

# **State-level Culture and Workplace Diversity Policies: Evidence from US Firms**

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## **Abstract**

This paper examines the effect of state-level culture in the US on the adoption of firms' workplace diversity policies. Using firm-level panel data (1592 firm-year observations) over the period 2011–2014, we document that firms in highly individualistic states are less likely to adopt workplace diversity policies, which in turn negatively affects firm performance. Our results are robust to alternative variables and econometric specifications. Our findings provide insights into the contemporary debate on the economic aspects of workplace diversity policies for firms operating in different cultural backgrounds.

**Keywords:** Culture; Workplace diversity policies; Firm performance

## 1. Introduction

This paper empirically investigates the role of state-level culture on the adoption of workplace diversity policies based on sexual orientation and gender identity (i.e., lesbian, gay, bisexual, and transgender (LGBT) identities) with reference to US firms. Around the globe, people face endemic violence, legal discrimination, and other human rights violations because of their sexual orientation or gender identity.<sup>1</sup> Workplace discrimination, hostility, and negative attitudes (homophobia and transphobia) towards LGBT employees are associated with several risks for firms, resulting in lower employee performance (Bonaventura & Biondo, 2016). Therefore, a conducive working environment to support and protect LGBT rights is of great importance because: (1) firms benefit from greater job commitment, satisfaction, and enhanced labor productivity (e.g., Cook & Glass, 2016; Day & Greene, 2008; Liddle, Luzzo, Hauenstein, & Schuck, 2004); (2) acceptance of LGBT individuals can augment talent pool and workforce diversity through which a firm may draw strategic benefits (Barbulescu & Bidwell, 2013; Bell, 2011); and (3) firms that implement workplace diversity policies have a competitive advantage in the market and enjoy improved performance (e.g., Shan, Fu, & Zheng, 2017), higher firm value (Johnston & Malina, 2008), and are typically more innovative (Hossain, Atif, Ahmed, & Mia, 2019).<sup>2,3</sup>

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<sup>1</sup> For example, countries such as Saudi Arabia and Iran punish same-sex relationships with the death penalty. <https://www.amnestyusa.org/the-state-of-lgbt-rights-worldwide/> (accessed on 1 Nov 2019).

<sup>2</sup> To improve the workplace environment and eliminate discrimination against LGBT employees, the UN High Commissioner for Human Rights released new standards of conduct in 2017 (Hossain et al., 2019). These standards (including respect, elimination, and prevention of discrimination, support, and a stand for LGBT individuals) advocate for an open and broadminded workplace environment in which employees are not discriminated based on their sexual orientation or gender identity.

<sup>3</sup> Over the last two decades, there has been a substantial increase in calls for supporting and protecting LGBT rights in different countries, including Australia, Europe, UK, and the US (Lloren & Parini, 2017; Pichler, Blazovich, Cook, Huston, & Strawser, 2018).

Despite growing contributions of workplace diversity policies to various firm-level outcomes (e.g., firm performance, firm value, and firm innovation), the majority of prior studies in this area focus on internal (e.g., Cook & Glass, 2016) and external institutional factors (e.g., Cook & Glass, 2016; Everly & Schwarz, 2015; Gupta, Briscoe, & Hambrick, 2017) that predict whether firms offer such policies. Building beyond the role of formal institutions, we extend the literature on the adoption of workplace diversity policies from a psychological perspective, namely state-level culture. Typically, culture is a powerful factor that imposes constraints on formal institutional governance structures (Shao, Kwok, & Zhang, 2013) and influences business and financial decisions through beliefs or values at the national level (e.g., Aggarwal, Faccio, Guedhami, & Kwok, 2016; An, Chen, Li, & Xing, 2018).<sup>4</sup> Among developed countries, the culture of the US is individualistic (e.g., Hofstede, 1980). However, intra-nation measurable variations in culture provide an interesting backdrop to examine the individualism vs. collectivism dimension closely (Vandello & Cohen, 1999).<sup>5</sup> Therefore, using Vandello and Cohen's (1999) individualism-collectivism index as an important form of informal institution, we fill this knowledge gap in the literature by investigating whether state-level individualistic culture within the US increases or decreases the likelihood that a firm will adopt workplace diversity policies.<sup>6</sup>

We hypothesize a negative association between state-level individualism and the adoption of workplace diversity policies for several reasons. The first rationale lies in the psychological

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<sup>4</sup> Williamson (2000) suggests an analytical framework of economic and social analysis that consists of four levels where the informal institution is the most fundamental level (Level 1).

<sup>5</sup> Refer to Vandello and Cohen (1999) for differences in state-level culture.

<sup>6</sup> Scholars ponder whether the constructs of individualism and collectivism are orthogonal dimensions or opposite ends of a single dimension. Triandis (1989) states that both interpretations of the individualism-collectivism construct can be correct, based on the context of research. Existing empirical studies interpret the individualism-collectivism construct in a unidimensional manner (e.g., Chen, Dou, Rhee, Truong, & Veeraraghavan, 2015; Gorodnichenko & Roland, 2017; Hofstede, 1980; Li, Griffin, Yue, & Zhao, 2013). Therefore, we treat individualism and collectivism as opposite ends of a unidimensional scale as suggested by Vandello and Cohen (1999).

differences at the individual level. Managers from individualistic state cultures are more ‘I’-conscious (i.e., self-centered and overconfident), prefer less social integration with coworkers, and show fewer concerns about equality than those from collectivist states, suggesting that employers are not expected to care for their employees beyond the scope of the work contract (Hofstede, 1980; Triandis, Leung, Villareal, & Clack, 1985; Vandello & Cohen, 1999). Given this influence on managerial decision making, we expect that managers in highly individualistic states are less likely to integrate with their society, and are thus less likely to adopt workplace diversity policies.<sup>7</sup> Furthermore, managers in highly individualistic cultures are likely to focus on shareholders at the expense of other stakeholders, as their compensation is directly linked to firm performance (Kang, Lee, & Yoo, 2016; Li et al., 2013; Schuler & Rogovsky, 1998). Therefore, we posit that firms and managers in highly individualistic cultures are less likely to care about stakeholders such as employees and are thus less likely to adopt workplace diversity policies. Taken together, it is quite plausible that firms in highly individualistic states are less likely to adopt workplace diversity policies.

To empirically test the validity of our theoretical arguments, we use the Corporate Equality Index (*CEI*) score from the Human Rights Campaign (HRC) that reflects the extent to which firms adopt workplace diversity policies (Hossain et al., 2019; Shan et al., 2017). The information on this score includes the adoptions of sexual orientation non-discrimination policy, gender-identity non-discrimination policy, domestic partner benefits policy, and transgender health benefits policy. To explain state-level variations in culture among firms in the US, we utilize Vandello and Cohen’s (1999) individualism-collectivism index. Using a longitudinal sample of large firms in

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<sup>7</sup> De Mooij and Hofstede (2010) show that individuals view themselves as more important in decision making than the group.

the US over the period 2011–2014, we show that state-level individualism is negatively and significantly related to *CEI*, implying that firms located in highly individualistic states are less likely to adopt workplace diversity policies, which in turn, negatively affects firm performance. Our main finding is robust to alternative variable specifications, alternative econometric specifications, and sub-sample analysis. To address endogeneity concerns, we use two econometric specifications, namely, propensity score matching (PSM) and dynamic panel estimation (system GMM). Our additional results support the main finding.

Our contribution to the existing literature is two-fold. First, we contribute to the literature on cross-cultural psychology and workplace diversity policies by extending Hofstede's (2001) cultural construct of individualism-collectivism to workplace diversity policies that create value for organizations. At the state-level within the US, Chen et al. (2015) highlight an association between cash holdings and individualism-collectivism. At the country-level, prior studies have shown that firms residing in individualistic countries adopt more aggressive financial policies. For example, firms in individualistic countries have volatile operating income (Li et al., 2013), more investments (Shao et al., 2013), higher leverage (Chui, Lloyd, & Kwok, 2002), and lower dividend payments (Shao, Kwok, & Guedhami, 2010). Drawing on this line of research, we show that the adoption of workplace diversity policies is likely to be lower in firms where state-level individualism is higher in the US. To the best of our knowledge, our study provides the first comprehensive evidence on the role of state-level individualism on workplace diversity policies.

Second, a growing body of literature documents the social imperative of workplace diversity policies based on workplace discrimination (Priola, Lasio, De Simone, & Serri, 2014; Ragins & Cornwell, 2001), stigma at the workplace (Ragins, 2008), and politics and workplace diversity policies (Rhodes, 2017). However, recognizing the economic effect of workplace

diversity policies in creating firm value is greatly important. For instance, Hossain et al. (2019) find that firms with workplace diversity policies are likely to be more innovative and perform better. Pichler et al. (2018) and Shan et al. (2017) report improved firm performance when workplace diversity policies are in place. Building on the economic imperative of workplace diversity policies, we document poor financial performance for firms located in states with high individualism where the likelihood of adopting workplace diversity policies is lower. In a nutshell, our empirical evidence demonstrates that implementing workplace diversity policies can enhance firms' financial performance, thus stressing the economic significance of such policies. Therefore, our study is timely and provides insights into the economic aspects of workplace diversity policies for firms.

The remainder of the paper is structured as follows. Section 2 discusses the relevant literature and develops hypotheses. Section 3 describes the data and descriptive statistics, and Section 4 reports our empirical results and discussion. Section 5 concludes the study.

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

### **2.1 Culture and corporate policy decisions**

Why organizational policies are influenced by culture is a critically important query to be addressed. In a corporate setting, national culture (i.e., cultural values and beliefs) exerts a significant influence on the policy decisions of managers by shaping their views and preferences (Chen et al., 2015). Prior studies provide a strong theoretical underpinning of the effect of culture on corporate policy decisions. For instance, El Ghouli and Zheng (2016) show a significant impact of national culture on trade credit through its effect on the decision making of suppliers and managers. Particularly, clients based in individualistic societies receive less trade credit because

of the higher cost of creditworthiness information in such societies. Kanagaretnam, Lim, and Lobo (2011) provide evidence on how cultural differences influence bank managers' choice of earnings management strategy. Gorodnichenko and Roland (2017) demonstrate that culture is an important determinant of innovation due to social status and associated rewards. Thanetsunthorn (2015) finds a substantial impact of national culture on the level of corporate engagement in social issues such as CSR (Corporate Social Responsibility). In addition, other studies have documented the role of national culture in corporate risk-taking (Li et al., 2013), corporate cash holdings (Chen et al., 2015), cross-border mergers (Ahern, Daminelli, & Fracassi, 2015), capital structure (Chui et al., 2002), debt maturity (Zheng, El Ghouli, Guedhami, & Kwok, 2012), and dividend payout policy (Shao et al., 2010).

National culture influences various outcomes and financial decisions by shaping managers' perceptions in corporate settings. Therefore, cultural values are highly relevant in managing and nurturing workforce diversity in contemporary corporations (Herring & Henderson, 2014). Vandello and Cohen (1999) provide evidence that culture is related to the rights of minorities and racial equality (e.g., gender, women rights). A strand of research highlights that culture has a significant influence on firms' attitude towards the welfare of stakeholders such as society at large (De Mooij & Hofstede, 2010; Kang et al., 2016; Thanetsunthorn, 2015). Building on this line of research, we argue that firms with a supportive culture in place are more likely to reflect the concerns of all stakeholders including employee minorities (i.e., LGBT employees).<sup>8</sup> In a nutshell, national culture plays a significant role in determining managerial policy decisions (Li et al., 2013) including the implementation of workplace diversity policies.

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<sup>8</sup> This is somewhat relevant to the masculinity vs. femininity dimension of Hofstede's (2001) cultural values and indicates that organizational cultures that score high on femininity are likely to support workplace diversity policies.

## **2.2 Hofstede's cultural framework and workplace diversity policies**

Of the most prominent psychological theories of cultural differences, Hofstede's work is the earliest and most widely cited among databases on national culture (e.g., Aggarwal et al., 2016; Karolyi, 2016; Kwok & Tadesse, 2006; Li et al., 2013). Hofstede (2001) defines culture as "the collective programming of the mind that distinguishes the members of one category of people from those of another. Culture is composed of certain values, which shape behavior as well as one's perception of the world." In this framework, four main cultural dimensions represent important facets of culture (Hofstede, 1983, 2001; Hofstede & Bond, 1988). These dimensions are: 1) power distance (the degree to which people in a society accept the unequal distribution of power); 2) uncertainty avoidance (the extent to which people in a society prefer to avoid risky and uncertain situations); 3) masculinity vs. femininity (the degree to which people in a society value male assertiveness (e.g., achievement, recognition, and material success) compared to female nurturance (e.g., modesty and care for others)); and 4) individualism vs. collectivism (the degree to which people in society prefer individualism (e.g., care for themselves) over collectivism (care for their group)). In cross-country studies, existing literature relies largely on these cultural dimensions for investigations of organizational policy decisions (Ahern et al., 2015; El Ghouli & Zheng, 2016).

Building on the above theoretical discussions, we provide the link on how each of the dimensions is relevant to workplace diversity policies. First, under the condition where cultural values are higher in power distance, minorities are less powerful members of society (e.g., LGBT individuals) and are not likely to stand against the uneven distribution of resources or power (Hofstede, 2001). Therefore, we argue that firms operating in such cultures are less likely to implement workplace diversity policies. Second, in societies where high uncertainty culture is observed, firms would prefer to avoid business practices that are not aligned with societal norms



because of cultural preference to avoid the possibility of any uncertain outcome. Therefore, we expect the adoption of workplace diversity policies to be lower in such cultures. Third, female leaders are considered to be more concerned about accountability and the welfare of members of society. Hence, it is plausible to expect that firms operating in a highly feminine culture are more likely to adopt workplace diversity policies, which protect the rights of minority employees than firms operating in societies where masculine culture is greatly observed.<sup>9</sup> Finally, people in highly individualistic cultures are “I” focused and are typically not concerned about societal issues. As opposed to individualistic societies, people in collectivistic cultures are “We” focused and show more concern for the wellbeing of others (Vandello & Cohen, 1999). Therefore, we posit that firms operating in individualistic cultures are less likely to care about the rights of others and the likelihood of the adoption of workplace diversity policies remains lower compared to collectivistic societies.

### **2.3 Individualism vs. collectivism and workplace diversity policies**

In societies where individualism prevails, people value individual freedom and prefer to achieve personal goals without concern for the collective interests of group members (Hofstede, 2001). One’s identity in such societies is in the person, and inhabitants are conscious of self-esteem (De Mooij & Hofstede, 2010). However, in collectivistic societies, people place emphasis on group achievement, the goals of individuals are aligned with the overall interests of the group, and people are willing to sacrifice their self-interest for the benefit of the group (Brett, 2000; De Mooij & Hofstede, 2010). Therefore, the individualism vs. collectivism dimension is widely considered and employed in the cultural social psychology literature (An et al., 2018; Gorodnichenko & Roland,

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<sup>9</sup> Partial support to this argument is provided by Cook and Glass (2016), who find that firms with female directors in their boardrooms are more likely to introduce workplace diversity policies than firms with no women in their boardrooms.

2017; Greif, 1994; Shao et al., 2010; Vandello & Cohen, 1999). According to Triandis (1996), this dimension most accurately explains the cultural differences in behaviors, attitudes, cognitions, norms, values, goals, and beliefs by organizing them into a general cultural theme. In a similar fashion, recent studies suggest that among cultural dimensions proposed by Hofstede's (2001) cultural framework, the individualism vs. collectivism dimension is considered the most important dimension that captures cultural differences among societies and regions (Gorodnichenko & Roland, 2017; Greif, 1994; Shao et al., 2010; Triandis, 2001). These differences mainly exist due to family structure, living arrangements, socio-political and religious beliefs, and economic practices (Vandello & Cohen, 1999). Given the significance of individualism vs. collectivism in that it captures internal motivations to guide one's behavior (Eun, Wang, & Xiao, 2015; Gelfand, Nishii, & Raver, 2006), we focus on state-level individualism vs. collectivism to relate specific psychological behaviors of managers in corporate settings with workplace diversity policies.

Given the variations in the individualism vs. collectivism dimension (Vandello & Cohen, 1999), the managerial decision to adopt workplace diversity policies is expected to vary in the US states for four reasons. First, state-level differences lead to psychological disparities because managers from individualist states are more idiocentric (i.e., self-centred) and those from collectivist states are more allocentric (Triandis et al., 1985). In Vandello and Cohen's (1999) view, the opportunity for social integration and unity within a group of coworkers is lower in more individualistic states, while collectivism accompanies teamwork. This suggests higher self-orientation in individualistic cultures. Second, people in individualistic cultures rely on formal institutions (e.g., rule of law) to protect individual rights (Li et al., 2013). However, the majority of the US states have no laws protecting the employment of LGBT individuals (Webster, Adams, Maranto, Sawyer, & Thoroughgood, 2018), which in turn indicates that workplace diversity

policies are less likely to be adopted in individualistic states. In addition, prior studies show that firms operating in highly individualistic cultures do not seriously consider minorities (i.e., employee minorities) and societal issues (Kang et al., 2016; Thanetsunthorn, 2015).

Third, based on compensation practices, firm-level influence on managerial decision making is more common in highly individualistic cultures (Li et al., 2013). Managerial compensation in individualistic cultures is closely linked with firm performance (Schuler & Rogovsky, 1998) because managers are evaluated and rewarded based on reported performance (Kanagaretnam et al., 2011). The emphasis on managerial achievements is also higher in such cultures due to career concerns. Therefore, managerial consideration of other stakeholders' welfare is likely to be lower in highly individualistic societies (Boubakri, Mirzaei, & Samet, 2017; Kanagaretnam et al., 2011); rather, managers focus on shareholders in order to secure personal gains associated with higher firm performance (Kang et al., 2016). Finally, innovation and creativity are common characteristics of LGBT employees, and thus it is socially desirable to have LGBT employees for better performance (Gorodnichenko & Roland, 2017; Hossain et al., 2019; Vandello & Cohen, 1999). However, people in individualistic societies are "I"-conscious, tend to overrate their abilities, and suffer from self-attribution bias (Campbell, Goodie, & Foster, 2004). Therefore, managers in individualistic cultures are less likely to adopt workplace diversity policies. Given these distinctive characteristics of an individualistic culture, it is plausible to expect that managers from highly individualistic cultures may undermine the benefits of workplace diversity policies and are less likely to adopt such policies.

Given both individual and firm-level influences on managerial decision making, we predict that managers of firms located in high individualism states will be less likely to adopt workplace diversity policies. Alternatively, managers of firms operating in states that rank high on the

collectivism dimension will be highly likely to promote workplace diversity policies. Therefore, we posit that state-level individualism is negatively related to workplace diversity policies.

### **3. Sample and descriptive statistics**

#### **3.1 Data source and sample**

To examine the impact of state-level individualism on workplace diversity policies, we merge data mainly from three sources for the period from 2011 to 2014: the Human Rights Campaign's (HRC) Corporate Equality Index (*CEI*) score<sup>10</sup>, Vandello and Cohen's (1999) cultural values for state-level individualism, and Bloomberg for corporate governance and firm-characteristics. The *CEI* measure from the HRC is typically used to examine the impact of workplace diversity policies on various firm-level outcomes (Johnston & Malina, 2008; Shan et al., 2017; Wang & Schwarz, 2010). As part of the sampling criteria, we match databases based on firm-year observations available for workplace diversity policies, cultural measure, governance, and firm-characteristic variables. Our final sample includes 398 large firms operating in the US, amounting to 1592 firm-year observations. The appendix provides further details on sample distribution based on both year and state (Tables A and B).

#### **3.2 Measuring workplace diversity policies**

The dependent variable in this study is workplace diversity policies. Following prior studies (e.g., Hossain et al., 2019), we measure workplace diversity policies using the *CEI* score.

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<sup>10</sup> The HRC is the leading organization on reporting of LGBT progress within the US (Cook & Glass, 2016). The Corporate Equality Index (*CEI*) score includes adoption of sexual orientation non-discrimination policies, adoption of gender identity non-discrimination policies, in addition to having domestic partner benefits and transgender policies from 2011–2014. The HRC survey covers large firms in the US (i.e., Standard and Poor's 500, Forbes' list of the 200 largest privately held firms, and the Fortune 500 publicly traded firms). The HRC reports during the sample period are based on similar scoring criteria. However, we acknowledge the limitations associated with the *CEI* measure due to certain perceptions about the HRC, state-level culture index, and data availability relating to small firms.

Specifically, we manually collect this measure from the HRC annual reports. This score is based on the HRC survey from various largest publicly traded (e.g., the Fortune 500) and privately held firms (e.g., Standard and Poor's 500) on a scale ranging from 0 to 100, with 100 being the highest equality score. The rating criteria include points assigned to a firm according to whether its employment policies include sexual orientation, gender identity, and diversity training, supportive gender transition guidelines, domestic partner insurance, and transgender wellness benefits.

As an alternative to the primary measure of workplace diversity policies, we quantify the individual policies using various binary measures. First, we utilize *SONDP*, a dummy variable equal to one if a firm has a sexual orientation non-discrimination policy in place and zero otherwise. The second measure is *GINDP*, a dummy variable equal to one if a firm has a gender-identity non-discrimination policy in place and zero otherwise. The third is *DPB*, a dummy variable equal to one if a firm has a domestic partner benefits policy in place and zero otherwise. Our last measure is *TG*, a dummy variable equal to one if a firm has a transgender benefits policy in place and zero otherwise. As a robustness check, we use *P\_index* based on the sum of the four individual policy dummy variables (*SONDP*, *GINDP*, *DPB*, and *TG*) ranging from zero to one.

### **3.3 Measuring state-level individualism**

The independent variable of interest is state-level culture, which is based on an existing index of individualism-collectivism developed by Vandello and Cohen (1999). To reflect a wide range of cultural practices, from family and living arrangements to political, occupational, and religious behaviors, Vandello and Cohen (1999) construct an eight-item index ranking the US states in terms of individualistic versus collectivistic tendencies. Among those items, three are related to family composition and living arrangements, and the rest are related to social, political, religious, and economic traditions. In the eight-item index, the higher (lower) scores reflect greater collectivism

(individualism). Therefore, to reflect individualistic tendencies across the US states, our measure of state-level individualism index (*S\_IND*) is the inverse of the index of collectivism (i.e., minus one times the collectivism index) of Vandello and Cohen (1999). Our reversed index indicates that the higher the individualistic index, the higher the individualism observed in that state. This index has been used in prior literature. For instance, using such a state-level cultural dimension, Chen et al. (2015) show that firms in individualistic states in the US hold less cash than firms in collectivistic states.

### **3.4 Measuring control variables**

To isolate the impact of state-level individualism on workplace diversity policies, we account for several corporate board characteristics. First, we include board size (*B\_SIZE*, defined as the total number of directors on a corporate board) because decisions made by a large board can lead to rational and less risky outcomes (Sah & Stiglitz, 1986; Sah & Stiglitz, 1991). Second, we control for CEO duality (*DUAL*, defined as a proxy for CEO power that equals one if the CEO is a chairman of the board, and zero otherwise) given that the power of the CEO plays a significant role in making a decision related to corporate policies (e.g., Chen, Leung, & Goergen, 2017). Third, we consider board independence (*B\_IND*, defined as the number of independent directors divided by the board size) based on the notion that board independence is more likely to promote workplace diversity policies (Hossain et al., 2019). Fourth, we account for board gender diversity (*WOBP*, defined as the percentage of female directors on a corporate board) because female directors on corporate boards are more likely to support diversity initiatives (Cook & Glass, 2016). Finally, we control for board meetings (*MEETG*, defined as the number of board meetings held in a year) because regular board meetings improve the board's monitoring ability (Rutherford &

Buchholtz, 2007) and increase the likelihood of approving diversity-supportive initiatives (Hossain et al., 2019).

In addition to governance characteristics, we include a series of firm-level characteristics to account for observable factors that might influence firm policies. The first control is the size of the firm (*F\_SIZE*, defined as the natural logarithm of total assets) because large corporations tend to attract more attention from the public and media, which could influence their propensity to adopt workplace diversity policies (Chuang, Church, & Ophir, 2011). Our second control is the return on assets (*ROA*, defined as the ratio of return to total assets), which accounts for the effect of corporate performance on the adoption of workplace diversity policies. The third control is leverage (*LEV*, defined as the ratio of total debt (short- and long-term) to total assets) because firms with more leverage may be influenced by creditors in implementing workplace diversity policies. The fourth control is growth opportunities (*TOBIN'Q*, defined as the ratio of the market value of equity to book value of equity) because firms with more growth prospects are more likely to invest in diversity policies as a way forward to enhance firm value. The fifth control is insider ownership (*INS\_OWN*, defined as the percentage of shares held by insiders) given that pressure from insiders is likely to influence the policy decisions made by the organization. The sixth control is a state law (*STATE\_LAW*) dummy variable equal to one if the state in which a firm is located prohibits employment opportunities based on sexual orientation and gender identity and zero otherwise. Everly and Schwarz (2015) argue that external pressure is likely to influence the policy decisions made by organizations. The last control is research and development expenditure (*R&D*, defined as the ratio of total research and development expenditure to total assets) because there is a positive association between anti-discriminatory policies and firm innovation (Hossain et al., 2019). In Table 1, we summarize the definitions of all variables.

[Insert Table 1 about here]

### 3.5 Descriptive statistics

Table 2 provides the descriptive statistics for the entire sample and sub-samples including state-law versus no-state-law and high-individualistic versus low-individualistic cultures. The average mean value for *CEI* is 58.22, with significant variations across sub-samples. For example, firms operating in states with a law prohibiting employment discrimination have a higher score (*CEI*=66.67), while the *CEI* score is lower in high (*CEI*= 54.40) relative to low individualistic state cultures (*CEI*=61.28). Moreover, of the firm-year observations, 89%, 61%, 58%, and 32% offer a sexual orientation non-discrimination policy (*SONDP*), a gender-identity non-discrimination policy (*GINDP*), domestic partner benefits (*DPB*), and transgender benefits (*TG*) policies, respectively. Among our sample firm-year observations, the average state-level individualistic score is 52.70. This value implies that firms falling below this value are expected to engage in best practices with their LGBT employees and provide support to their diverse workforce to create a respectful and conducive working environment for all. The mean differences between sub-samples are significant at the 10% level or better. The other board- and firm-level variables are relatively standard and conform to our expectations. Table C in the appendix provides industry-wise descriptive statistics.

[Insert Table 2 here]

### 3.6 Correlation analysis

Table 3, as a basic check for multicollinearity, provides a correlation matrix for the variables used in the baseline analysis. Consistent with our expectations, we find that the correlation coefficient (-0.056) on *S\_IND* negatively correlates with *CEI*. This preliminary evidence suggests



a negative relationship between state-level individualism and workplace diversity policies. As far as individual policies are concerned, state-level individualism remains negatively correlated with each of the policies (*SONDP*, *GINDP*, *DPB*, and *TG*). As in Table 3, the highest correlation coefficients of 0.823, 0.848, and 0.701 appear between *CEI* and individual policies. As a general principle, a correlation higher than 0.70 may indicate a multicollinearity issue (Atif, Hossain, Alam, & Goergen, 2020; Liu, Wei, & Xie, 2014). Since these variables are used alternatively in the regression model instead of simultaneously, the high correlation among these variables does not seem to be an issue. The control variables in most cases continue to hold expected signs with *CEI*. In general, these correlation coefficients are univariate in nature (Hsu, Lee, Liu, & Zhang, 2015). In addition, we calculate the variance inflation factor (VIF) to test the potential effect of multicollinearity among the variables in our model.<sup>11</sup> All the variables show a VIF of less than 2.33 and the overall average value is 1.35.<sup>12</sup> This suggests that multicollinearity is not an issue in the model.

[Insert Table 3 here]

## 4. Empirical results and discussion

### 4.1 Main results: State-level individualism and workplace diversity policies

To examine the effect of state-level individualism on workplace diversity policies, we estimate the following baseline regression model:

$$CEI_{ijt} = \beta_0 + \beta_1 S\_IND_{st} + \gamma' CONTROL_{ijt} + \psi_j + \omega_t + u_{ijt} \quad (1)$$

where *i*, *j*, *s*, and *t* refer to the firm, industry, state, and year, respectively. The dependent variable, workplace diversity policies, is measured by *CEI*. Our variable of interest, *S\_IND*, is the state-

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<sup>11</sup> We do not report the VIF table for the sake of brevity.

<sup>12</sup> Lardaro (1993) suggests that multicollinearity may be a concern if VIF exceeds 10.

level individualism index of Vandello and Cohen (1999). The vector CONTROL consists of the board- and firm-level characteristics as defined previously. The model specification includes the year ( $\omega_t$ ) and industry effects ( $\psi_j$ ) based on the two-digit codes of the Global Industry Classification Standard (GICS). We report t-statistics in parentheses in all regressions.

[Insert Table 4 here]

Table 4, Panel A reports the regression results for various specifications of Equation (1). In Column 1, we regress workplace diversity policies (*CEI*) on the key independent variable, i.e., *S\_IND*, without the full set of board- and firm-level controls. In Columns 2–3, we add all control variables and re-estimate the regression along with and without year ( $\omega_t$ ) and industry effects ( $\psi_j$ ), respectively. The results for the estimated coefficient on *S\_IND* in all model specifications continue to be negative and statistically significant (coefficients= -0.359,  $p < 0.01$ ; -0.275,  $p < 0.05$ ; -0.316;  $p < 0.01$ ), suggesting that firms located in highly individualistic states are less likely to adopt workplace diversity policies in the US. The results are economically significant: for instance, an increase in state-level individualism (*S\_IND*) by one (sample) standard deviation (i.e., using Table 2), reduces firms' engagement in the best practices of workplace diversity policies (*CEI*) by approximately 3.85% [ $S\_IND (7.09) \times -0.316 / CEI (58.22) = -0.0385$ ].

Most of our control variables exhibit directional effects consistent with those documented by previous studies. For instance, firms with higher board independence (Hossain et al., 2019), a higher percentage of female directors (Cook & Glass, 2016), frequent board meetings (Rutherford & Buchholtz, 2007), more growth opportunities and greater insider ownership (Everly & Schwarz, 2015), and higher R&D expenses are more likely to adopt workplace diversity policies. By

contrast, highly leveraged (Cook & Glass, 2016) and profitable firms are negatively associated with workplace diversity policies.

In Panel B of Table 4, we regress individual policies such as the sexual orientation non-discrimination (*SONDP*) policy (Columns 1–2), gender identity non-discrimination (*GINDP*) policy (Columns 3–4), domestic partner benefits (*DPB*) policy (Columns 5–6), and transgender insurance (*TG*) policy (Columns 7–8) on *S\_IND* with (Columns 2, 4, 6, and 8) and without (Columns 1, 3, 5, and 7) the full set of board- and firm-level controls. As expected, we find the estimated coefficient on *S\_IND* to be negative and statistically significant at the 10% level or better, except for the sexual orientation non-discrimination policy.

Given the differences across the individual and firm-level influences on managerial decision making in individualistic vs. collectivistic cultures, we expect a negative association between state-level individualism and workplace diversity policies. In our main analysis, we find consistent and statistically strong evidence across all specifications, implying that firms located in highly individualistic states are less likely to adopt workplace diversity policies. Further, we show that state-level individualism has a negative impact on the likelihood that a firm will provide domestic partner benefits, adopt gender-identity non-discrimination, and transgender insurance policies. However, state-level individualism has no direct effect on whether a firm adopts a sexual orientation non-discrimination policy. Overall, our findings, which reveal the cultural variations across the US states as an important predictor of policy adoption, lend strong support for our hypothesis.

## 4.2 Robustness tests

This section re-examines the baseline findings using various robustness checks including accounting for state-level fixed effects, alternative variable and model specifications, exclusion of board characteristics, exclusion of dominating industry sector and state in the sample, and incorporating additional control variables.

In Table 5, we use *CEI* and *P\_index* as dependent variables, where *P\_index* is measured as the sum of four individual policy dummies (*SONDP*, *GINDP*, *DPB*, and *TG*) ranging from 0 to 1. First, as a robustness check, we repeat our baseline analysis by controlling state-level fixed effects in addition to the industry- and year fixed-effects (Panel A). Second, to check whether the negative effect of state-level individualism on workplace diversity policies is sensitive to the choice of model specification, we conduct our robustness check using Tobit regression (Panel B). Third, our baseline result could also be driven by the influence of board characteristics, because the corporate board is the apex body of a firm's internal governance system (Fama & Jensen, 1983), which could play a role in the adoption of workplace diversity policies. To address this concern, we re-estimate the baseline regression model by excluding board governance characteristics (Panel C). Fourth, to check any potential impact of the industry classifications (e.g., Alam, Atif, Chien-Chi, & Soytas, 2019) on the role of state-level individualism, we exclude the consumer discretionary industry sector that dominates the sample (Panel D).<sup>13</sup> Fifth, we control for firm age and location given that both variables may affect a firm's diversity policies depending on whether it is a new or established firm and the state location (Panel E). Sixth, we control for CEO gender (a dummy variable equal to one if the CEO is a female and zero otherwise) and the existence of an equity committee (a dummy variable equal to one if the firm has an equity committee and zero otherwise) due to their

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<sup>13</sup> Industry-wise detail of the sample is presented in Table C in the appendix.

potential influence on the adoption of workplace diversity policies (Panel F). Finally, to address the concern that our results may be driven by states with a higher number of observations dominating the sample, we exclude such states (i.e., CA, NY, and TX) from our analysis (Panel G). Table 5 reports the regression results in two columns (across seven panels) of the above sensitivity checks with baseline control variables, industry, and year effects. Consistent with our expectations, we find that the effect of state-level individualism on *CEI* and *P\_index* remains robust across all specifications.

[Insert Table 5 here]

### 4.3 Endogeneity bias

In this study, endogeneity between state-level individualism and workplace diversity policies is unlikely to be a concern because a firm-level event that could cause a state's cultural traits seems implausible. However, a caveat for our finding may be the causal effect of workplace diversity policies on state-level culture. To meet social expectations, managers in individualistic states may make a strategic move avoiding the adoption of workplace diversity policies. This may also be consistent with the notion that managers who do not comprehend the benevolent effects of workplace diversity policies (and their positive impacts on firm performance) are less likely to accept LGBT employees into their workforce and adopt such policies. Therefore, it may be quite plausible for our independent variable (*S\_IND*) to systematically dissociate with our dependent variable (*CEI*). To address these concerns, we employ two techniques: propensity score matching (PSM) and a dynamic panel data estimation technique, namely Generalized Method of Moments (GMM).

Following extant literature (e.g., Atif, Huang, & Liu, 2019; Lennox, Francis, & Wang, 2012; Rosenbaum & Rubin, 1983), we first use PSM to estimate the difference in our dependent

variable (*CEI*) as a result of an independent variable (*S\_IND*). To construct treatment versus control groups, we use a binary indicator, *S\_DUMMY*, equal to one (zero) based on above (below) mean value of *S\_IND*. We include firms in the treatment (control) group if a firm is assigned the value of one (zero) based on *S\_DUMMY*. As part of the estimation process, we run a logistic regression on our treatment versus control groups with similar explanatory variables as in Equation (1).<sup>14</sup> In Panel A of Table 6, we report the logistic regression results for the pre-matched sample (Column 1) that captures significant coefficients in most cases as expected, while the overall model produces a pseudo-R-squared of 0.056.

To ensure firms in both groups are adequately similar, we use the nearest neighbor approach and match each firm in the treatment group with a firm in the control group. In the case of numerous matches, we retain the pair for which the difference between the propensity scores of the two firms is the smallest. We also require that the maximum difference between the propensity score of each firm and its matched cohort does not exceed 0.1% in a certain value.<sup>15</sup>

To verify that the firms in the treatment and control groups are identical in terms of observable characteristics, we perform two diagnostics tests. The first test involves re-estimating the logit model for the post-matched sample. Consistent with our expectations, the results for the restricted sample (Column 2, Panel A in Table 6) show mostly insignificant coefficients in most cases, implying that there are less obvious trends between the treatment and control groups. Furthermore, coefficients in the post-matched sample are much smaller in size than those in the pre-matched sample, signaling a drop in the degree of freedom in the matched sample. Lastly, the pseudo R-squared decreases from 0.056 to 0.026 for the post-matched sample. The second test

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<sup>14</sup> As a robustness measure, we use the median to form *S\_DUMMY*. Our results remain consistent.

<sup>15</sup> We also use multiple matched firms by modifying the difference in propensity scores to 1.0% and 0.5% in value (Atif, Liu, & Huang, 2019); nevertheless, our un-tabulated results are consistent.

explores the differences in the mean values across variables in the treatment and control firms. Panel B of Table 6 shows that none of the variations in the variables between the two groups is statistically significant.<sup>16</sup> Overall, these diagnostics indicate that PSM removes all observable variations in explanatory variables, other than the state-level individualism.

In Panel A of Table 6 (Column 3), we report regression results based on the matched sample and find that the coefficient on *S\_IND* is significantly negative (significant at the 1% level). This evidence implies that individualistic cultures are less likely to implement workplace diversity policies. This supports our hypothesis, confirming that our results are not driven by (observable) differences between firm-year observations in the two groups.

[Insert Table 6 about here]

Second, we use dynamic panel estimation that accounts for unobserved heterogeneity, as well as simultaneous and dynamic endogeneity (Roodman, 2009; Wintoki, Linck, & Netter, 2012). The two-step system Generalized Method of Moments (GMM) consists of a system of two types of equations: equations in levels and equations in first differences (Arellano & Bover, 1995; Blundell & Bond, 1998).<sup>17</sup> This approach uses first-differenced variables as instruments for the equations in levels and lagged levels of the variables as instruments for the equations in first differences. The estimations are robust to undetected heterogeneity, as well as simultaneous and dynamic endogeneity (if present). The stability of the dynamic system GMM depends on two major conditions. The first condition is the serial independence of the residuals, where the first-difference residuals should be serially correlated (*AR1*) by the means of their structure. However, second-difference residuals should not be serially correlated (*AR2*). The second condition is the

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<sup>16</sup> Mean difference between the treatment and control group is based on the average treatment effect on the treated (ATT).

<sup>17</sup> The system GMM estimations are performed using Roodman (2009) Stata module 'xtabond2'. Refer to Roodman (2009) and Pathan (2009) for details on dynamic panel data estimations.

validity of the instruments used in the dynamic estimation. The *Hansen J-statistic* of over-identifying restrictions tests the null hypothesis of the instruments' validity. The insignificance of the *Hansen J-statistic* indicates the validity of the instruments. Finally, the number of instruments (i.e., 41) used in the model needs to be less than the number of firms in the panel (i.e., 398), which adds to the consistency of the *Hansen J-statistic*.

The diagnostic test in Table 7 suggests that the model is statistically well-fitted as the test for first-order autocorrelation (*ARI*) is significant, the test for second-order autocorrelation (*AR2*) is insignificant, and the *Hansen J-statistic* of over-identifying restrictions is also insignificant. The regression results are qualitatively similar to those in Table 4 (Column 3). For instance, *S\_IND* negatively affects workplace diversity policies (*CEI*). Hence, the system GMM estimation supports our results after controlling for potential heterogeneity, as well as simultaneous and dynamic endogeneity.

[Insert Table 7 about here]

#### 4.4 Workplace diversity policies, state-culture, and firm performance

In this section, we investigate whether workplace diversity policies in individualistic states affect firm performance. Building on the negative effect of state-individualism on workplace diversity policies, we expect that there could be a spill-over effect on firm performance. To quantify firm performance, we use two measures, namely *ROS* (net income scaled by sales turnover) and *TOBIN'Q* in line with prior studies (e.g., Atif et al., 2020; Liu et al., 2014). Using the following regression model, we estimate the impact of *CEI* and *S\_IND* on firm performance.

$$FPF_{ijt} = \beta_0 + \beta_1(CEI_{ijt}) + \beta_2(S\_IND_{st}) + \beta_3(CEI_{ijt} \times S\_IND_{st}) + \gamma'CONTROL_{ijt} + \psi_j + \omega_t + u_{ijt} \quad (2)$$

where the dependent variable in Equation (2) is firm performance, *FPF*, measured by *ROS* and *TOBIN'Q*. The independent and control variables are similar to those in Equation (1) except for



the interaction between workplace diversity policies and state-individualism ( $CEI \times S\_IND$ ), the main variable of interest. In Table 8, we report the regression results using OLS and one-year lagged specifications for *ROS* and *TOBIN'Q*, respectively. The interaction term shows a negative effect on firm performance across all specifications at the 10% or better level of significance, suggesting poor firm performance due to the negative relationship between state-level individualism and workplace diversity policies. Overall, our findings signal a negative impact on performance for firms in individualistic states, who are less likely to adopt workplace diversity policies.

[Insert Table 8 about here]

## 5. Conclusion

The employment prospects and career mobility of LGBT individuals are limited as a result of discrimination and workplace hostility (e.g., Bilgehan Ozturk, 2011; Drydakis, 2015; Willis, 2012). However, LGBT-friendly workplace diversity policies are increasingly viewed as central priorities for firms because such policies not only benefit the workforce but also companies themselves (Cook & Glass, 2016) in terms of competitive advantage and better firm performance. Prior studies mainly focus on formal institutional factors (e.g., board gender diversity) to predict whether firms adopt workplace diversity policies. Given the differences in managerial decision making from psychological perspectives (i.e., values and beliefs), we expect a negative association between state-level individualism and workplace diversity policies. This study empirically investigates the effect of state-level individualism on workplace diversity policies, measured by the Corporate Equality Index. Using a cross-state sample of large US firms over the period 2011–2014, we find a significantly negative relationship between state-level individualism and workplace diversity policies. We also show that firms in individualistic states perform poorly

because of their reduced likelihood of adopting workplace diversity policies. Our results are robust to various econometric specifications, alternative measures of variables, and sub-sample analysis. Our results are further strengthened by identification strategies, namely PSM and GMM, demonstrating that the results are not spurious due to causality issues.

The main policy implication of our study is that top-level management should consider and implement workplace diversity policies through which firms can achieve higher performance. Specifically, our study suggests that firms in individualistic cultures should seek to improve their performance by adopting workplace diversity policies. The adoption of such anti-discriminatory policies provides equal employment opportunities and potential economic benefits to firms. Given the ongoing debate around sexual orientation and discrimination in the workplace across the US, our findings are timely and of significant importance for policymakers and regulators. Moreover, our findings provide insights into the contemporary debate on the economic aspects of workplace diversity policies for firms operating in different cultural backgrounds.

Our study is limited to the examination of larger firms in the US over the period from 2011 to 2014 due to the availability of data. Therefore, the generalization of our findings to small and medium-sized enterprises is limited. Future research could be extended to explore the relationship across various types of organizations (e.g., not-for-profit) and using micro-lenses on culture in individual firms. Further, the focus on developed or developing countries may be interesting given the large variations in national culture and debate on workplace diversity policies. Overall, our study suggests that state-level individualism is a significant institution but may have omitted variables in the literature that can also explain differences in workplace diversity policies among different cultures.

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Table 1. Definition of variables

Notation	Variable name	Measure
<b>Panel A: Corporate equality</b>		
CEI	Corporate equality index	This index ranges from 0 to 100 with 100 being the top score based on a firm's workplace diversity policies
SONDP	Sexual orientation non-discrimination employee policy	A dummy variable equals 1 if firm has a sexual orientation non-discrimination employee policy and 0 otherwise
GINDP	Gender-identity non-discrimination employee policy	A dummy variable equals 1 if firm has a gender-identity non-discrimination employee policy and 0 otherwise
DPB	Domestic partner benefits	A dummy variable equals 1 if firm offers domestic partner benefits to its LGBT constituents and 0 otherwise
TG	Transgender insurance	A dummy variable equals 1 if firm offers health benefits to transgender employees and 0 otherwise
<b>Panel B: Culture</b>		
S_IND	State-level individualism	Minus one times the collectivism index of Vandello and Cohen (1999). The higher the individualistic index of a state, the higher the individualism in that state
<b>Panel C: Corporate governance</b>		
B_SIZE	Board size	Total number of directors on a corporate board
DUAL	CEO duality	A dummy variable equals 1 if the CEO is also the chairman of the board and 0 otherwise
B_IND	Board independence	The number of independent directors divided by board size
WOBP	Percentage women on board	The percentage of women directors on a corporate board
MEETG	Board meetings	The number of board meetings held in a year
<b>Panel D: Firm characteristics</b>		
F_SIZE	Size of firm	The natural logarithm of total assets
ROA	Return on assets	The ratio of return to total assets
LEV	Leverage	The ratio of total debt (short- and long-term) to total assets
TOBIN'Q	Growth opportunities	The ratio of market value of equity to book value of equity
INS_OWN	Insider ownership	The percentage of share held by insiders in total outstanding capital
STATE_LAW	State law	A dummy variable equals 1 if the state in which a firm is located prohibits employment discrimination based on sexual orientation and gender-identity and 0 otherwise
R&D	Research and development	The ratio of total research and development expenditure scaled by to total assets

Table 2. Descriptive statistics

Variables	Full sample N = 1,592		STATE_LAW=1 N=756		STATE_LAW=0 N = 836		Mean Diff.	t-stat	High S_IND N=584		Low S_IND N = 1,008		Mean Diff.	t-stat
	Mean	Std. Dev.	Mean	Std. Dev.	Mean	Std. Dev.			Mean	Std. Dev.	Mean	Std. Dev.		
<b>Panel A: Corporate equality</b>														
CEI	58.222	37.738	66.670	36.443	49.528	36.919	-17.141***	-8.880	54.395	37.217	61.279	37.512	-6.749***	-3.347
SONDP	0.889	0.314	0.903	0.295	0.878	0.326	-0.024*	-1.517	0.877	0.328	0.896	0.304	-0.023*	-1.897
GINDP	0.611	0.489	0.686	0.464	0.528	0.499	-0.157***	-6.222	0.548	0.498	0.653	0.476	-0.102***	-3.944
DPB	0.578	0.493	0.679	0.466	0.468	0.499	-0.211***	-8.336	0.526	0.499	0.615	0.486	-0.086***	-3.276
TG	0.321	0.467	0.412	0.492	0.223	0.417	-0.188***	-7.829	0.277	0.448	0.347	0.476	-0.073***	-2.936
<b>Panel B: Culture</b>														
S_IND	-52.701	7.090	-50.664	7.040	-51.735	7.141	1.071***	2.190	-45.643	5.303	-56.615	3.567	11.667***	51.544
<b>Panel C: Corporate governance</b>														
B_SIZE	11.051	2.019	11.172	2.007	10.964	2.034	-0.207***	-1.936	11.003	1.957	11.115	2.061	-0.115*	-1.852
DUAL	0.527	0.478	0.460	0.361	0.670	0.332	-0.21***	3.874	0.400	0.321	0.597	0.354	-0.197**	-2.134
B_IND	83.899	10.032	83.491	9.791	84.331	10.286	0.839*	1.578	84.834	9.356	83.609	10.272	1.561**	2.182
WOBP	17.955	8.985	19.151	9.178	16.653	8.59	-2.497***	-5.290	18.682	9.302	17.457	8.470	1.205***	2.483
MEETG	8.148	3.320	8.040	3.071	8.265	3.571	0.224*	1.272	7.941	2.994	8.286	3.401	0.343*	1.906
<b>Panel D: Firm characteristics</b>														
F_SIZE	4.252	0.646	4.276	0.688	4.226	0.595	-0.049*	-1.449	4.187	0.597	4.293	0.663	-0.107***	-3.083
ROA	6.208	6.132	6.955	6.612	5.393	5.448	-1.562***	-4.855	6.391	5.769	6.092	6.218	0.302	0.912
LEV	0.256	0.229	0.256	0.263	0.262	0.168	0.006	0.529	0.268	0.274	0.257	0.180	0.014*	1.741
TOBIN'Q	1.854	1.124	2.034	1.318	1.649	0.805	-0.384***	-6.561	1.894	1.299	1.806	0.959	0.071*	1.815
INS_OWN	2.139	4.428	2.631	5.171	1.596	3.347	-1.034***	-4.433	1.988	3.716	2.222	4.793	-0.249*	-1.749
STATE_LAW	0.522	0.499	1.000	0.000	0.000	0.000	0.000	0.000	0.517	0.500	0.535	0.498	-0.007*	-1.814
R&D	0.032	0.012	0.018	0.041	0.026	0.014	-0.015***	-9.511	0.017	0.021	0.012	0.035	0.005***	3.338

Table 2 presents descriptive statistics for the full sample and the sub-samples with state law and without law as well as the sub-samples with high- low-individualism. For each variable, the differences in means between the sub-samples are reported along with t-statistics based on the two-sample t-test. \*\*\*, \*\*, \* denote statistical significance at the 1%, 5% and 10% level, respectively. All variables are defined in Table 1.

Table 3. Correlation

Variables	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
1 CEI	1.000																	
2 SONDP	0.528	1.000																
3 GINDP	<b>0.823</b>	0.407	1.000															
4 DPB	<b>0.848</b>	0.390	0.600	1.000														
5 TG	<b>0.701</b>	0.235	0.536	0.503	1.000													
6 S_IND	-0.056	-0.015	-0.078	-0.081	-0.036	1.000												
7 B_SIZE	0.212	0.127	0.148	0.138	0.137	-0.008	1.000											
8 DUAL	0.073	-0.004	0.040	0.060	0.100	-0.010	0.026	1.000										
9 B_IND	0.132	0.092	0.090	0.142	0.049	-0.047	0.120	0.042	1.000									
10 WOBP	0.329	0.185	0.259	0.284	0.213	0.054	0.138	0.346	0.196	1.000								
11 MEETG	0.110	0.041	0.075	0.064	0.149	-0.037	0.120	0.028	0.146	0.056	1.000							
12 F_SIZE	0.343	0.198	0.249	0.282	0.276	-0.059	0.488	-0.035	0.181	0.169	0.249	1.000						
13 ROA	-0.010	-0.044	-0.009	-0.003	0.017	0.027	-0.113	-0.007	-0.073	-0.009	-0.259	-0.234	1.000					
14 LEV	-0.090	0.047	-0.087	-0.117	-0.077	0.012	0.007	0.014	-0.072	-0.042	0.023	-0.095	-0.004	1.000				
15 TOBIN'Q	0.067	-0.021	0.062	0.064	0.018	0.078	-0.152	-0.007	-0.120	0.037	-0.239	-0.305	0.488	0.206	1.000			
16 INS_OWN	-0.008	-0.013	-0.004	0.000	0.044	-0.008	-0.094	-0.002	-0.274	-0.109	-0.102	-0.164	0.013	0.004	0.079	1.000		
17 STATE_LAW	0.232	0.035	0.168	0.219	0.201	-0.005	0.055	0.099	-0.036	0.135	-0.034	0.042	0.123	-0.006	0.170	0.112	1.000	
18 R&D	0.139	0.037	0.117	0.134	0.105	-0.122	-0.035	-0.009	0.026	0.006	-0.050	0.002	0.088	-0.051	0.181	0.038	0.245	1.000

This table shows the correlation coefficients among all the independent and dependent variables employed in the baseline analysis. All variables are defined in Table 1.

Table 4. State-Individualism and workplace diversity policies

Panel A: The effect of state-level individualism on workplace diversity policies

Dependent Variable	CEI		
	(1)	(2)	(3)
S_IND	-0.359*** (-2.721)	-0.275** (-2.231)	-0.316*** (-2.713)
B_SIZE	-	0.872* (1.761)	0.288 (0.605)
DUAL	-	-2.872 (-0.671)	-2.725 (-0.661)
B_IND	-	0.185* (1.960)	0.335*** (3.691)
WOBP	-	1.018*** (9.413)	0.787*** (7.402)
MEETG	-	0.616** (2.221)	0.664*** (2.514)
F_SIZE	-	17.041*** (10.323)	22.154*** (12.283)
ROA	-	-0.553*** (-2.735)	-0.464** (-2.354)
LEV	-	-15.452*** (-3.774)	-14.590*** (-3.601)
TOBIN'Q	-	7.295*** (6.241)	5.115*** (4.454)
INS_OWN	-	0.488** (2.293)	0.537*** (2.642)
STATE_LAW	-	10.670*** (5.810)	6.739*** (3.754)
R&D	-	70.941*** (2.512)	71.881** (2.354)
Constant	3.179 (0.380)	-90.476*** (-7.593)	-143.334*** (-11.211)
Industry effects	Y	N	Y
Year effects	Y	N	Y
N	1,592	1,592	1,592
Adj. R <sup>2</sup>	0.141	0.262	0.351

Panel B: The effect of state-level individualism on individual policies								
Dependent Variable	SONDP		GINDP		DPB		TG	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
S_IND	-0.001 (-0.580)	-0.000 (-0.418)	-0.006*** (-3.381)	-0.006*** (-3.379)	-0.007*** (-3.746)	-0.006*** (-3.747)	-0.003* (-1.734)	-0.002* (-1.781)
B_SIZE	-	0.004 (0.894)	-	0.002 (0.368)	-	-0.010 (-1.505)	-	-0.006 (-0.908)
DUAL	-	-0.100** (-2.497)	-	-0.094 (-1.612)	-	-0.039 (-0.688)	-	0.125** (2.270)
B_IND	-	0.002** (2.082)	-	0.003** (2.099)	-	0.005*** (4.078)	-	0.001 (1.176)
WOBP	-	0.006*** (5.330)	-	0.009*** (5.978)	-	0.009*** (5.992)	-	0.006*** (4.025)
MEETG	-	-0.001 (-0.206)	-	0.007* (1.850)	-	0.003 (0.831)	-	0.016*** (4.516)
F_SIZE	-	0.096*** (5.464)	-	0.206*** (8.094)	-	0.242*** (9.656)	-	0.246*** (10.195)
ROA	-	-0.001 (-0.484)	-	-0.006** (-2.147)	-	-0.004 (-1.601)	-	0.001 (0.320)
LEV	-	0.102*** (2.574)	-	-0.186*** (-3.259)	-	-0.232*** (-4.116)	-	-0.113** (-2.089)
TOBIN'Q	-	-0.004 (-0.346)	-	0.058*** (3.574)	-	0.053*** (3.297)	-	0.022 (1.430)
INS_OWN	-	0.004* (1.768)	-	0.005* (1.725)	-	0.007** (2.364)	-	0.009*** (3.430)
STATE_LAW	-	-0.007 (-0.376)	-	0.051** (2.015)	-	0.102*** (4.092)	-	0.087*** (3.617)
R&D	-	0.181 (0.606)	-	0.890** (2.058)	-	1.147*** (2.693)	-	0.471 (1.150)
Constant	0.788*** (10.832)	0.080 (0.639)	-0.078 (-0.716)	-1.420*** (-7.861)	-0.272** (-2.410)	-1.810*** (-10.171)	0.043 (0.409)	-1.332*** (-7.785)
Industry effects	Y	Y	Y	Y	Y	Y	Y	Y
Year effects	Y	Y	Y	Y	Y	Y	Y	Y
N	1,592	1,592	1,592	1,592	1,592	1,592	1,592	1,592
Adj. R <sup>2</sup>	0.032	0.101	0.109	0.228	0.118	0.269	0.100	0.240

This table presents the regression results of Equation (1) using Panels A and B. *S\_IND* is the independent variable in both panels. Panel A reports results using *CEI* as a dependent variable in three columns. Column 1 reports results without any control variables, Column 2 presents the results if all control variables are included, and Column 3 presents results if all control variables are included along with industry and year effects. Panel B reports results using individual workplace policies. Columns 1 and 2 report results using *SONDP*, Columns 3 and 4 use *GINDP*, Columns 5 and 6 use *DPB*, and Columns 7 and 8 report results based on *TG*, respectively. Industry (two-digit GICS) and year effects are included in all the regressions. Robust t-statistics are shown in parentheses. \*\*\*, \*\*, \* denote statistical significance at the 1%, 5% and 10% level, respectively. All variables are defined in Table 1.



Table 5. Robustness analysis

Dependent Variable	CEI	P_index
	(1)	(2)
<b>Panel A</b>		
<i>OLS regression (N = 1,592)</i>		
S_IND	-0.299*** (-2.713)	-0.003*** (-3.240)
Controls	Yes	Yes
Industry effects	Yes	Yes
Year effects	Yes	Yes
State effects	Yes	Yes
<b>Panel B</b>		
<i>Tobit regression (N = 1,592)</i>		
S_IND	-0.213*** (-2.631)	-0.004*** (-3.142)
Controls	Yes	Yes
Industry effects	Yes	Yes
Year effects	Yes	Yes
<b>Panel C</b>		
<i>Excluding governance characteristics (N = 1,592)</i>		
S_IND	-0.283** (-2.361)	-0.003*** (-2.901)
Controls	Yes	Yes
Industry effects	Yes	Yes
Year effects	Yes	Yes
<b>Panel D</b>		
<i>Excluding Consumer Discretionary sector (N = 1,276)</i>		
S_IND	-0.403** (-2.243)	-0.006*** (-2.793)
Controls	Yes	Yes
Industry effects	Yes	Yes
Year effects	Yes	Yes
<b>Panel E</b>		
<i>Controlling for firm age and HQ location (N = 1,592)</i>		
S_IND	-3.328** (-2.283)	-0.034*** (-2.723)
Controls	Yes	Yes
Industry effects	Yes	Yes
Year effects	Yes	Yes
<b>Panel F</b>		
<i>Controlling for CEO gender and equity committee (N = 1,592)</i>		
S_IND	-0.193** (-2.181)	-0.248*** (-3.156)
Controls	Yes	Yes
Industry effects	Yes	Yes
Year effects	Yes	Yes
<b>Panel G</b>		
<i>Excluding observations from states i.e., CA, NY, and TX (N = 1,094)</i>		
S_IND	-0.308*** (-3.132)	-0.206** (-2.188)
Controls	Yes	Yes
Industry effects	Yes	Yes
Year effects	Yes	Yes

This table presents the results of robustness analyses using alternative variables (*CEI* in Column 1 and *P\_index* in Column 2) across seven panels (Panels A–G). Further, we present results when estimating regressions with state effects (Panel A), an alternative estimation technique (Panel B), the sample that excludes governance characteristics (Panel C), the sample that excludes dominant industry sector—consumer discretionary (Panel D), additional controls such as firm age and HQ location (Panel E), CEO gender and the existence of equity committee (Panel F), and the sample that excludes states with the higher number of observations (Panel F). Intercept and controls are included in all regressions but are suppressed for brevity. Industry (two-digit GICS) and year effects are included in all the regressions. Robust t-statistics are shown in parentheses. \*\*\*, \*\*, \* denote statistical significance at the 1%, 5% and 10% level, respectively. All variables are defined in Table 1.

Table 6. Propensity score matching (PSM) analysis

Panel A: PSM analysis in a logit and pooled regression frameworks			
Dependent Variable	S_DUMMY		CEI
	Pre-match logit	Post-match logit	PSM pooled
	(1)	(2)	(3)
S_IND	-	-	-0.411*** (-3.200)
B_SIZE	0.033* (1.981)	0.232 (0.263)	0.893* (1.891)
DUAL	-0.174* (-1.960)	-0.115 (-0.503)	-6.593* (-1.972)
B_IND	-0.017*** (-3.092)	-0.010* (-1.789)	0.387*** (3.230)
WOBP	-0.011* (-1.852)	-0.007 (-1.117)	1.069*** (4.001)
MEETG	0.026** (2.163)	0.015 (1.165)	0.64** (2.191)
F_SIZE	0.021** (2.143)	0.011 (1.088)	18.901*** (6.123)
ROA	0.005** (2.143)	0.003 (0.683)	-0.507** (-2.139)
LEV	0.031** (2.132)	0.011 (1.945)	-9.922** (-2.172)
TOBIN'Q	-0.099** (-2.197)	-0.060 (-0.223)	7.682*** (5.231)
INS_OWN	-0.006* (-1.913)	-0.003 (-1.190)	0.743*** (2.477)
STATE_LAW	-0.084** (-2.115)	-0.049 (-1.516)	11.546*** (4.440)
R&D	6.884*** (3.134)	4.235** (2.134)	11.879** (2.342)
Constant	2.401*** (4.011)	1.437*** (3.111)	-125.987*** (-10.501)
Industry effects	Y	Y	Y
Year effects	Y	Y	Y
N	1,592	558	558
Pseudo $R^2$	0.056	0.026	-
Adj. $R^2$	-	-	0.320

Panel B: Difference in firm-characteristics

Variable	Treatment	Control	Difference	t-stat
B_SIZE	11.049	11.096	-0.047	-0.430
DUAL	0.045	0.041	0.004	0.390
B_IND	83.586	84.836	-1.250	-1.490
WOBP	17.874	17.799	0.075	0.160
MEETG	8.143	8.225	-0.081	-0.470
F_SIZE	4.259	4.261	-0.002	-0.060
ROA	6.243	6.422	-0.179	-0.590
LEV	0.256	0.263	-0.007	-0.580
TOBIN'Q	1.843	1.770	0.073	1.300
INS_OWN	2.230	2.012	0.218	0.970
STATE_LAW	0.521	0.485	0.037	1.380
R&D	0.008	0.008	0.000	0.140

The table presents the results of the propensity score matching in two panels. Panel A shows the logit regression using  $S\_DUMMY$  (which equals one for higher than mean state-individualism and zero otherwise) for the pre- and post-match sample, and the matched sample regression results explaining workplace diversity policies. Industry (two-digit GICS) and year effects are included in all the regressions. Panel B presents the differences in firm characteristics for the treatment and control sub-samples. Robust t-statistics are shown in parentheses. \*\*\*, \*\*, \* denote statistical significance at the 1%, 5% and 10% level, respectively. All variables are defined in Table 1.

Table 7. Generalized method of moments (GMM)

Dependent Variable	CEI (1)
S_IND	-4.720** (-2.111)
B_SIZE	-6.160** (-2.105)
DUAL	8.207 (0.025)
B_IND	0.022 (0.045)
WOBP	-0.576 (-0.961)
MEETG	0.371 (0.281)
F_SIZE	0.154* (1.918)
ROA	0.035* (1.995)
LEV	-26.520 (-0.062)
TOBIN'Q	5.657 (0.971)
INS_OWN	-1.159* (-1.989)
STATE_LAW	6.232** (2.174)
R&D	23.565* (1.894)
Constant	-91.693*** (-15.879)
Industry effects	Y
Year effects	Y
N	1,592
<b>Model fits</b>	
AR I	2.180*** (2.901)
AR II	-0.590 (0.556)
Wald F-statistics	1.940*** (0.004)
No. of instruments	41
Hansen J-statistic	9.011 (0.001)

The table presents the results of dynamic panel data estimation (system GMM) on the effect of state-individualism on workplace diversity policies. Industry (two-digit GICS) and year effects are included in all the regressions. Robust t-statistics are shown in parentheses. \*\*\*, \*\*, \* denote statistical significance at the 1%, 5% and 10% level, respectively. All variables are defined in Table 1.

Table 8. State culture, workplace diversity policies, and firm performance

Dependent Variable	ROS		TOBIN'Q	
	OLS	Lagged OLS	OLS	Lagged OLS
	(1)	(2)	(3)	(4)
CEI	-0.003*** (-2.952)	-0.003** (-2.222)	0.002 (0.381)	0.005 (0.707)
S_IND	0.018** (2.405)	0.015* (1.799)	-0.036 (-0.767)	-0.044 (-0.792)
CEI × S_IND	-0.002*** (-3.436)	-0.007*** (-2.630)	-0.005* (-1.894)	-0.006** (-2.033)
B_SIZE	-0.004 (-1.291)	-0.004 (-1.118)	-0.016 (-1.023)	-0.025 (-1.341)
DUAL	-0.054** (-2.292)	-0.046 (-1.480)	-0.293** (-2.227)	-0.318* (-1.897)
B_IND	-0.002*** (-2.795)	-0.002** (-2.415)	0.002 (0.761)	0.004 (1.150)
WOBP	0.003*** (4.691)	0.003*** (4.134)	0.007* (1.926)	0.007* (1.790)
MEETG	-0.004** (-2.257)	-0.004** (-2.112)	-0.052*** (-6.244)	-0.056*** (-5.655)
F_SIZE	0.046*** (3.841)	0.043*** (3.095)	-0.459*** (-7.617)	-0.470*** (-6.532)
LEV	0.032 (1.388)	0.033 (1.238)	1.130*** (8.948)	1.288*** (8.714)
INS_OWN	0.003** (2.314)	0.002* (1.797)	-0.001 (-0.146)	-0.000 (-0.039)
STATE_LAW	-0.136 (-1.407)	-0.108 (-0.955)	1.144** (2.073)	1.194* (1.803)
R&D	1.729*** (10.100)	1.714*** (8.581)	4.908*** (5.073)	4.990*** (4.325)
Constant	1.125*** (2.994)	0.993** (2.262)	1.762 (0.780)	1.386 (0.513)
Industry effects	Y	Y	Y	Y
Year effects	Y	Y	Y	Y
State effects	Y	Y	Y	Y
N	1,592	1,592	1,592	1,592
Adj. R <sup>2</sup>	0.433	0.421	0.318	0.326

This table presents the regression results of Equation (2) where firm performance is measured by the return on sales (*ROS*) and *TOBIN'Q*. Columns 1 and 2 show the results based on *ROS* using contemporaneous levels and one-year lagged independent variables, respectively. Columns 3 and 4 show the results based on *TOBIN'Q* using contemporaneous levels and one-year lagged independent variables, respectively. Industry (two-digit GICS) and year effects are included in all the regressions. Robust t-statistics are shown in parentheses. \*\*\*, \*\*, \* denote statistical significance at the 1%, 5% and 10% level, respectively. All variables are defined in Table 1.

## Appendix

Table A. Sample distribution by year

Year	N	CEI	S_IND
2011	380	56.525	-52.701
2012	382	53.558	-52.701
2013	418	59.323	-52.752
2014	412	63.491	-52.676

This table reports the number of observations, *CEI* score, and state-level individualism (*S\_IND*) across sample years.

Table B. Sample distribution by states

State	State code	N	CEI
Alabama	AL	16	38.75
Arkansas	AR	20	47.00
Arizona	AZ	24	45.23
California	CA	188	69.26
Colorado	CO	28	29.39
Connecticut	CT	48	65.73
Delaware	DE	16	74.13
Florida	FL	48	58.19
Georgia	GA	44	67.00
Iowa	IA	12	62.17
Idaho	ID	16	49.00
Illinois	IL	72	64.16
Indiana	IN	20	63.75
Kansas	KS	16	46.00
Kentucky	KY	24	54.50
Louisiana	LA	16	68.13
Massachusetts	MA	28	65.54
Maryland	MD	12	74.75
Michigan	MI	48	62.71
Minnesota	MN	44	79.32
Missouri	MO	20	43.90
North Carolina	NC	40	30.63
Nebraska	NE	18	48.50
New Jersey	NJ	72	72.26
New Mexico	NM	16	49.00
Nevada	NV	20	86.00
New York	NY	178	77.23
Ohio	OH	76	46.25
Oklahoma	OK	16	33.25
Oregon	OR	20	100.00
Pennsylvania	PA	52	63.38
Rhode Island	RI	16	49.17
South Carolina	SC	20	44.00
Tennessee	TN	40	49.08
Texas	TX	132	45.39
Virginia	VA	48	61.17
Washington	WA	40	79.63
Wisconsin	WI	28	48.33

This table reports the number of observations and the *CEI* scores across different states.

Table C. Sample distribution by industries

Industry classification by GICS	N	CEI	S_IND
Energy	84	24.345	-54.571
Materials	92	28.239	-51.217
Industrial	212	56.995	-51.452
Consumer Discretionary	316	60.525	-52.075
Consumer Staples	124	72.080	-51.419
Health Care	140	53.828	-52.857
Financials	184	73.853	-52.500
Information Technology	168	70.023	-55.142
Communication	116	54.687	-58.250
Utilities	96	55.708	-53.875
Real Estate	60	48.437	-53.000

This table reports the number of observations, *CEI* score, and state-level individualism (*S\_IND*) across different industry sectors based on the two-digit GICS codes.