*** (-4.999)	0.132*** (8.017)	-0.103*** (-4.573)	0.169*** (7.928)
<i>_CONSTANT</i>	0.551** (2.387)	-2.239*** (-14.023)	0.451* (1.952)	-2.404*** (-11.892)

<i>Year fixed effects</i>	Yes	Yes	Yes	Yes
<i>Industry fixed effects</i>	Yes	Yes	Yes	Yes
<i>Country fixed effects</i>	Yes	Yes	Yes	Yes
<i>First-stage Cragg and Donald test</i>	p = 0.000	/	p = 0.000	/
<i>Minimum eigenvalue statistic</i>	155.043	/	111.682	/
<i>Adj. R2</i>	0.468	/	0.467	/
<i>Observations</i>	30,885	30,885	30,885	30,885

Notes: This table reports the results of the IV approach. First-stage regressions are reported in Models 1 and 3, while second-stage regression results are displayed in Models 2 and 4. The first IV, *NUM\_EXE\_KOREANWAR*, is computed as the number of top managers of each firm born on or before 1935. The second IV employed, *NUM\_EXE\_VIETNAMWAR*, is measured as the number of top managers of each firm born on or before 1955. All regression models control for year, industry, and country-level fixed effects. The 1%, 5%, and 10% significance levels are denoted by \*\*\*, \*\*, and \* (two-tailed), respectively.

**Table 9** PSM approach**Panel A** Estimated ATT

	ATT (T-Stat.)	Treated	Control	Treated : Control
<i>Dep. Var. = EMPLOYEE TREATMENT</i>				
<i>MILITARY_D</i>	0.020** (2.20)	0.500	0.480	8,573 : 20,691

**Panel B** The regression based on the matched sample

<i>Dep. Var. = EMPLOYEE TREATMENT</i>	PSM sample with replacement (1)
<i>MILITARY_D</i>	0.017*** (3.072)
<i>FIRM_AGE</i>	0.004 (0.417)
<i>FIRM_SIZE</i>	0.080*** (17.247)
<i>TANGIBILITY</i>	0.060** (2.369)
<i>LEVERAGE</i>	-0.142*** (-6.162)
<i>ROA</i>	0.019 (0.459)
<i>TOBINQ</i>	0.011** (2.582)
<i>FCF</i>	-0.015 (-0.191)
<i>RD_INTENSITY</i>	0.442*** (3.701)
<i>BOARD_SIZE</i>	0.030 (1.351)
<i>INDEPENDENCE</i>	-0.067** (-2.269)
<i>TEAM_SIZE</i>	0.025*** (3.477)
<i>FEMALE_DIRECTOR</i>	0.327*** (5.320)
<i>DIRECTOR_AGE</i>	-0.007 (-0.344)
<i>FOREIGN</i>	-0.092** (-2.188)
<i>GDP_PERCAPITA</i>	0.049 (1.068)
<i>_CONSTANT</i>	-1.173** (-2.381)
<i>Year fixed effects</i>	Yes
<i>Industry fixed effects</i>	Yes
<i>Country fixed effects</i>	Yes
<i>Adj. R2</i>	0.589
<i>Observations</i>	29,264

Notes: This table reports the results of a propensity score matching (PSM) routine for treatment companies and control companies. Panel A reports the average treatment effect on the treated (ATT), where the ATT is the average difference between the employee treatment score of companies with the presence of ex-military top executives and their counterfactual employee treatment score. Panel B shows the regression result by re-estimating Eq. (1) based on the matched sample. All continuous variables are winsorized at the 1% (99%) level. All matching criteria except for *FIRM\_AGE* and *GDP\_PERCAPITA* are in year *t-1*. The 1%, 5%, and 10% significance levels are denoted by \*\*\*, \*\*, and \* (two-tailed), respectively.

**Table 10** Entropy balancing test**Panel A** Before entropy balancing (without weighting)

<i>Variables used in the matching</i>	MILITARY_D = 1	MILITARY_D = 0
	Mean	Mean
<i>FIRM_AGE</i>	0.302	1.415
<i>FIRM_SIZE</i>	15.720	15.460
<i>TANGIBILITY</i>	0.285	0.330
<i>LEVERAGE</i>	0.259	0.244
<i>ROA</i>	0.082	0.070
<i>TOBINQ</i>	2.075	1.889
<i>FCF</i>	0.105	0.091
<i>RD_INTENSITY</i>	0.027	0.018
<i>BOARD_SIZE</i>	2.493	2.236
<i>INDEPENDENCE</i>	0.497	0.209
<i>TMT_SIZE</i>	3.712	1.722
<i>FEMALE_DIRECTOR</i>	0.132	0.111
<i>DIRECTOR_AGE</i>	4.038	3.953
<i>FOREIGN</i>	0.028	0.068
<i>GDP_PERCAPITA</i>	10.790	10.530

**Panel B** After entropy balancing (with weighting)

<i>Variables used in the matching</i>	MILITARY_D = 1	MILITARY_D = 0
	Mean	Mean
<i>FIRM_AGE</i>	0.302	0.302
<i>FIRM_SIZE</i>	15.720	15.720
<i>TANGIBILITY</i>	0.285	0.285
<i>LEVERAGE</i>	0.259	0.259
<i>ROA</i>	0.082	0.082
<i>TOBINQ</i>	2.075	2.075
<i>FCF</i>	0.105	0.105
<i>RD_INTENSITY</i>	0.027	0.027
<i>BOARD_SIZE</i>	2.493	2.493
<i>INDEPENDENCE</i>	0.497	0.497
<i>TMT_SIZE</i>	3.712	3.712
<i>FEMALE_DIRECTOR</i>	0.132	0.132
<i>DIRECTOR_AGE</i>	4.038	4.038
<i>FOREIGN</i>	0.028	0.028
<i>GDP_PERCAPITA</i>	10.790	10.790

**Panel C** The multivariate result with entropy balancing weighted on the first (mean) moment

<i>Dep. Var. =</i>	EMPLOYEE TREATMENT
	(1)
<i>MILITARY_D</i>	0.019*** (3.015)
<i>FIRM_AGE</i>	-0.006 (-0.822)
<i>FIRM_SIZE</i>	0.084*** (23.997)
<i>TANGIBILITY</i>	0.085*** (4.576)
<i>LEVERAGE</i>	-0.070*** (-3.541)
<i>ROA</i>	0.080** (2.488)
<i>TOBINQ</i>	0.025*** (6.562)
<i>FCF</i>	0.048 (0.993)
<i>RD_INTENSITY</i>	0.562*** (5.543)
<i>BOARD_SIZE</i>	0.087*** (5.709)
<i>INDEPENDENCE</i>	0.012 (0.504)
<i>TMT_SIZE</i>	0.035***

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	(7.161)
<i>FEMALE_DIRECTOR</i>	0.312***
	(7.523)
<i>DIRECTOR_AGE</i>	-0.035***
	(-3.084)
<i>FOREIGN</i>	0.040
	(1.460)
<i>GDP_PERCAPITA</i>	0.106***
	(2.682)
<i>_CONSTANT</i>	-2.401***
	(-6.072)
<i>Year fixed effects</i>	Yes
<i>Industry fixed effects</i>	Yes
<i>Country fixed effects</i>	Yes
<i>R2</i>	0.443
<i>Observations</i>	30,885

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Notes: This table presents the results of an entropy balancing analysis. Panels A and B report the mean, variance, and skewness for control variables for the treatment sample (*MILITARY\_D*=1) versus the control sample (*MILITARY\_D*=0) derived before and after the application of the entropy balancing approach, respectively. Panel C presents the regression results of the entropy balancing method. The regression includes industry, year, and country fixed effects. All matching criteria except for *FIRM\_AGE* and *GDP\_PERCAPITA* are in year *t-1*. Variable definitions are displayed in Appendix A. The 1%, 5%, and 10% significance levels are denoted by \*\*\*, \*\*, and \* (two-tailed), respectively.