

# Cultural Diversity in the Boardroom and Corporate Social Performance

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## Abstract

We examine the impact of cultural diversity in corporate boards on a firm's corporate social performance. Using a novel approach to identify a director's cultural roots based on ancestry, we estimate the degree of cultural diversity at the board level. We find that board cultural diversity is positively associated with corporate social performance, consistent with the view that board cultural diversity enhances a firm's ability to satisfy the needs of broader groups of stakeholders. The results are robust to addressing endogeneity concerns and the use of different culture frameworks. The positive relation between board cultural diversity and corporate social performance is particularly strong for firms that have higher needs for stakeholder management (i.e. firms that operate in industries with high visibility to consumers and in highly competitive industries) and for firms that have boards with strong positive diversity beliefs (captured using the board's gender diversity, age diversity and independence).

**Keywords:** cultural diversity, corporate social responsibility, board of directors, board diversity, corporate social performance

**JEL classifications:** M14, G3, G34, G39

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## 1. Introduction

Stakeholder theory argues that the objective of the firm should be to satisfy the needs of all groups that have a stake in the business to maximize firm value (e.g., Freeman 1984; Freeman et al. 2004). The argument that creating value for stakeholders also creates value for shareholders finds empirical support in numerous studies. Firm value benefits from corporate social initiatives, such as employee satisfaction, customer satisfaction, ties with local communities, and corporate donations (e.g., Hillman and Keim, 2001; Anderson et al., 2004; Edmans, 2011; Liang and Renneboog, 2017). Hence, having a comprehensive understanding of multiple stakeholders' interests and demands is crucial for firm value maximization (Clarkson, 1995).

Since the board of directors is the ultimate decision-making body of the firm, various studies have focused on its characteristics and efforts towards corporate social responsibility (CSR). The success of these efforts is commonly measured by a firm's corporate social performance (CSP).<sup>1</sup> Board diversity, in particular, has received attention in the CSP literature (e.g., Rao and Tilt, 2016). Supporting the argument that diversity encourages sharing different perspectives and experiences and leads to an improved ability of the board to recognize the needs of various stakeholders, several studies document a positive relation between board diversity and CSP (e.g., Bear et al. 2010; Post et al. 2011; Harjoto et al. 2015; Harjoto et al. 2019). However, as argued by several studies, not all diversity is the same. For instance, Milliken and Martins (1996), van Knippenberg et al. (2004), and Rao and Tilt (2016) make a distinction between observable (such as gender and race) and less observable (educational and

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<sup>1</sup>CSP, defined as the number of stakeholder concerns addressed by a firm, has been used as a proxy for management performance in balancing the interests of multiple stakeholders (e.g., Hillman and Keim, 2001; Harjoto et al., 2015).

professional backgrounds) forms of diversity. Anderson et al. (2011b) similarly argue for an important distinction between occupational (education, experience, and profession) and social diversity (gender, race, and age).<sup>2</sup> They argue that occupational diversity may be more relevant in the board's advisory and monitoring roles and resolving task-related issues, and, therefore, more important for corporate financial performance. Social diversity, on the other hand, generates broader perspectives on other aspects and is arguably more relevant to implementing CSR policies. Perhaps not surprising, the relation between board gender diversity and CSP has been a key focal point in several studies (e.g., Bear et al., 2010; Byron and Post, 2016; Francoeur et al., 2017).

In this paper, we focus on a unique dimension of board diversity that to date has not received any attention, namely board cultural diversity.<sup>3</sup> Board cultural diversity is a form of social diversity that is relatively unobservable and, we argue, is strongly related to the adoption of CSR initiatives. Since directors with different cultural backgrounds have different cultural norms and values and may share these views during board meetings, cultural diversity can be a rich source of differences of opinions and result in more active adoption of CSR policies. For instance, some cultures promote individual achievement whereas others promote contributions to the common good; some cultures accept large power gaps between different members of society while others are more egalitarian, etc. We expect that these different perspectives that cultural differences bring to the board lead to more robust discussions around the importance of stakeholder concerns and have a positive impact on CSP.

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<sup>2</sup>Another interesting distinction is made by Hafsi and Turgut (2013) who document that CSP is affected by *diversity in boards* (specifically gender and age) rather than *diversity of boards* (board size, independence, etc.).

<sup>3</sup>Previous studies have focused on ethnic diversity (Haniffa and Cooke, 2005) and nationality (Harjoto et al., 2019). However, as we argue, cultural diversity is quite different.

What distinguishes cultural diversity from other forms of social diversity (gender, age, ethnicity) is that it is not easily observed. For instance, people with German ancestry have very similar physical appearances as people with French ancestry, though their cultural backgrounds are quite different. The fact that cultural diversity is less observable is important as firms may use tokenism to signal their commitment to CSR by appointing a visually diverse board. For instance, Farrell and Hersch (2005) argue that firms may simply include members of minority groups to build a public image of inclusiveness to explain the positive association they document between gender diversity and CSP. However, a firm is unlikely to increase the cultural diversity of the board to signal its commitment to CSR as cultural diversity is not very visible. Thus, focusing on the relation between cultural diversity of the board and CSP mitigates an important endogeneity concern present in more visible forms of social diversity.<sup>4</sup>

We empirically examine the relation between cultural diversity of the board and CSP for S&P1500 firms covering the period 2004-2015. We implement a novel measure to capture the board's cultural diversity. Specifically, we follow an epidemiological approach (e.g., Fernandez, 2011; Liu, 2016), that assumes that cultural values travel with people over generations as they migrate to new countries and identify the cultural roots (ancestry) of each director based on their last names and three large reference libraries built on historical immigration flows to the US. Specifically, we use a large database of 68,134,313 immigration records obtained from historical census data (e.g., Liu, 2016), a library of common American Asian surnames (Lauderdale and Kestenbaum, 2000), and the Oxford Dictionary of American Family Names to robustly identify the cultural roots of 20,976 directors of S&P1500 firms over

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<sup>4</sup>This endogeneity stems from the reverse causality, where firms may use diversity to signal their already existing commitment to CSR, and thus a higher level of CSR may result in higher levels of diversity. Since cultural diversity is less observable, signaling by improving cultural diversity would not be very effective and thus it is unlikely that firms would increase cultural diversity to signal their commitment to CSR. In the case of cultural diversity causality is more likely to run from diversity to CSP. This is indeed what we find in our robustness tests where we address any potential endogeneity issues.

the period 2004-2015. Based on Hofstede's (2001) culture framework, we construct our measure of board cultural diversity as the average cultural distance between board members. To measure CSP, we follow prior literature and employ Kinder, Lydenberg, and Domini (KLD) Social Ratings data on a firm's social responsibility performance in six areas: environment, community, diversity, employee, product, and human rights (e.g., Kim et al., 2012; Harjoto et al., 2015; Lins et al., 2017).

Our empirical analysis reveals a significant positive relation between board cultural diversity and CSP, consistent with the argument of cultural diversity increasing a board's ability to incorporate stakeholder concerns into corporate decision making. Our results are robust to the consideration of various firm and board characteristics, including other sources of board diversity identified previously (e.g., Anderson et al., 2011a; Harjoto et al., 2015), the inclusion of firm and year fixed effects, the use of alternative culture frameworks in the computation of cultural diversity (House et al., 2004 – GLOBE; Schwartz, 2006), and after addressing endogeneity concerns.

To further examine the relation between board cultural diversity and CSP, we consider instances where board cultural diversity matters most. We argue that the benefits of culturally diverse boards vary across firms and consider two moderating factors that potentially affect the relation between board cultural diversity and CSP: (1) a firm's needs for CSR; and (2) a board's attitudes towards diversity in general (i.e., its diversity beliefs). First, we focus on a firm's needs for CSR. Firms that operate in industries with high visibility to consumers and in more competitive industries have a greater need to engage in CSR to differentiate themselves from their competitors (e.g., Fisman et al., 2007; Harjoto et al., 2015). Such firms require better

stakeholder management and can benefit more from culturally diverse boards. Indeed, we find that the positive relation between board cultural diversity and CSP is driven by firms that have greater needs for CSR (firms that operate in industries with high visibility to consumers and in highly competitive industries). Second, we consider the impact of diversity beliefs of the board (van Knippenberg et al., 2007). Diversity beliefs are defined as people's beliefs about the value of diversity, and it is argued that the benefits of diversity emerge if group members believe diversity is beneficial to the group's functioning. We capture these diversity beliefs by focusing on a firm's commitment to other forms of diversity and document that the impact of board cultural diversity on CSP is greater for firms that have more diverse boards in other dimensions (gender, age, independence).

Our paper contributes to the literature in several ways. First, we contribute to the literature on diversity and CSP. While several studies focus on the relation between various aspects of diversity and CSP (e.g., Bear et al., 2010; Byron and Post, 2016; Francoeur et al., 2017; and Rao and Tilt, 2016, for an overview), the impact of cultural diversity has been overlooked. As we pointed out, cultural diversity is important as it brings in a wide range of perspectives, yet compared with other forms of social diversity, it is not very visible. Hence, improvements in board cultural diversity are not likely to be a consequence of tokenism and, therefore, provide more direct evidence of a causal effect of social diversity in boards on CSP.

Second, an important contribution of our paper is the novel measure of cultural diversity of boards based on directors' ancestry that allows us to single out an aspect of social diversity, which is an important driver of the incorporation of stakeholder concerns in the boardroom. Although cultural diversity can be approximated by other measures such as ethnicity (Haniffa and Cooke, 2005) or nationality (Harjoto et al., 2019), these measures do not per se capture

cultural differences. For instance, ethnic diversity is often measured by the percentages of representation of specific ethnic groups and does not capture the cultural dissimilarities between or within these ethnic groups. Similarly, nationality looks at the representation of foreigners on the board but does not capture their cultural differences, does not consider the cultural roots of other board members. In addition, foreign directors in US corporate boards are still relatively rare (according to Masulis et al. (2012) foreign independent directors represent only 2.3% of all independent directors in their US sample of S&P1500 from 1998 to 2006).

In a broader sense, we contribute to the growing literature on culture and corporate decision making. This literature documents a significant impact of culture on corporate takeovers and mergers (Ahern et al. 2015), capital structure decisions (Chui et al., 2002), dividend policy (Shao et al., 2010), corporate risk taking (Li et al., 2013), and hedging decisions (Lievenbrück and Schmid, 2014) to name a few.<sup>5</sup> We contribute to this growing literature by documenting the importance of culture in shaping CSR initiatives of firms.

The remainder of the paper is organized as follows. Section 2 discusses relevant literature and develops the hypotheses. Section 3 presents data, main variables and summary statistics. Section 4 presents and discusses the results of our analysis, while Section 5 concludes.

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

### *2.1 Stakeholder management and CSR performance*

As a response to market failures, society's demands for CSR have notably increased (Bénabou and Tirole, 2010). In contrast to Friedman (1970)'s shareholder value maximization approach,

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<sup>5</sup>See Karolyi (2016) for a recent review of the culture and finance literature.

stakeholder theory posits that corporate managers should satisfy the needs of all stakeholders to maximize firm value (Freeman, 1984; Freeman et al., 2004).<sup>6</sup> According to Freeman et al. (2004), creating value for stakeholders creates value for shareholders: “*How else could managers create shareholder value other than by creating products and services that customers are willing to buy, offering jobs that employees are willing to fill, building relationships with suppliers that companies are eager to have, and being good citizens in the community?*” (p. 366). Indeed, empirical studies provide evidence consistent with employee satisfaction, customer satisfaction, or corporate donations creating shareholder value (e.g., Edmans, 2011; Anderson et al., 2004; Liang and Renneboog, 2017; Hillman and Keim, 2001). Flammer (2015) shows that the adoption of CSR proposals that pass by a small margin of votes leads to positive announcement returns and superior accounting performance possibly due to an increase in labor productivity and sales growth, implying that these CSR proposals are value-enhancing. As pointed out by Malik (2015), a vast body of the CSR literature acknowledges the value-enhancing capabilities of a firm’s social and environmental activities. As a result, managing stakeholder satisfaction is critical for modern companies. It requires identifying and responding to stakeholder expectations.

## *2.2 Board cultural diversity and corporate social performance*

According to resource dependence theory, directors can be a critical channel to valuable resources and information as well as advice and counsel for organizational success (Salancik and Pfeffer, 1978).<sup>7</sup> Numerous studies support this notion by showing that board members

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<sup>6</sup>Stakeholders are not limited to shareholders but also include employees, customers, suppliers, local communities, and the environment (Clarkson, 1995). Clarkson (1995) asserts that ‘the survival and continuing profitability of the corporation depends upon its ability to fulfill its economic and social purpose, which is to create and distribute wealth or value sufficient to ensure that each primary stakeholder group continues as part of the corporation’s stakeholder system’ (p. 107).

<sup>7</sup>See Hillman et al. (2009) for a review on resource dependence theory on board of directors as an application of this theory.

share key information with management on industry trends, market conditions, regulatory changes, and other key market data, which helps firms make better strategic decisions (e.g., Song and Thakor, 2006; Baldenius et al., 2014; Kang et al., 2018). More specifically, corporate directors provide resources to induce organizational, social, and public policy outcomes that are favorable in meeting stakeholder expectations (Hillman and Hitt, 1999; Keim and Baysinger, 1988). Hung (2011) shows that the more concern the board demonstrates for stakeholders, the more likely it is for a firm to effectively implement CSR initiatives. Furthermore, firms are more likely to adopt CSR initiatives when directors are stakeholders themselves (Johnson and Greening, 1999). Hillman et al. (2001) document that the presence of stakeholder directors (suppliers, customers, employees, and community representatives) is positively associated with CSP.

One aspect of corporate boards that has been linked to CSP is board diversity (e.g., Rao and Tilt, 2016). The key argument for diversity being important for the adoption of CSR initiatives is that it encourages sharing different perspectives, generating alternative solutions and reducing groupthink, resulting in a board that is more open to the implementation of CSR policies (e.g., Bear et al., 2010; Post et al., 2011; Harjoto et al., 2015; Rao and Tilt, 2016). Differences of opinions force groups to have in-depth discussions on these different views, consider alternatives, and prevent them from making rushed decisions (van Knippenberg et al., 2004). Diversity, however, has a flipside as it could impose communication barriers and can lead to social categorization, the creation of in- and out-groups, and potentially result in lower commitment to the group (Westphal and Milton, 2000; Nielsen, 2010; Marimuthu and Kolandaisamy, 2009). This downside of diversity could result in more frictions in the board that cause the board to operate less effectively. Hence, diversity is sometimes referred to as a

“double-edged sword” (Milliken and Martins, 1996) that can be positive if the benefits of diversity can be harvested and negative if the frictions overtake the benefits.

In addition to diversity having both benefits and costs, several studies argue that not all forms of diversity are the same. Milliken and Martins (1996), van Knippenberg et al. (2004), and Rao and Tilt (2016), for instance, distinguish between visible and less visible forms of diversity. This distinction is important as visible forms of diversity (e.g., race and gender) are more likely to lead to social categorization and the creation of in- and out-groups, thereby increasing frictions in the group decision-making process (e.g., van Knippenberg and Mell, 2016). In addition, Anderson et al. (2011b) argue that it is important to distinguish between occupational (education, experience, and profession) and social (gender, ethnicity and age) diversity among board members. They argue that occupational diversity is more related to the problem-solving abilities of the board and resolving task-related problems. Social diversity is more directly observable to outsiders and may, therefore, be more related to the public image of the firm. Arguably, social diversity is more related to a firm’s efforts to improve its CSP as this type of diversity brings in a broader range of perspectives regarding the interests of various stakeholders, and indeed many studies have highlighted the strong positive relation between gender diversity and CSP (see Rao and Tilt (2016) for an overview).

We focus on a specific aspect of diversity that to date has been overlooked, namely cultural diversity of the board. According to Nederveen-Pieterse et al. (2013), cultural diversity engenders information elaboration and offers a diverse range of knowledge and perspectives. Indeed, cultures differ substantially in several dimensions. While some cultures focus on the individual, other cultures are more concerned about the collective. Some cultures nurture competitiveness and assertiveness while other cultures promote harmony and quality of life.

Some cultures are organized in hierarchical ways while others are egalitarian. Having a culturally diverse board implies that many of these perspectives are present in the board and could lead to a broader understanding on the different interests and needs of stakeholders.

However, unlike other forms of social diversity, such as gender and race, cultural diversity is not easily observed, which suggests that social categorization issues that arise with more visible forms of social diversity are perhaps less important for cultural diversity. Therefore, the negative consequences of diversity, which come from social categorization, play a lesser role, while the benefits of diversity, which come from the different cultural views, prevail. The main hypothesis that we test in this paper is whether cultural diversity is positively related to corporate social performance.

**H1.** Cultural diversity of the board has a positive impact on the firm's corporate social performance.

Although we expect to see a positive relation between cultural diversity and corporate social performance, we do not expect this positive relation to hold for all firms. As argued by Baron et al. (2011) and Harjoto et al. (2015), some firms have greater needs for stakeholder management; hence, CSP is a more relevant issue for such firms and their boards to consider. This needs-based argument predicts that cultural diversity of the board has a greater impact on CSP when CSP is more of a concern to the firm. In line with Harjoto et al. (2015), we focus on two types of firms that have a greater need for stakeholder management: 1) firms that are highly visible to consumers; and 2) firms operating in highly competitive industries need to differentiate themselves from their competitors and may use CSR to gain a competitive edge. For these types of firms, the board will need to consider a wider range of stakeholders and ways

to meet their demands. Hence, our second hypothesis considers whether the impact of cultural diversity of boards on CSP varies for firms with different needs for stakeholder management.

**H2.** The positive effect of cultural diversity on corporate social performance is more prevalent in firms that have a greater need for stakeholder management.

In addition to firms' different needs for CSP, there is a second moderating factor, namely, the diversity beliefs of the board. Diversity beliefs, defined as "the extent to which individuals perceive diversity to be beneficial for or detrimental to the group's functioning" (van Dick et al., 2008, p. 8), have an impact on whether the group will focus on the benefits (e.g., a wide range of different perspectives) or frictions (e.g., social categorization). Indeed, as van Knippenberg et al. (2007) argue, diversity beliefs can be an important moderator of the relation between diversity and group performance. Therefore, we expect cultural diversity to be more beneficial in corporate boards that are more open to diversity in general. Diversity beliefs can be captured using a firm's commitment to other forms of diversity (gender, age and board independence). Hence, our third hypothesis addresses the moderating role of diversity beliefs of the board, measured with board gender diversity, age diversity, and independence, on the relation between cultural diversity of the board and CSP.

**H3.** The positive effect of cultural diversity on corporate social performance is more prevalent in firms that have boards with strong diversity beliefs.

### **3. Data and Sample Statistics**

#### *3.1 Sample Construction*

To test our hypotheses, we employ a sample of S&P 1500 firms covered in the GMI (MSI) database over the period 2004 to 2015. We exclude foreign firms (incorporated outside of the US) and financial firms (SIC codes 6000-6999). We obtain our data from multiple sources. We obtain information on board membership from two databases, GMI (MSI) and Osiris database maintained by Bureau van Dijk. These databases contain a director's last name, gender, age, executive title, independence status, and tenure. Where possible, we patch missing data by searching through annual reports and internet sources such as Bloomberg or LinkedIn. We use director last name data to construct our cultural diversity measure, while the other variables are used as control variables. To capture the firm's CSP, we obtain data from the MSCI ESG KLD STATS database. We obtain additional data for control variables from COMPUSTAT, Thomson Reuters 13-F filings, and I/B/E/S. After merging these databases, we obtain a final sample of 1,501 firms, comprising of 20,976 unique directors, and 100,269 director-year and 11,342 firm-year observations.

#### *3.2 Measuring Cultural Diversity in the Board*

The construction of our cultural diversity measure at the board level involves several steps. First, we need a culture framework to base the measure on. Second, we need to identify cultural roots/backgrounds of directors, and finally we need to combine these two to estimate our measure of board cultural diversity.

Hofstede (2001) defines culture as a collective mental programming that separates members of one group or category of people from others. Culture manifests itself in a set of values, beliefs,

and practices that people within that society feel are important and conform to. These values, beliefs, and practices are persistent, and just like genes and last names are transmitted from parents to their children. Guiso et al. (2006) define culture as those “customary beliefs and values that ethnic, religious, and social groups transmit fairly unchanged from generation to generation” (p.23). Guiso et al. (2006) argue and empirically show that culture has an impact on a broad range of economic outcomes, which have been corroborated by many studies thereafter (see Karolyi [2016] for a recent literature overview).

Although culture itself is unobservable, various initiatives have been undertaken to quantify different aspects of culture. We base our analysis on the most widely known quantification of culture by Hofstede (2001) who constructs various culture dimensions that characterize unique cultural traits of a nation. Hofstede initially introduced four dimensions: individualism, masculinity, power distance, and uncertainty avoidance,<sup>8</sup> but later added a fifth and sixth dimensions (long-term orientation and indulgence). We focus on the initial four dimensions as these are used most and are based on the original surveys conducted by Hofstede (Kirkman et al., 2006).<sup>9</sup> Each country is given a score on each dimension.

To identify the cultural background of directors, we build on recent literature that maps a person’s last name to the geographic area that is most likely to represent his/ her country of ancestry (see Liu, 2016; Pan et al., 2017; Jung et al., 2017; Du et al., 2017). Since last names, like genes and culture, are passed on from generation to generation, they contain important

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<sup>8</sup>Individualism captures how much value people place on taking care of themselves rather than prioritizing the collective. Masculinity measures the importance people place on achievement, assertiveness, and material reward for success. Power Distance captures people’s acceptance of an unequal distribution of power within a society. Uncertainty Avoidance represents the degree to which people are uncomfortable with uncertainty and ambiguity.

<sup>9</sup>The fifth and sixth dimension were computed *ex post* based on different surveys and among a different set of participants. We confirm that our results remain when we use either five (including long-term orientation) or six (including long-term orientation and indulgence) dimensions.

information about a person's background and cultural heritage.<sup>10</sup> To map last names to the most likely country of origin, we construct reference libraries of last names with country of ancestry. We use three different reference libraries, including (1) a reference library based on historical census data from IPUMS (Integrated Public Use Microdata Series), (2) a reference library of common Asian American last names developed by Lauderdale and Kestenbaum (2000), and (3) a reference library based on the Oxford Dictionary of American Family Names. We include the latter two reference libraries to address the issue that the census-based reference library, while comprehensive, underrepresents two migrant groups: 1) Asian migrants, as there was little migration from Asia in the early settlement of the US; 2) and Jewish migrants, as census records do not identify people of Jewish descent who would have migrated from various other countries. In Appendix B, we describe how we construct our reference libraries of last names and procedures of matching directors' last names to last names in the reference libraries. In Table B.1 of Appendix B, we provide a breakdown of the sample of directors by country of ancestry and year and the total percentage of directors associated with a specific country. In the sample, 22.4% of directors have British cultural roots, 19.7% have Irish cultural roots and 16.9% have German cultural roots. The following countries also have high representation in the sample: Canada (9.1%), Israel (6.2%), Italy (5.5%), Russia (4.5%), and Sweden (2.7%).

After we identify the country of a director's ancestry, we combine this information with the culture framework of Hofstede (2001) to construct the measure of board cultural diversity. First, we compute the cultural distances between directors using scores on the individual cultural dimensions for each director, following Kogut and Singh (1988). Next, based on the

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<sup>10</sup>One shortcoming of this approach is that married women regularly adopt their spouse's last name. Since it is impossible to identify whether a female director uses her birth name or adopts her husband's last name, this introduces some noise in our measure of cultural diversity. To address this concern, we first point out that women, on average, represent only 12% of the corporate directors in the sample. Second, we conduct additional tests where we exclude female directors from the board and find that our results still hold. Hence, this potential misclassification has little impact on our results.

cultural distance scores, we compute the firm-level measure of board cultural diversity as the average of cultural distances across all pairs of board members, following Frijns et al. (2016). Appendix A provides a detailed definition of the board cultural diversity (CD BOARD) variable.

### *3.3 Measuring Corporate Social Performance*

We use KLD ratings data from the MSCI ESG KLD STATS database to measure CSP of firms. This database uses data from company disclosure filings, government databases, media reports, NGO databases, and other sources to compile environmental, social (including community, employee relations, diversity, human rights, and product quality), and governance scores. Since we study the effects of a governance-related variable (board composition) on CSP, we exclude the governance component from the CSP measure and focus on the other six areas. For each area, the KLD database reports binary ratings for one or more categories, and for each category it provides positive (strengths) and negative (concerns) ratings. To obtain scores for each of the six areas (environment, community, employee relations, diversity, human rights, and product quality), we first sum all ratings available for each area, separately for each area and for positive and negative indicators. The maximum number of positive and negative indicators for any given area is not constant over time; therefore, we scale the sum of the ratings for each area by dividing it by the maximum rating possible for that area in that year. This procedure produces scores for each area that range from zero to one. Our CSP measure (*CSP*) is the sum of the scores for positive indicators (strengths) for six areas (environment, community, employee relations, diversity, human rights, and product quality). We also estimate CSP concerns measure (*CSP\_con*) as the sum of the negative indicators (concerns) for the six areas and CSP net measure (*CSP\_net*) as the difference between the sum of the strengths and the sum

of the concerns.<sup>11</sup> We do not consider KLD's exclusionary categories (alcohol, gambling, military contracting, nuclear power, and tobacco) in constructing our CSP measures as these dimensions are industry-specific and do not relate to firms' discretionary activities. Our approach to constructing CSP measures is consistent with the literature (e.g., Kim et al. 2012; Harjoto et al. 2015; Lins et al. 2017; Ioannou and Serafeim 2015).

### *3.4 Control Variables*

In the regressions of CSP on board cultural diversity, we control for a set of variables that have been documented to affect a firm's CSP. An important set of control variables are those pertaining to board diversity. We control for gender because various studies have shown that gender diversity is an important factor contributing to a firm's CSP (see Rao and Tilt [2016] for an overview). We include the average tenure of all directors as Harjoto et al. (2015) identify this variable as an important driver of CSP. We control for board independence as Jo and Harjoto (2011) find that it is positively associated with CSR. We also control for age diversity (Anderson et al., 2011a) and CEO duality (Petrenko et al., 2016). We further control for firm characteristics such as firm size (McWilliams and writeSiegel, 2001), leverage (Jo and Na, 2012), financial constraints measured by the KZ index (Di Giuli and Kostovetsky, 2014), book-to-market ratio (Bhandari and Javakhadze, 2017), firm risk (Becchetti et al., 2015), institutional ownership (Dhaliwal et al., 2011), and analyst coverage (Jo and Harjoto, 2011). All variables are defined in Appendix A. We also include firm and year fixed effects to control for observable and unobservable heterogeneity across firms and years.

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<sup>11</sup>Although literature often uses a single net CSP measure (the difference between the summed strength and concern items), this approach has been critiqued by e.g., Mattingly and Berman (2006), who argue that positive and negative actions (measured by strengths and concerns) are conceptually distinct constructs and should not be combined. Ioannou and Serafeim (2015) argue that using a single net score could be problematic because 'it is merging together fundamentally different and perhaps conflicting underlying mechanisms: 'doing good' is theoretically and strategically different from 'doing no harm.'"

### 3.5 Summary statistics

In Table 1, Panel A, we report summary statistics for board characteristics. For board cultural diversity (CD BOARD), the mean is 1.84, with a median of 1.85 and a maximum of 3.54, and we observe a steady increase in CD BOARD over time from 1.78 in 2004 to 1.88 in 2015.<sup>12</sup> The average number of directors on a board is 9.09, with variation from 4 to 24 directors. Women constitute 12% of directors, on average, and there is a slow but steady increase in women on boards from 10% in 2004 to 16% in 2015. The average director age is 60.87 years and the average age range (difference between the oldest and youngest director) is 22.9. The average percentage of independent directors is 75%, and the average director tenure is 9 years. Finally, 53% of firms have a CEO who is also the chairman of the board; this number has decreased from 69% in 2004 to 43% in 2015. These average board characteristics are in line with prior studies (e.g., Anderson et al., 2011a; Di Giuli and Kostovetsky, 2014; Harjoto et al., 2015).

INSERT TABLE 1 HERE

Panel B of Table 1 reports summary statistics for the CSP measure and other firm-level variables. The mean CSP is 0.39, with a median of 0.14 and a range from 0 to 5.12. The average total assets of our sample firms are around \$8 billion, average firm age is 26 years, average leverage is 20%, average KZ Index is -6.55, and average book-to-market ratio is 0.49. The average firm is covered by 11 analysts and institutional ownership represents 77% of total ownership. The average return volatility is 10%. Again, these figures are in line with previous

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<sup>12</sup>Unreported statistics reveal that only a small proportion of boards (12%) have three or fewer cultural backgrounds represented on the board; 76% of boards have four, five, or six different cultural backgrounds while 12% of boards include between seven and ten different cultural backgrounds.

studies (e.g., Jo and Harjoto, 2011; Harjoto et al., 2015; Bhandari and Javakhadze, 2017; Becchetti et al., 2015).

## 4 Results

### 4.1 Cultural diversity of boards and corporate social performance: main results

We start with the estimation of regressions of CSP on CD BOARD, controlling for a range of board and firm characteristics. Table 2 reports the main results. Columns (1) – (5) report the results for our main measure of corporate social performance, CSP. Column (1) of Table 2 reports the results for CSP as the dependent variable and CD BOARD and firm and year fixed effects as explanatory variables. Columns (2) and (3) report the regression results that additionally include board and firm characteristics, respectively. Column (4) reports the results of the full specification that includes CD BOARD, board and firm characteristics (excluding analyst coverage and institutional investors variables to limit the loss in the number of observations due to limited data availability for these two variables), and firm and year fixed effects. Finally, column (5) reports the results of the full specification including analyst coverage and institutional ownership variables (with reduced number of observations). The coefficient on CD BOARD is positive and significant at the 1% level in all specifications, and the inclusion of board and firm characteristics does not alter this significant positive relationship. The positive impact of CD BOARD on CSP suggests that an increase in cultural diversity of the board is associated with an improvement in CSP.<sup>13</sup> Since we control for firm

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<sup>13</sup>In unreported tests, we also assess how CD BOARD is related to different aspects of CSP. We focus on six areas of CSP – environment, community, employee relations, diversity, human rights and product – as the dependent variables and find that CD BOARD is associated with stronger CSP in specific areas of community, employee relations, and diversity but not with stronger CSP in environment, human rights or product. These results are in line with stakeholder management targeting principally firm stakeholders more material for firm value (e.g., Hillman and Keim, 2001; Anderson et al., 2004; Edmans, 2011; Flammer 2015; Malik, 2015; Liang and Renneboog, 2017) and with greater implicit claim (Cornell and Shapiro, 1987).

fixed effects, the results are mostly driven by time series variations. Within a firm, we find that an increase in CD BOARD is associated with an increase of CSP.

INSERT TABLE 2 HERE

Regarding other board characteristics, we observe that gender diversity, average director age, and average director tenure are significantly related to CSP. That is, higher female representation on boards, younger boards and smaller average director tenure lead to improvements in CSP, consistent with literature (see Rao and Tilt, 2016). Regarding the firm characteristics, increases in firm size, leverage, book-to-market, and analysts' coverage are associated with improvements in CSP. These results are in line with prior literature.

In addition, we estimate regressions with other measures of corporate social performance, CSP concerns (CSP\_con) and CSP net (CSP\_net), as the dependent variables. Column (6) and (7) of Table 2 report the results for CSP\_con and CSP\_net, respectively. We expect CD BOARD to reduce CSP concerns and to increase CSP net. Our estimation results show that CD BOARD has no significant impact on CSP concerns, while the coefficient on CD BOARD is positive and significant at the 1% level in the regression of CSP\_net (column (7)), suggesting that board cultural diversity plays an important role in increasing CSP strengths, while its role in reducing CSP concerns is insignificant. These results conform with Ioannou and Serafeim (2015) who argue that shifting corporate attitudes from an agency to a stakeholder perspective is more likely to affect proactive CSR initiatives rather than concerns. Overall, the positive relation between CD BOARD and corporate social performance remains robust when we use an alternative measure (CSP net).

## *4.2 Endogeneity*

The relation between CSP and CD BOARD is potentially endogenous (Jo and Harjoto, 2012; Masulis et al., 2012). The endogeneity can arise when board members are not randomly selected, and their presence may be determined by factors related to the firm's demand for culturally diverse boards. To address the endogeneity concern, we use an instrumental variable approach. As our instrument, we use the cultural heterogeneity of the population of the state where the firm is headquartered. As many directors would come from within the firm's local geographic area, greater local cultural heterogeneity arguably provides for a more diverse pool to source directors from (e.g., Pirinsky and Wang, 2006; Davis and Henderson, 2008). In addition, individuals coming from more culturally heterogeneous geographic locales are more likely to recognize diversity and include individuals with different backgrounds relative to individuals coming from a homogenous population. Consequently, we argue that firms located in areas with greater cultural diversity of the population are more likely to appoint boards that are more culturally diverse. We construct our instrument of state-level cultural heterogeneity based on the data from the American Community Survey.<sup>14</sup> For each state, we compute the percentage of people with a specific country of ancestry. We use these percentages for each country of ancestry and cultural distances between all pairs of countries of ancestry to estimate the cultural diversity within a state (CD STATE). Since we have annual survey data, we compute CD STATE for each year. Appendix A provides a detailed definition of the CD STATE variable.

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<sup>14</sup>The American Community Survey is conducted annually by the U.S. Census Bureau and is available at the IPUMS website. This state-level survey includes questions about participants' ancestry.

INSERT TABLE 3 HERE

In Table 3, we report the results of the instrumental variable regressions. In the first stage regression (first column), the instrumental variable has the expected positive sign and is highly significant. Thus, firms headquartered in states with greater cultural diversity have more culturally diverse boards. Directors' age range is also a significant positive determinant of CD BOARD, suggesting that age diversity influences cultural diversity. Regarding firm characteristics, we observe that larger firms and less financially constrained firms tend to have culturally more diverse boards.

The second column of Table 3 reports the results of the second stage regression for CSP. CD BOARD is positive and significant at the 1% level, which supports a causal interpretation of the relation between CD BOARD and CSP.<sup>15</sup> Results of the instrumental variable regression confirm the positive relation between CD BOARD and CSP.

#### *4.3 Robustness test: Alternative measures for cultural diversity*

In this section, we assess the robustness of our results by considering alternative culture frameworks. While Hofstede's (2001) culture framework is widely used and recognized, we want to ensure that our results are not driven by a specific definition of culture. Hence, we consider several alternative culture frameworks to compute our CD BOARD measure. First, we use culture scores from the Global Leadership and Organizational Behavior Effectiveness

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<sup>15</sup>We note that the estimated coefficient increases in magnitude relative to the OLS regressions, which can be attributed to the instrumental variables approach resolving the errors-in-variables bias (i.e., as cultural diversity is arguably measured with noise, we expect the OLS coefficients to be biased towards zero).

(GLOBE) project by House et al. (2004). GLOBE scores expand Hofstede’s framework to nine culture dimensions of values and practices: performance orientation, assertiveness orientation, future orientation, humane orientation, institutional collectivism, family collectivism, gender egalitarianism, power distance, and uncertainty avoidance. We employ both societal values (“ought to be”) and practices (“as is”) scores.<sup>16</sup> We also employ the culture framework of Schwartz (2006), which contains seven value orientations that are based on three culture dimensions: embeddedness vs. autonomy (affective autonomy and intellectual autonomy), hierarchy vs. egalitarianism, and mastery vs. harmony.

For each alternative culture framework, we recalculate CD BOARD and estimate our main model as in Table 2 column (5). In Table 4, we report the results. We observe that the coefficients on CD BOARD are positive and significant at the 1% level for the three alternative measures of CD BOARD. Overall, these results suggest that, irrespective of the choice of culture framework, cultural diversity has a significant positive impact on CSP.

INSERT TABLE 4 HERE

#### *4.4 Moderating factors on the relation between CD BOARD and CSP*

##### *4.4.1 Firm needs: Industry visibility to consumers and competition*

As we argue in Hypothesis 2, culturally diverse boards are more effective in overseeing CSP for firms that operate in industries with greater needs for stakeholder management, i.e., when a firm’s image is important to consumers and for firms operating in highly competitive

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<sup>16</sup>Societal values reflect desired behavior or practices while societal practices reflect behavior or practices that respondents perceive to be widespread (Smith, 2006).

industries (Fisman et al., 2007; Harjoto et al., 2015). We expect CD BOARD, through a better understanding and incorporation of stakeholder concerns, to have a greater impact on CSP. Therefore, a firm's needs in CSR play a moderating role in the relation between CD BOARD and CSP.

To test our conjecture, we follow Fisman et al. (2007) and Harjoto et al. (2015) and divide our sample into two subsamples based on the level of: (1) visibility to consumers; and (2) industry competition. We measure visibility to consumers by the industry's advertising intensity, i.e., the industry's average ratio of advertising expenditures to sales (*Ad\_to\_Sales*). We use all Compustat firms to estimate *Ad\_to\_Sales* for each year and each 2-digit SIC code and use the five-year average *Ad\_to\_Sales* ratio in our analysis. We measure industry competition using the Herfindahl-Hirschman Index (HHI) estimated as the sum of squares of the percentages of the market shares (in terms of sales) of all firms in the industry. We use Compustat data to estimate HHI for each year and each 2-digit code and use five-year average HHI.

Panel A of Table 5 reports the results for high and low visibility to consumers subsamples (with above and below median *Ad\_to\_Sales*, respectively) and high and low industry competition subsamples (with below and above median HHI, respectively). We observe that CD BOARD significantly increases CSP for firms in industries with high visibility to consumers and firms in highly competitive industries, while the relation between CD BOARD and CSP for low visibility and low competition firms is insignificant. These results support the idea that having a culturally diverse board helps to address stakeholder concerns for firms where stakeholder management is important for firm value. These results also suggest that boards are likely to concentrate less on stakeholder concerns for firms where

CSP is less important, as indicated by the insignificant result for firms with low visibility and low competition.

INSERT TABLE 5 HERE

#### *4.4.2 Diversity beliefs: Importance of a board's commitment to diversity*

As we argue in Hypothesis 3, the beliefs that a board holds about the value of diversity can be an important moderating factor on the relation between CD BOARD and CSP. When boards hold a belief that diversity is beneficial, it is more likely for the benefits of diversity to be realized (see e.g., van Knippenberg et al., 2007). To examine whether diversity beliefs have a moderating role on the relation between CD BOARD and CSP, we focus on a firm's other commitments to diversity. Specifically, we consider whether the relation between CD BOARD and CSP is stronger in boards that are already more diverse in terms of gender and director age profile and have a larger proportion of independent directors, as those boards have already demonstrated a commitment to diversity and may therefore be more open to cultural diversity.

As with the previous analysis, we create subsamples based on high and low diversity (above and below median, respectively) for gender diversity, age diversity, and board independence, and estimate the regressions for these subsamples. In Panel B of Table 5, we report the results for these regressions. As can be seen, CD BOARD significantly increases CSP for firms that have boards with greater gender diversity, greater age diversity, and more independent boards, while the relation between CD BOARD and CSP for firms with low gender diversity, low age diversity, and less independent boards is insignificant. Overall, the results support the argument that the beliefs of a board about diversity in general is an important moderating

factor in the relation between CD BOARD and CSP. Positive diversity beliefs allow the benefits of cultural diversity to materialize.

## **5 Conclusion**

In this paper, we argue that greater cultural diversity in the corporate board can increase a firm's ability to manage the needs and interests of different stakeholders. We find that cultural diversity is positively associated with corporate social performance, supporting the stakeholder theory. This positive relation manifests itself in firms which depend on CSR to generate value, either because their CSR image is important to consumers or they must differentiate themselves from their competitors. We also find that the impact of board cultural diversity on CSP is present in firms with boards that are diverse in other areas, confirming the important role of diversity beliefs.

Our study makes several important contributions. First, we focus on an underexamined aspect of diversity, namely cultural diversity and document a strong relation between this form of diversity and corporate social performance. We demonstrate that increasing cultural diversity has a significant impact on corporate social performance. Second, cultural diversity is less observable than other types of diversity (e.g., gender, age) and, therefore, a firm's attempt to increase cultural diversity is not likely to be due to tokenism and signaling. The fact that cultural diversity is not likely to be a consequence of tokenism mitigates endogeneity concerns and adds confidence that the documented positive relation is causal, i.e., an increase in diversity of the board indeed leads to an improvement in CSP. Third, our study highlights the importance of culture as a determinant of CSR and adds to the growing literature on the role of culture in finance. Our study offers important implications for firms that care about improving their

corporate social performance and demonstrates a new way of achieving this, i.e. by increasing the degree of cultural diversity of the board.

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## Appendix A. Variable definitions and data sources.

| Variable                              | Definition   |
|---------------------------------------|--|
| <i>Panel A: Cultural diversity</i>    |  |
| CD BOARD                              | <p>The measure of cultural diversity of the board is the average of the cultural distances between each two directors. We compute the cultural distances between directors using scores on the individual cultural dimensions for each director as in Kogut and Singh (1988):</p> $Dist_{ij} = \sqrt{\sum_{k=1}^4 \{(I_{ki} - I_{kj})^2 / V_k\}} \quad \forall i \neq j$ <p>where <math>Dist_{ij}</math> is the cultural distance between two directors (<math>i, j</math>), <math>I_{ki}</math> is the culture score on dimension <math>k</math> for a director <math>i</math>, <math>I_{kj}</math> is the cultural score on dimension <math>k</math> for a director <math>j</math>, and <math>V_k</math> is the in-sample variance of the score for the specific cultural dimension.</p> <p>We compute the firm-level cultural diversity of the board as in Frijns et al. (2016):</p> $CD_{nt} = \frac{\sum_{i,j} Dist_{ij,nt}}{m(m-1)/2} \quad \forall i < j$ <p>where <math>CD_{nt}</math> captures the cultural diversity of the board of firm <math>n</math> in year <math>t</math>, and <math>m</math> is the number of board members. The measure of cultural diversity is normalized for the size of the board by dividing by the number of pairs of board members.</p> |
| CD State                              | <p>The measure of cultural diversity of a state is estimated for each state using population data from the American Community Survey obtained from the IPUMS website and Hofstede culture scores. For each state, we compute the percentage of people with a specific country of ancestry, <math>f_i</math>, where <math>f</math> is the frequency and <math>i</math> is the specific country of ancestry. The cultural diversity for a state (CD STATE) is computed as follows:</p> $CD STATE_k = \frac{\sum_{i=1}^M \sum_{j=i}^M f_i f_j Dist_{ij}}{2}$ <p>where <math>M</math> is the number of countries of ancestry, <math>Dist_{ij}</math> is the cultural distance between country of ancestry <math>i</math> and <math>j</math>, and <math>k</math> is the respective state. We compute CD STATE for each year.</p>  |
| <i>Panel B: CSR performance</i>       |  |
| CSP                                   | The sum of KLD's positive indicators (strengths) for six areas: environment, community, employee, diversity, human rights and product. Indicators for each area and year are normalized  |
| CSP_con                               | The sum of KLD's negative indicators (concerns) for six areas: environment, community, employee, diversity, human rights and product. Indicators for each area and year are normalized   |
| CSP_net                               | The difference between the summed KLD's strengths (CSP) and summed KLD's concerns (CSP_con) for six areas: environment, community, employee, diversity, human rights and product   |
| <i>Panel C: Board characteristics</i> |  |
| Board size                            | The number of directors on the board; log-transformed in regression analysis   |
| Gender                                | The proportion of female directors (in %)  |
| Director age                          | The average age (in years) of all directors on the board; log-transformed in regression analysis   |
| Directors' age range                  | The age difference (in years) between the oldest and youngest directors on the board; log-transformed in regression analysis   |
| Board independence                    | The proportion of independent directors (in %)   |
| Director tenure                       | The average tenure (in years) of all directors on the board; log-transformed in regression analysis  |
| CEO duality                           | An indicator variable that equals one if the CEO serves also as the Chairman of the board of directors, and zero otherwise.  |

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*Panel C: Firm characteristics*

|                         |  |
|-------------------------|--|
| Firm size               | Total assets of the firm at the end of the fiscal year; winsorized at 1%; log-transformed in regression analysis   |
| Firm age                | The number of years since the establishment of the firm; log-transformed in regression analysis  |
| Leverage                | Total debt scaled by total assets at the end of the fiscal year; winsorized at 1%  |
| KZ index                | KZ index: Kaplan and Zingales (1997) index measured as following: $-1.002CF_t/AT_{t-1} - 39.368DIV_t/AT_{t-1} - 1.315C_t/AT_{t-1} + 3.139BLEV_t + 0.283Q_t$<br>where $CF_t/AT_{t-1}$ is cash flow over lagged assets; $DIV_t/AT_{t-1}$ is cash dividends over lagged assets; $C_t/AT_{t-1}$ is cash balances (“CHE”) over lagged assets; book leverage, denoted by $BLEV_t$ , is total debt divided by the sum of total debt and book equity measured at fiscal year-end, and Tobin's Q is the market value of equity plus assets minus the book value of equity all over asset. The variable is winsorized at 1%. |
| Book-to-market          | Book value of equity divided by market value of equity; winsorized at 1%   |
| Return volatility       | Volatility of the firm’s returns over the last three years; winsorized at 1%   |
| Analyst coverage        | Number of analysts covering a firm; log-transformed in regression analysis   |
| Institutional ownership | Percentage of a firm’s common shares held by 13F institutional investors at the end of the fiscal year.  |
| Industry                | Identified by the 2-digit SIC code.  |

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*Panel C: Industry characteristics*

|             |   |
|-------------|---|
| Ad_to_sales | A measure of visibility to consumers; industry average advertising intensity estimated using all Compustat firms as an industry’s five-year average ratio of advertising expenditures to sales.     |
| HHI         | Herfindahl-Hirschman Index estimated as five-year average of the sum of squares of the percentages of the market shares (in terms of sales) of all firms in the industry, using all Compustat firms |

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## **Appendix B. Country of ancestry**

To identify country of ancestry of directors we use directors' last names.

### *Reference libraries of last names*

We employ three distinct reference libraries of last names that contain country of ancestry:

(1) The main reference library is based on census records of foreign-born US residents (Liu, 2016). For this reference library, we obtain digitized historical census data from Integrated Public Use Microdata Series (IPUMS). Since US law prohibits the release of census data with personally identifiable information for 72 years after these records are collected, we make use of available census records for the years 1850, 1880, 1900, 1910, 1920, 1930 and 1940. These records contain last names, marital status, and countries of birth. We clean these records by removing last names that contain non-alphabetical characters that would not occur in last names and remove records of married women, as they most likely adopt last names of their spouses. Overall, these census records provide 6,182,373 unique last names representing 68,134,313 individuals from 199 countries of origin.

(2) Second, we use a reference library of 20,693 common Asian American last names from six major Asian American ethnic groups (Chinese, Japanese, Filipino, Korean, Indian, and Vietnamese) developed by Lauderdale and Kestenbaum (2000).

(3) The third reference library is the Oxford Dictionary of American Family Names. This dictionary contains most likely regions of origin (sometimes countries, other times broader regions, such as Scandinavia) for close to 70,000 most common American family names. This library identifies whether a last name is a common Jewish name.

### *Procedure of matching last names*

We match the last names of directors in our sample (20,976 unique directors and 15,235 unique last names) with the last names in the reference libraries. For the census-based reference library, we obtain the number of occurrences of the last name, and the percentage of that last name coming from each country. For the other reference libraries, we match last names and obtain the country of origin of that

last name. We then implement the following algorithm to robustly identify the most likely country of origin of a last name. If a last name has more than 100 unique entries in the census-based reference library and more than 60% of those come from one country, then we assign that country as the most likely country of origin. In all other cases, we cross-check the last name in the different reference libraries. If the last name is associated with the same country of origin in two or more reference libraries, then we take that country of origin. If we find no match in the main reference library and we have an entry in the Asian names reference library, we use that country of origin. If we only have one entry in one of the reference libraries, we use that entry. After having matched all last names for which we have entries in the reference libraries, we run a cross-check using the Oxford Dictionary of American Family Names to see whether that last name is a common Jewish last name, and if so, we replace the origin of that last name.<sup>17</sup> Using this procedure, we match 94% of the last names in the sample from 52 countries of origin based on the three reference libraries we employ. In Table B.1, we provide a breakdown of the sample of directors by country of ancestry and year.

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<sup>17</sup>For instance, the last name “Cohen” has 102,016 entries in the census data. If we were to rely on these census records, we would attribute this last name to Russian origin (over 65% of people with this last name migrated to the US from Russia). The Oxford Dictionary of American Family Names identifies this last name as Jewish.

**Table B.1.** Number of directors by country of ancestry and by year

| Country of ancestry | 2004  | 2005  | 2006  | 2007  | 2008  | 2009  | 2010  | 2011  | 2012  | 2013  | 2014  | 2015  | Total  | % Total |
|---------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|--------|---------|
| Arab origin         |       |       | 1     | 1     | 1     | 1     | 1     | 2     | 2     | 2     | 1     | 1     | 13     | 0.01%   |
| Australia           | 2     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 13     | 0.01%   |
| Austria             | 66    | 69    | 78    | 77    | 82    | 84    | 81    | 78    | 78    | 75    | 71    | 73    | 912    | 0.91%   |
| Belgium             | 16    | 20    | 25    | 29    | 24    | 21    | 20    | 22    | 24    | 18    | 16    | 14    | 249    | 0.25%   |
| Canada              | 719   | 771   | 833   | 795   | 805   | 823   | 803   | 770   | 755   | 730   | 681   | 632   | 9,117  | 9.09%   |
| China               | 68    | 64    | 75    | 85    | 88    | 94    | 108   | 103   | 111   | 102   | 97    | 95    | 1,090  | 1.09%   |
| Costa Rica          |       |       |       |       |       |       |       |       |       | 1     | 1     |       | 2      | 0.00%   |
| Cuba                | 2     | 3     | 3     | 2     | 3     | 3     | 3     | 3     | 2     | 1     | 2     | 1     | 28     | 0.03%   |
| Czech Republic      | 54    | 56    | 72    | 75    | 76    | 80    | 76    | 76    | 64    | 56    | 52    | 63    | 800    | 0.80%   |
| Denmark             | 34    | 43    | 44    | 38    | 44    | 44    | 46    | 41    | 37    | 41    | 34    | 31    | 477    | 0.48%   |
| Finland             | 8     | 9     | 11    | 11    | 10    | 8     | 9     | 7     | 5     | 5     | 3     | 6     | 92     | 0.09%   |
| France              | 40    | 44    | 53    | 54    | 58    | 58    | 53    | 49    | 43    | 40    | 47    | 47    | 586    | 0.58%   |
| Germany             | 1,211 | 1,346 | 1,482 | 1,451 | 1,475 | 1,531 | 1,500 | 1,480 | 1,467 | 1,417 | 1,314 | 1,276 | 16,950 | 16.90%  |
| Greece              | 37    | 43    | 52    | 50    | 54    | 54    | 54    | 53    | 56    | 51    | 50    | 48    | 602    | 0.60%   |
| British Guyana      |       |       |       | 2     | 4     | 4     | 2     | 2     | 2     | 2     | 2     | 1     | 21     | 0.02%   |
| Honduras            |       | 1     | 1     | 1     | 1     | 1     | 1     |       |       |       |       |       | 6      | 0.01%   |
| Hungary             | 23    | 28    | 33    | 31    | 36    | 39    | 40    | 37    | 42    | 44    | 43    | 42    | 438    | 0.44%   |
| India               | 29    | 33    | 45    | 48    | 53    | 65    | 64    | 70    | 73    | 74    | 62    | 60    | 676    | 0.67%   |
| Iran                |       |       |       |       |       |       |       |       | 1     | 1     | 1     | 2     | 5      | 0.00%   |
| Ireland             | 1,470 | 1,594 | 1,720 | 1,689 | 1,712 | 1,805 | 1,768 | 1,691 | 1,701 | 1,644 | 1,520 | 1,438 | 19,752 | 19.70%  |
| Israel              | 449   | 500   | 542   | 536   | 528   | 575   | 564   | 539   | 544   | 500   | 467   | 437   | 6,181  | 6.16%   |
| Italy               | 371   | 400   | 447   | 451   | 487   | 507   | 502   | 497   | 504   | 485   | 436   | 409   | 5,496  | 5.48%   |
| Jamaica             |       |       | 1     | 1     | 1     | 1     | 2     | 2     | 2     | 3     | 3     | 2     | 18     | 0.02%   |
| Japan               | 27    | 36    | 36    | 35    | 31    | 28    | 28    | 25    | 28    | 28    | 25    | 25    | 352    | 0.35%   |
| Latvia              |       |       |       |       |       |       |       |       |       |       |       | 1     | 1      | 0.00%   |
| Lithuania           | 14    | 13    | 14    | 15    | 16    | 17    | 17    | 17    | 14    | 15    | 14    | 13    | 179    | 0.18%   |
| Luxembourg          | 1     | 2     | 2     | 2     | 1     | 2     | 1     |       |       |       |       |       | 11     | 0.01%   |
| Malta               | 3     | 3     | 4     | 3     | 2     | 2     | 1     | 2     | 1     | 1     | 1     | 1     | 24     | 0.02%   |
| Mexico              | 102   | 106   | 112   | 124   | 111   | 124   | 113   | 119   | 123   | 128   | 120   | 120   | 1,402  | 1.40%   |
| Netherlands         | 50    | 56    | 64    | 70    | 69    | 73    | 64    | 63    | 70    | 68    | 65    | 65    | 777    | 0.77%   |
| Norway              | 76    | 83    | 92    | 100   | 99    | 100   | 100   | 90    | 87    | 82    | 79    | 75    | 1,063  | 1.06%   |
| Palestine           |       |       |       |       |       | 1     | 2     | 2     | 2     | 2     | 2     | 2     | 13     | 0.01%   |

|                |              |              |              |              |              |              |              |              |              |              |              |              |                |        |
|----------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|----------------|--------|
| Philippines    | 5            | 8            | 10           | 9            | 10           | 11           | 11           | 10           | 10           | 11           | 13           | 15           | 123            | 0.12%  |
| Poland         | 86           | 101          | 114          | 119          | 123          | 122          | 124          | 122          | 125          | 108          | 106          | 101          | 1,351          | 1.35%  |
| Portugal       | 11           | 12           | 15           | 17           | 19           | 20           | 21           | 19           | 21           | 22           | 25           | 26           | 228            | 0.23%  |
| Romania        | 5            | 5            | 7            | 8            | 6            | 6            | 4            | 5            | 7            | 6            | 6            | 6            | 71             | 0.07%  |
| Russia         | 302          | 353          | 400          | 395          | 389          | 406          | 396          | 389          | 408          | 372          | 344          | 327          | 4,481          | 4.47%  |
| South Korea    | 6            | 7            | 4            | 3            | 2            | 2            | 2            | 3            | 3            | 3            | 3            | 4            | 42             | 0.04%  |
| Spain          | 10           | 10           | 14           | 13           | 13           | 15           | 15           | 15           | 16           | 13           | 14           | 11           | 159            | 0.16%  |
| Sweden         | 166          | 192          | 226          | 229          | 236          | 246          | 249          | 251          | 248          | 238          | 218          | 212          | 2,711          | 2.70%  |
| Switzerland    | 28           | 32           | 34           | 31           | 32           | 42           | 41           | 41           | 40           | 44           | 40           | 39           | 444            | 0.44%  |
| Syria          | 26           | 26           | 29           | 31           | 36           | 37           | 40           | 41           | 42           | 38           | 31           | 28           | 405            | 0.40%  |
| Turkey         | 11           | 13           | 11           | 11           | 12           | 9            | 11           | 12           | 12           | 11           | 9            | 9            | 131            | 0.13%  |
| Vietnam        |              | 1            | 1            | 1            | 2            | 2            | 2            | 2            | 2            | 1            | 1            |              | 15             | 0.01%  |
| United Kingdom | 1,615        | 1,813        | 1,938        | 1,906        | 1,928        | 2,035        | 1,973        | 1,950        | 1,978        | 1,906        | 1,771        | 1,674        | 22,487         | 22.43% |
| <i>Total</i>   | <i>7,158</i> | <i>7,915</i> | <i>8,665</i> | <i>8,569</i> | <i>8,701</i> | <i>9,125</i> | <i>8,937</i> | <i>8,726</i> | <i>8,781</i> | <i>8,416</i> | <i>7,817</i> | <i>7,459</i> | <i>100,269</i> |        |

**Table 1.** Summary statistics

| <i>Panel A: Board characteristics</i> |          |            |        |              |                      |                    |                 |             |        |
|---------------------------------------|----------|------------|--------|--------------|----------------------|--------------------|-----------------|-------------|--------|
| Variable                              | CD BOARD | Board size | Gender | Director age | Directors' age range | Board independence | Director tenure | CEO duality |        |
| N                                     | 11,342   | 11,342     | 11,342 | 11,342       | 11,342               | 11,342             | 11,342          | 11,342      | 11,342 |
| Mean                                  | 1.84     | 9.09       | 0.12   | 60.87        | 22.90                | 0.75               | 9.03            | 0.53        |        |
| S.D.                                  | 0.54     | 2.17       | 0.10   | 3.86         | 7.13                 | 0.13               | 3.80            | 0.50        |        |
| Min                                   | 0        | 4.00       | 0.00   | 42.25        | 2.00                 | 0.00               | 0.50            | 0.00        |        |
| 25p                                   | 1        | 8.00       | 0.00   | 58.44        | 18.00                | 0.67               | 6.36            | 0.00        |        |
| Median                                | 1.85     | 9.00       | 0.11   | 61.00        | 22.00                | 0.78               | 8.40            | 1.00        |        |
| 75p                                   | 2.24     | 10.00      | 0.18   | 63.33        | 27.00                | 0.86               | 11.00           | 1.00        |        |
| Max                                   | 3.54     | 24.00      | 0.75   | 78.20        | 55.00                | 1.00               | 31.29           | 1.00        |        |

  

| <i>Panel B: Firm characteristics</i> |        |           |          |          |          |                |                  |                         |                   |
|--------------------------------------|--------|-----------|----------|----------|----------|----------------|------------------|-------------------------|-------------------|
| Variable                             | CSP    | Firm size | Firm age | Leverage | KZ index | Book-to-market | Analyst coverage | Institutional ownership | Return volatility |
| N                                    | 11,342 | 11,342    | 11,342   | 11,342   | 11,342   | 11,342         | 11,170           | 11,266                  | 11,342            |
| Mean                                 | 0.39   | 7,738     | 26.1     | 0.20     | -6.55    | 0.49           | 11.01            | 0.77                    | 0.10              |
| S.D.                                 | 0.63   | 17,524    | 6.19     | 0.16     | 13.93    | 0.31           | 7.47             | 0.16                    | 0.05              |
| Min                                  | 0      | 123       | 6        | 0        | -88.82   | 0.05           | 1.00             | 0.06                    | 0.03              |
| 25p                                  | 0      | 693       | 22       | 0.04     | -7.04    | 0.27           | 5.17             | 0.67                    | 0.07              |
| Median                               | 0.14   | 1,827     | 28       | 0.20     | -2.02    | 0.43           | 9.25             | 0.78                    | 0.09              |
| 75p                                  | 0.50   | 5,592     | 31       | 0.31     | 0.29     | 0.63           | 15.33            | 0.89                    | 0.12              |
| Max                                  | 5.12   | 120,431   | 32       | 0.64     | 2.72     | 1.75           | 54.83            | 1.00                    | 0.28              |

This Table reports summary statistics for the various board (Panel A) and firm characteristics (Panel B). We report the number of observations (N), the mean and standard deviation (S.D.). In addition, we report some distributional properties, the minimum (Min), 25<sup>th</sup> percentile value (25p), median, 75<sup>th</sup> percentile value (75p) and the maximum (Max).

**Table 2.** Main specification: Board cultural diversity and corporate social performance

|                         | CSP               |                     |                    |                     |                     | CSP con             | CSP net             |
|-------------------------|-------------------|---------------------|--------------------|---------------------|---------------------|---------------------|---------------------|
|                         | (1)               | (2)                 | (3)                | (4)                 | (5)                 | (6)                 | (7)                 |
| CD BOARD                | 0.04***<br>(3.18) | 0.04***<br>(2.95)   | 0.05***<br>(3.34)  | 0.04***<br>(3.09)   | 0.04***<br>(3.17)   | -0.01<br>(-0.77)    | 0.05***<br>(2.94)   |
| Board size              |                   | 0.01<br>(0.30)      |                    | -0.03<br>(-0.74)    | -0.03<br>(-0.71)    | -0.05<br>(-1.50)    | 0.02<br>(0.41)      |
| Gender                  |                   | 0.52***<br>(6.44)   |                    | 0.50***<br>(6.14)   | 0.52***<br>(6.33)   | -0.43***<br>(-6.41) | 0.95***<br>(9.05)   |
| Director age            |                   | -0.39***<br>(-2.98) |                    | -0.38***<br>(-2.95) | -0.33**<br>(-2.50)  | 0.36***<br>(2.90)   | -0.69***<br>(-3.88) |
| Directors' age range    |                   | 0.00<br>(0.12)      |                    | 0.00<br>(0.28)      | 0.00<br>(0.24)      | -0.00<br>(-0.06)    | 0.01<br>(0.22)      |
| Board independence      |                   | 0.02<br>(0.36)      |                    | -0.00<br>(-0.08)    | -0.01<br>(-0.15)    | 0.05<br>(1.16)      | -0.05<br>(-0.91)    |
| Director tenure         |                   | -0.04**<br>(-1.97)  |                    | -0.05***<br>(-2.68) | -0.06***<br>(-3.03) | -0.01<br>(-0.81)    | -0.04*<br>(-1.79)   |
| CEO duality             |                   | 0.02<br>(1.39)      |                    | 0.01<br>(1.21)      | 0.01<br>(1.26)      | -0.00<br>(-0.35)    | 0.02<br>(1.20)      |
| Firm size               |                   |                     | 0.06***<br>(4.31)  | 0.06***<br>(4.70)   | 0.05***<br>(3.22)   | 0.11***<br>(7.98)   | -0.06***<br>(-3.19) |
| Firm age                |                   |                     | -1.62**<br>(-2.32) | -1.03<br>(-1.52)    | -1.04<br>(-1.54)    | -0.37<br>(-0.71)    | -0.67<br>(-0.62)    |
| Leverage                |                   |                     | 0.13***<br>(2.96)  | 0.13***<br>(2.92)   | 0.14***<br>(3.10)   | -0.09**<br>(-2.39)  | 0.23***<br>(3.96)   |
| KZ index                |                   |                     | -0.00<br>(-0.22)   | 0.00<br>(0.26)      | 0.00<br>(0.47)      | 0.00<br>(0.69)      | -0.00<br>(-0.12)    |
| Book-to-market          |                   |                     | 0.08***<br>(5.00)  | 0.08***<br>(4.84)   | 0.08***<br>(4.73)   | 0.05***<br>(2.91)   | 0.03<br>(1.44)      |
| Return volatility       |                   |                     | -0.03<br>(-0.24)   | -0.03<br>(-0.26)    | 0.02<br>(0.16)      | 0.47***<br>(3.82)   | -0.45**<br>(-2.54)  |
| Analyst coverage        |                   |                     |                    |                     | 0.05***<br>(3.73)   | -0.02<br>(-1.51)    | 0.06***<br>(3.73)   |
| Institutional ownership |                   |                     |                    |                     | 0.01<br>(0.26)      | 0.01<br>(0.26)      | 0.00<br>(0.01)      |
| R-squared               | 0.74              | 0.74                | 0.74               | 0.75                | 0.75                | 0.75                | 0.62                |
| N of observations       | 11,342            | 11,342              | 11,342             | 11,342              | 11,127              | 11,127              | 11,127              |
| N of firms              | 1,501             | 1,501               | 1,501              | 1,501               | 1,466               | 1,466               | 1,466               |

All regressions are estimated with firm and year fixed effects, and with robust standards errors. All variables are defined in Appendix A. T-statistics are reported in parentheses. \*\*\*, \*\*, and \* indicate significance at the 1%, 5%, and 10% level, respectively.

**Table 3.** Instrumental variable two-stage least square (2SLS) regression

|  | First stage        | Second stage        |
|--|--------------------|---------------------|
|  | CD BOARD           | CSP                 |
| <i>Instrumental variable: CD State</i> | 0.87***<br>(4.35)  |                     |
| CD BOARD                               |                    | 0.82***<br>(3.44)   |
| Board size                             | -0.11<br>(-1.51)   | 0.20***<br>(2.65)   |
| Gender                                 | -0.04<br>(-0.29)   | 0.73***<br>(5.06)   |
| Director age                           | 0.26<br>(1.16)     | -0.56**<br>(-2.28)  |
| Directors' age range                   | 0.09**<br>(2.51)   | -0.10**<br>(-2.21)  |
| Board independence                     | -0.02<br>(-0.20)   | 0.23**<br>(2.49)    |
| Director tenure                        | -0.05<br>(-1.45)   | 0.00<br>(0.12)      |
| CEO duality                            | -0.01<br>(-0.66)   | 0.01<br>(0.40)      |
| Firm size                              | 0.03**<br>(2.19)   | 0.20***<br>(9.27)   |
| Firm age                               | 0.04<br>(0.74)     | 0.04<br>(0.68)      |
| Leverage                               | -0.06<br>(-0.68)   | -0.31***<br>(-3.36) |
| KZ index                               | -0.002*<br>(-1.92) | 0.00<br>(0.37)      |
| Book-to-market                         | -0.03<br>(-0.80)   | -0.10**<br>(-2.53)  |
| Analyst coverage                       | -0.02<br>(-0.56)   | 0.06**<br>(1.99)    |
| Institutional ownership                | 0.04<br>(0.49)     | -0.58***<br>(-5.64) |
| Return volatility                      | 0.22<br>(0.72)     | -0.19<br>(-0.59)    |
| R-squared                              | 0.09               | 0.06                |
| N of observations                      | 11,118             | 11,118              |
| N of firms                             | 1,465              | 1,465               |

The first column reports the first-stage results of the 2SLS regressions with *CD BOARD* as the dependent variable. The second column reports the second-stage results from 2SLS regressions for *CSP* as the dependent variable. All regressions are estimated with industry and year fixed effects, and with robust standard errors clustered by firm. All variables are defined in Appendix A. T-statistics are reported in parentheses. \*\*\*, \*\*, and \* indicate significance at the 1%, 5%, and 10% level, respectively.

**Table 4.** Alternative measures of cultural diversity of boards: Alternative culture frameworks

|                   | GLOBE values      | GLOBE practices   | Schwartz          |
|-------------------|-------------------|-------------------|-------------------|
| CD BOARD          | 0.04***<br>(4.21) | 0.05***<br>(3.86) | 0.07***<br>(3.46) |
| Control variables | YES               | YES               | YES               |
| R-squared         | 0.75              | 0.75              | 0.75              |
| N of observations | 9,382             | 9,382             | 10,579            |
| N of firms        | 1,337             | 1,337             | 1,429             |

All regressions are estimated with firm and year fixed effects, with robust standards errors, and include control variables as in Table 2. *BOARD* is the measure of cultural board diversity computed using different culture frameworks. CD BOARD and other variables are defined in Appendix A. T-statistics are reported in parentheses. \*\*\* indicates significance at the 1% level.

**Table 5.** Moderating effects of firms' needs for CSR and diversity beliefs

| <i>Panel A: Firms' needs: Visibility to consumers and industry competition</i>            |                         |                |                      |                |                  |                |
|---|-------------------------|----------------|----------------------|----------------|------------------|----------------|
|   | Visibility to consumers |                | Industry competition |                |                  |                |
|   | High                    | Low            | High                 | Low            | High             | Low            |
| CD BOARD  | 0.06**<br>(2.43)        | 0.02<br>(1.21) | 0.08***<br>(4.19)    | 0.02<br>(0.77) |                  |                |
| Control variables   | YES                     | YES            | YES                  | YES            |                  |                |
| R-squared   | 0.79                    | 0.74           | 0.77                 | 0.75           |                  |                |
| N of observations   | 5,575                   | 5,552          | 5,558                | 5,569          |                  |                |
| N of firms  | 1,115                   | 882            | 802                  | 805            |                  |                |
| <i>Panel B: Diversity beliefs: Gender diversity, age diversity and board independence</i> |                         |                |                      |                |                  |                |
|   | Gender diversity        |                | Age diversity        |                | Independence     |                |
|   | High                    | Low            | High                 | Low            | High             | Low            |
| CD BOARD  | 0.05**<br>(2.02)        | 0.01<br>(0.86) | 0.05**<br>(2.13)     | 0.02<br>(0.91) | 0.05**<br>(2.01) | 0.02<br>(1.20) |
| Control variables   | YES                     | YES            | YES                  | YES            | YES              | YES            |
| R-squared   | 0.78                    | 0.73           | 0.77                 | 0.79           | 0.78             | 0.77           |
| N of observations   | 5,320                   | 5,807          | 5,803                | 5,324          | 5,073            | 6,054          |
| N of firms  | 980                     | 1,073          | 1,125                | 1,010          | 966              | 1,189          |

All regressions are estimated with firm and year fixed effects, with robust standards errors, and include control variables as in Table 2. Visibility to consumers is measured by the industry's advertising intensity, that is the industry five-year average ratio of advertising expenditures to sales (*Ad\_to\_Sales*). Firms with high (low) visibility to consumers have above (below) median *Ad\_to\_Sales*. Industry competition is measured using the Herfindahl-Hirschman Index (*HHI*). Firms operating in high (low) competition industry have below (above) median *HHI*. Firms have boards with high (low) Gender diversity if *Gender* is above (below) median. Firms have boards with high (low) Age diversity if *Directors' age range* is above (below) median. Firms have boards with high (low) Independence if *Board independence* is above (below) median. *CD BOARD* and other variables are defined in Appendix A. T-statistics are reported in parentheses. \*\*\*, \*\*, and \* indicate significance at the 1%, 5%, and 10% level, respectively.