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Abstract

Prior research provides evidence that LGBT-supportive corporate policies are related to important human resources functions, such as enhanced recruitment and retention. In addition, prior research indicates that investors view the adoption of such policies positively. We examine the firm-performance mechanisms underlying favorable stock-market reactions based on an integration of perspectives from corporate social responsibility and the business case for diversity. Specifically, we estimate a hierarchical linear model (HLM) to account for the nested nature of our data (firms nested within states) and find that (1) the presence of LGBT-supportive policies is associated with higher firm value, productivity, and profitability, (2) the firm-value and profitability benefits associated with LGBT-supportive policies are larger for companies engaged in research and development (R&D) activities, and (3) the firm-value and profitability benefits of LGBT-supportive policies persist in the presence of state anti-discrimination laws. In supplemental analyses, we find that firms implementing (discontinuing) LGBT-supportive policies experience increases (decreases) in firm value, productivity, and profitability. We are among the first to link LGBT-supportive policies specifically to financial performance outcomes as well as to develop and test a multilevel model of these relationships. Our results have important implications for theory and research on LGBT issues in organizations, human resources managers, and policymakers.

Keywords

corporate social responsibility, diversity, firm performance, resource based view, LGBT

JEL Classifications

J24, J71, M12, M14, M51

Do LGBT-supportive Corporate Policies Enhance Firm Performance?

Introduction

Significant advances have been made in recent history in the United States for the lesbian, gay, bisexual and transgender (LGBT) community. In 2011, “Don’t Ask, Don’t Tell” was repealed, effectively allowing gay men and lesbians to serve openly in the military. In 2013, the U.S. Supreme Court handed down two key rulings related to same-sex marriage. The Defense of Marriage Act (DOMA), which defined marriage as a union between a man and a woman, was repealed in a 5-4 decision (*United States v. Windsor*, June 26, 2013). In another 5-4 decision (*Hollingsworth v. Perry*, June 26, 2013), the court dismissed an appeal from proponents of California’s Proposition 8, which had banned same-sex marriages in that state, on jurisdictional grounds—returning the case to the Ninth Circuit and effectively allowing same-sex marriages in that state to resume. There is also increased public and political support for the passage of federal non-discrimination employment legislation known as the Employment Nondiscrimination Act of 2013, and the U.S. Senate recently voted to approve the Act in a 64-32 vote.

Historically, public opinion of homosexuality has been negative. In 1965, 70% of respondents in a public opinion poll indicated that homosexuals were harmful to American life (Herek, 2002). Since that time, public opinion of homosexuality has changed significantly, becoming more positive (Hicks & Lee, 2006). Today, while approximately 40% of Americans feel that homosexuality is “always wrong” (Bowman, Rugg, & Marisco, 2013), most Americans (63%) feel that discrimination against gay men and lesbians is somewhat serious or very serious (Gallup, 2014), and 67% favor expanding federal hate crime laws to include sexual orientation (Gallup, 2014). Organizational support for LGBT workers also has risen noticeably in recent

years. Whereas 61% of the *Fortune* 500 had non-discrimination policies in 2002, 88% did in 2013 (Human Rights Campaign, 2014).

Management and organization researchers have become increasingly interested in organizational support for LGBT workers (e.g., Anteby & Anderson, 2014; Creed, Scully, & Austin, 2002; Day & Schoenrade, 1997; Griffith & Hebl, 2002; Kaplan, 2006; King & Cortina, 2010; Pichler & Ruggs, in press; Theodorakopoulous & Budhwar, 2015; Trau & Härtel, 2007). Recent research at the organizational level has focused on potential financial benefits to organizations for adopting LGBT-supportive policies and practices. For instance, Johnston and Malina (2008), Wang and Schwarz (2010), and Li and Nagar (2013) examine company-level data to determine whether investors appreciate LGBT-supportive policies, and each of these studies documents at least some support for the hypothesized positive association between these policies and stock prices. However, these studies rely on stock market returns data to provide evidence of this positive association and call for additional research examining the fundamental performance improvements yielding their results.

We address these calls by developing and testing a cross-level theoretical model of firm-performance outcomes associated with LGBT-supportive policies (Figure 1), which is the overarching purpose of our study. We do so using a more generalizable dataset than has been used in previous research, offering a number of important and unique benefits, which we describe in the methods section. We therefore provide a robust and valid test of the proposition that organizations adopting LGBT-supportive policies perform better than non-adopters. To our knowledge, ours is the most sophisticated test of this proposition to date. In so doing, we address calls for more research on the economic imperative organizations face in terms of adopting LGBT-supportive policies, as well as the role of state laws as related to the protection of LGBT

workers (e.g., King & Cortina, 2010; Pichler & Ruggs, in press). Results of our research have important implications for organizations, policymakers, and human resources management.

Theory and Hypotheses

Integrating Corporate Social Responsibility and the Business Case for LGBT-Supportive Policies

Corporate social responsibility (CSR) theory. Howard Bowen, a pioneer of social responsibility theory, described CSR as a reference “to the obligations of businessmen to pursue those policies, to make those decisions, or to follow those lines of actions which are desirable in terms of the objectives and values of society” (Bowen 1953: 6). Although there are a variety of theoretical perspectives of CSR (Carroll, 1994; Garriga & Melé, 2013; McWilliams & Siegel, 2001), the prevailing framework is that of corporate social performance (CSP; Carroll, 1979; Preston, 1978), which is closely tied to stakeholder theory (Donaldson & Preston, 1995). The key proposition of stakeholder theory as it applies to CSR is that firms have varied stakeholders who are affected by and affect the firm in terms of, for instance, its performance (Freeman, 1984). Thus, the CSP model posits that firms respond to social issues and social responsibility, in part, due to an economic imperative (e.g., Clarkson, 1995; Garriga & Melé, 2013; Wartick & Cochran, 1985). Simply put, firms attempt to behave in a socially responsive way so as to engage stakeholders in a manner that improves performance.

Numerous studies document a positive association between CSR, broadly defined, and firm performance (Blazovich & Smith, 2011; Chung, Eneroth, & Schneeweis, 2003; Rushton, 2002; Waddock & Graves, 1997). Findings suggest that firm performance is positively related to several components of CSR including environmental reputation (Clarkson, Li, & Richardson, 2004), the implementation of labor-friendly policies (Faleye & Trahan, 2011), and employee satisfaction (Edmans, 2011). The CSR literature is continually evolving, reflecting the shifting

beliefs of what society views as good or responsible behavior (Carroll, 1999). It follows that CSR, perhaps especially social responsiveness, is largely dictated by society's current objectives and values. Given recent changes and trends in public opinion, public policy, and organizational adoption of LGBT-supportive policies, it seems particularly timely to better understand the legitimacy of such rationales for adopting these policies. CSR is theorized to benefit firms in terms of financial performance, even for a relatively controversial socially responsible practice.

While public opinion has changed in the recent past, negative attitudes towards gay men and lesbians are still more normative and socially accepted than other forms of prejudice (Ragins, 2004; Pichler, 2007). The adoption of LGBT-supportive policies is also relatively controversial (Creed et al., 2002; Kaplan, 2006; Chuang, Church & Ophir, 2011). In fact, firms often face backlash from key stakeholders, such as customers and investors, when adopting LGBT-supportive policies (e.g., Kaplan, 2006). A recent example is the One Million Moms boycott of Mattel for an article related to one of their product lines, American Girl dolls, featuring two gay fathers (Starr, 2015). Hence, firms adopting LGBT-supportive policies face competing challenges when it comes to CSP issues in the sense that they may be attempting to fulfill a social purpose that could threaten their fundamental responsibility to create and share wealth with key stakeholder groups (Clarkson, 1995). Thus, policy adoption in this case represents a unique test of CSR theory in the sense that adoption may not be universally seen as socially responsive, or may be less so than other diversity-related policies, such as work-family benefits (see Kossek & Pichler, 2007).

In the case of this study, the adoption of LGBT-supportive policies, as compared to other types of diversity management policies or practices, may not necessarily be related to firm performance, in part, because stakeholders may not react positively to these policies. Consistent

with scholarship that suggests commitment to diversity and inclusiveness is an important aspect of CSR (Colgan, 2011; Snider, Hill, & Martin, 2003), we suggest that LGBT-supportive policies are an increasingly important, although more stigmatized, type of diversity-enhancing policy. They are also increasingly important as related to outside stakeholder perceptions, namely to consumer perceptions. We explain these points further below by integrating the CSP model of CSR with the business case for diversity, which we see as an important contribution to CSR theory as applied to controversial policies. In so doing, we shed light on why firms should benefit from LGBT-supportive policies despite their relatively controversial nature.

The business case for diversity. Diversity experts have suggested that organizational support for diversity can have performance-enhancing benefits for organizations, and research generally supports this proposition (Richard, 2000; Theodorakopoulos & Budhwar, 2015). This logic is often used by organizations when explaining the potential benefits of CSR programs and socially responsible behavior, such as the adoption of diversity-enhancing policies. The literature on the business case for diversity is a useful complement to the CSR perspective outlined above. In fact, CSR is increasingly important in a diverse and global business environment (Berkley & Watson, 2009). Research suggests that diversity at the organizational level and organizational support for diversity in terms of certain policies and practices are related to enhanced firm performance (Kossek & Pichler, 2007). In this connection, there is a growing body of research suggesting that organizational policies that support LGBT workers specifically may be a source of competitive advantage (Bell, Özbilgin, Beauregard, & Sürgevil, 2011; Day & Greene, 2008; King & Cortina, 2010) and should also be related to firm performance.

Estimates indicate that there are approximately nine million LGBT individuals living in the United States (Renna, 2011), comprising up to 12% of the workforce (Day & Greene,

2008)—a relatively large minority group. From a stakeholder perspective, as more firms implement LGBT-supportive policies, a company’s decision *not* to adopt such rules may send a signal to potential employees that the firm is not socially responsible when it comes to anti-discrimination and support for diversity. Indeed, support for a variety of forms of diversity and inclusion seems increasingly “in vogue” (Theodorakopoulos & Budhwar, 2015). Recent research suggests that LGBT-supportive policies and practices are increasingly important to workers regardless of their sexual orientation. For instance, a recent poll found that 6% of *heterosexual* respondents indicated the availability of domestic-partner benefits is the most important factor when considering a new job (Badgett, 2006). Cordes (2012) contends that creating inclusive work environments through the adoption of LGBT-supportive policies helps establish companies as “employers of choice” for all employees, not just gay employees. Badgett (2006) suggests employees view companies with LGBT-supportive policies as more open and supportive. Empirical research shows that LGBT-supportive policies are related to several performance enhancing benefits: better employee recruitment (Clermont, 2006; Metcalf & Rolfe, 2011), lower employee turnover (Metcalf & Rolfe, 2011), and a less stressful work environment that allows employees to be open about their sexual orientation (Ellis & Riggle, 1996; Ragins & Cornwell, 2001; Ragins, Singh, & Cornwell, 2007).

In addition to more human resources-related benefits, gay consumers, perhaps especially gay men, are more likely to have higher levels of disposable income than their heterosexual counterparts (Colgan, Creegan, McKearney, & Wright, 2007; Iwata, 2006; Paul, McElroy, & Leatherberry, 2011; Valenti, 2012), which seems important from a stakeholder perspective. A recent survey (Experian Marketing Services, 2012) finds that the household income of married/partnered homosexual men (women) exceeds that of their heterosexual counterparts by

\$21,500 (\$7,200). The buying power of the gay market, sometimes referred to as the “pink dollar,” was estimated to reach \$835 billion by 2014 (Paul et al., 2011). Hence, companies ignore the gay consumer at the peril of their own bottom line. In 1994, only 19 *Fortune* 500 companies targeted advertising campaigns at gay consumers, a paltry figure compared to the 175 *Fortune* 500 companies that did so in 2005. Gay consumers are distinct in that they are brand loyal (Iwata, 2006; Valenti, 2012) and prefer to buy products from companies with LGBT-supportive corporate policies (Clermont, 2006; Valenti, 2012). Conversely, companies with *anti-gay* actions or policies face a growing risk of losing business from both homosexual and heterosexual consumers. For example, Proctor and Gamble, AT&T, American Express, and Xerox pulled advertising from Dr. Laura Schlessinger’s radio talk show to distance themselves from the host’s anti-gay rhetoric (Valenti, 2012). Thus, it seems that support for diversity and CSR are closely tied when it comes to organizational rationale for adopting LGBT-supportive policies.

That said, to date there is no direct evidence supporting this proposition. Emerging management and organization research indicates that markets may react positively to LGBT-supportive policies (Proposition 1, Figure 1). Employing an event-study design, Johnston and Malina (2008) found a significant and positive abnormal return on the initial day of announcing the adoption of LGBT-supportive policies, based on scores on the HRC Corporate Equality Index (CEI), but no significant abnormal return when the window is extended to three days, suggesting an overall neutral market reaction to the announcement. Wang and Schwarz (2010) found that changes in firms’ CEI scores are positively associated with stock-price changes during the subsequent year. Li and Nagar (2013) find excess annual returns of 14% in the year following the decision to adopt same-sex domestic-partner benefits. The authors suggest the excess returns *may be due* to an increase in profitability, documenting an increase in return on

assets (ROA) following the adoption of these benefits. Firm performance (e.g., profitability and productivity) are related to stock market returns (Proposition 2, Figure 1; Bao & Bao, 1989; Belkaoui, 1999; Cho & Pucik, 2005; Varaiya, Kerin & Weeks, 1987). Thus we propose, consistent with Li and Nagar (2013), that positive stock market reactions to LGBT-supportive policies may be due, in part, to a link between supportive policies and firm performance.

----- Insert Figure 1 here -----

Although this emerging literature would suggest that LGBT-supportive policies may be related to firm performance, these studies are limited in their scope and generally do not use firm performance outcome variables. Hence, while the stock returns-based results offered by Johnston and Malina (2008), Wang and Schwarz (2010), and Li and Nagar (2013) suggest that investors believe LGBT-supportive policies to be value-adding, perhaps due to the factors we outlined and explained above, our study investigates the actual existence of underlying value-adding performance (Hypothesis 1, Figure 1). Consistent with previous research on the outcomes of firm-level policies (e.g., Huselid, 1995) and assertions from scholars in the LGBT literature (Li & Nagar, 2013), we utilize multiple indicators of firm performance to assess the potential gains of implementing LGBT-supportive policies: firm value, productivity, and profitability. Based on the literature reviewed above, we expect that LGBT-supportive policies will be positively related to these performance metrics.

HYPOTHESIS 1. LGBT-supportive corporate policies are positively associated with firm value, productivity, and profitability.

Engagement in R&D Activities as a Moderator of LGBT-Supportiveness and Firm

Performance Relationships: A Resource-Based View

Wang & Schwarz (2010) state, “Future research is needed to explore how...boundary conditions influence the relationship between GLBT nondiscrimination policies

and...organizational-level work-related outcomes” (pg. 212). We examine potential moderators of relationships between LGBT-supportive policies and firm performance outcomes related to characteristics of the firm or its strategy, consistent with the previous research on resource-based view of the firm (Richard, 2000). We leverage the resource-based view of the firm, research on demand for highly skilled labor, as well as the literatures reviewed above to develop a hypothesis about engagement in R&D activities as a firm-level moderator of the relationship between LGBT-supportive policies and firm performance (Hypothesis 2, Figure 1).

The resource-based view of the firm (Barney, Wright, & Ketchen, 2001; Barney & Wright, 1997) would suggest that support for LGBT workers should be more strongly related to firm performance among firms with relatively more demand for highly skilled labor, which we measure as engagement in R&D activities (Faleye & Trahan, 2011; Berman, Bound, & Griliches, 1994). The premise of this theory is resources that are valuable, rare, non-substitutable, and inimitable can provide competitive advantage for firms (Barney, 1992, 2001; Wernerfelt, 1984). Human resources, or the way that they are managed, may be a particularly important source of competitive advantage for specific types of firms (Barney & Wright, 1997). Human resources are particularly valuable for firms that rely more on knowledge-based work, for instance (Becker & Gerhart, 1996). Specific human resource management policies, such as LGBT-supportive policies, may be a source of competitive advantage when tied to a firm’s unique characteristics, competencies or strengths. Thus, we propose that social responsiveness, in the form of the adoption of controversial yet employee-supportive policies, may be more beneficial for firms with that engage in R&D activities. This seems highly consistent with what Garriga and Melé (2013) refer to as “social investments in a competitive context” (pg. 54) as a strategy for gaining

competitive advantage. We believe this is an important integration of theoretical propositions from the CSP model of CSR with the resource-based view of the firm.

Firms that require highly skilled workers place more value on employee recruitment and retention (Faleye & Trahan, 2011). The CSR and diversity management literatures suggest that firms adopt LGBT-supportive policies to enhance recruitment and retention (e.g., Huffman, Watrous-Rodriguez, & King, 2008; Trau, 2015). Florida and Gates (2004) found that, while locating in a geographic region with high overall diversity positively correlates with financial performance for high-technology firms, the concentration of the gay population in the area is the foremost indicator of high-technology firms' success. The authors argue that the concentration of gay people in a geographic area reflects the "frontier" or "fringe" culture upon which the high-technology field thrives. It seems important for such firms to be able to leverage this population through effective human resources (HR) policies, specifically LGBT-supportive policies. In addition, we expect based on the CSR and diversity management literatures that highly skilled heterosexual workers will be more attracted to and more interested in staying with firms that adopt LGBT-supportive policies (e.g., Badgett, 2006; Cordes, 2012). Thus, engagement in R&D activities may moderate relationships between LGBT-supportive policies and firm performance.

Consistent with previous research (e.g., Faleye & Trahan, 2011; Berman et al., 1994), we use research and development (R&D) expenditures as a way to operationalize demand for highly skilled labor. Not only are these expenditures important to the success of high-tech firms specifically (e.g., Florida & Gates, 2004), but also changes toward high-skill, non-production labor are closely tied to R&D expenditures among firms in general (e.g., Berman et al., 1994). Moreover, firms rely on highly skilled workers to capture benefits from risky investments in firm-specific R&D expenditures (Faleye & Trahan, 2011). When firms compete based on firm-

specific skills or knowledge (exemplified by R&D activities), low turnover and long-term employee commitment are critical to sustaining a competitive advantage (Batt, 2002), which we expect can be sustained through effective HR and diversity management in the form of LGBT-supportive policies (e.g., Badgett, 2006; Metcalf & Rolfe, 2011). Firms are most likely to benefit from CSR efforts that are tied to their business (Porter & Kramer, 2006), and we therefore expect that firms requiring highly specialized labor benefit more from LGBT-supportive policies because these policies should help firms attract and retain such labor.

HYPOTHESIS 2. The positive associations between LGBT-supportive corporate policies and firm value, productivity, and profitability increase with engagement in R&D activities.

State-Level Policy as a Cross-Level Moderator of LGBT-Supportiveness and Firm

Performance Relationships: Leveraging Perceived Organizational Support Theory

There is currently no federal legislation preventing discrimination on the basis of sexual orientation, making it effectively legal to use sexual orientation as a basis for making employment decisions. States and municipalities are free to adopt their own anti-discrimination laws, and such anti-discrimination laws vary significantly at state and local levels, as do attitudes towards gay men and lesbians (Pichler, 2007). Twenty-one states and the District of Columbia prohibit employment discrimination based on sexual orientation (Human Rights Campaign, 2014). The presence or absence of an anti-discrimination law at the state level may influence both the adoption of LGBT-supportive policies (Chuang et al., 2011) as well as the extent to which adoption is related to firm performance, which is yet untested in the literature. Thus, we leverage perceived organizational support theory (Eisenberger, Huntington, Hutchison, & Sowa, 1986) to develop a hypothesis about the presence or absence of a state-level anti-discrimination law as a cross-level moderator of the relationship between firm-level LGBT-supportive policies and firm performance outcomes (Hypothesis 3, Figure 1).

Perceived organizational support theory proposes that employees personify their organizations and feel more supported when their organizations demonstrate genuine concern for their well-being. These care qualities can be demonstrated in a variety of ways, such as through compensation policies or practices or supervisory supportive behavior (Rhoades & Eisenberger, 2002; Kossek, Pichler, Bodner, & Hammer, 2011). Perceived organizational support theory (Eisenberger et al., 1986; Rhoades & Eisenberger, 2002) would suggest that firms with LGBT-supportive policies, especially anti-discrimination policies, in states where sexual orientation discrimination in employment decisions is prohibited by law may not garner as much benefit from these firm-level policies as adopter firms in states without such legislation. Presumably, voluntary adoption becomes interpreted as a signal of care and support (e.g., Eisenberger et al., 1986). We expect that when employers adopt LGBT-supportive policies where employment discrimination on the basis of sexual orientation is already prohibited, the positive benefits we described above, in terms of social responsiveness among employees and consumers, will be muted.

Previous research suggests this interaction of firm-level policies and state-level laws is important to investigate. For instance, Ragins and Cornwell (2001) report that both protective legislation (state/local anti-discrimination laws) and organizational policies and practices (e.g., anti-discrimination policies, same-sex domestic partner benefits, etc.) reduce perceived workplace discrimination among LGBT employees. However, the beneficial effect of firm policies in terms of discrimination perceptions is almost three times as large as that of state/local laws. Research also has shown that anti-discrimination legislation is effective when it comes to mitigating sexual orientation discrimination (Barron & Hebl, 2010). Although no research to our knowledge has investigated the role of firm-level LGBT-supportive policies as well as state-level

laws in the same model as they relate to firm performance outcomes, the literature on sexual orientation discrimination suggests that both firm policies and state laws may affect outcomes that are related to social responsiveness, such as employee attraction and workplace discrimination (see Pichler, 2007).

We propose that, when the adoption of LGBT-supportive policies is not voluntary but state mandated, adoption is less likely to be perceived as socially responsive by stakeholders and thus less likely to lead to enhanced firm performance outcomes.

HYPOTHESIS 3. The positive associations between LGBT-supportive corporate policies and firm value, productivity, and profitability decrease in the presence of state-level anti-discrimination laws.

Methods

Data

Our initial sample contains 26,243 firm-year observations with non-missing information on “Gay & Lesbian Policies” ratings from the MSCI ESG STATS database for years 1996 through 2009. This database publishes annual CSR ratings of publicly traded US companies. These ratings reflect the presence or absence of various strengths and concerns, organized into seven categories: community, corporate governance, diversity, employee relations, environment, human rights, and product. The MSCI ESG STATS database first reported the “Gay & Lesbian Policies” rating in 1995; however, our sample period begins in 1996 because that is the first year of data availability in the RiskMetrics Directors database, which we use to construct a control variable. We end our sample period in 2009 because MSCI ESG STATS discontinued the collection and reporting of numerous ratings after 2009; thus, including post-2009 observations could introduce measurement error and affect the associations between our response variables and certain control variables.

Related research (Johnston & Malina, 2008; Wang & Schwarz, 2010) has used the HRC's CEI scores to study LGBT-supportive corporate policies. While the CEI, compiled and reported by the HRC since 2002, is meticulous in its analyses of these policies, we use the MSCI ESG STATS database because it provides a much larger sample of companies with publicly available data and a longer time-series of observations. Specifically, the CEI database ranges from 319 firms in 2002 to 636 firms in 2012, and many of these businesses are privately held (thus lacking publicly available financial-statement data required for our analyses); in contrast, the MSCI ESG STATS database included 650 firms prior to 2001 but expanded its coverage to 1,100 firms from 2001 to 2002 and 3,100 firms from 2003 to the present. Whereas CEI focuses exclusively on LGBT-supportive policies, MSCI ESG STATS includes data on a broad set of CSR metrics; if these other metrics are correlated with LGBT-supportive policies, failing to control for them in our multivariate analyses may result in a correlated-omitted-variables problem.

We discard 5,598 (10,785; 5,241) firm-year observations that lack sufficient data from the Compustat Fundamental Annual (RiskMetrics Governance and Directors; Compustat Executive Annual Compensation) database to calculate required variables for our analyses. These reductions yield a sample of 4,619 firm-year observations, which we use to examine Hypotheses 1-3. This sample contains 1,347 unique firms, and the average firm appears in the sample for 3.43 years. When we compare our sample observations to observations that are in the MSCI ESG STATS database but lack required data to calculate one or more control variables (i.e., the 16,026 observations with complete financial-statement data but lacking governance and/or compensation data), we find that the two samples are very similar, both in terms of our four response variables (discussed below) and our Compustat control variables (i.e., *size*,

leverage, investment opportunity, and R&D). Thus, we have no reason to believe that the 16,026 observations that we lose due to missing governance and/or compensation data are different from the 4,619 observations that we retain in ways that affect the generalizability of our results.

Measures

Explanatory variable. The indicator variable *LGBT policy* is the explanatory variable of interest in our primary analysis. We set this variable equal to the “Gay & Lesbian Policies” rating from the MSCI ESG STATS database, which codes this variable as 1 if the company has “notably progressive” LGBT-supportive corporate policies in year *t*, and 0 otherwise. MSCI ESG STATS uses multiple criteria to define “notably progressive” policies, including commendation by the HRC as an industry or corporate leader on such policies, earning an HRC CEI score of 60 or above, or the presence of both an anti-discrimination policy and the extension of benefits to same-sex domestic partners.

Response variables. We model four response variables that capture the underlying theoretical constructs of firm value, factor productivity, employee productivity, and profitability. Following Faleye and Trahan (2011), we define these four response variables as follows:

firm value = Tobin’s Q: (total assets - total common equity + fiscal year closing price × common shares outstanding) / total assets;

factor productivity = the residual from the Cobb-Douglas production function,¹ which we estimate within each industry-year group:
 $\ln(\text{net sales}) = \alpha + \beta_1 \ln(\text{net property, plant, and equipment}) + \beta_2 \ln(\text{employees}) + \varepsilon$;

employee productivity = $\ln(\text{net sales} / \text{employees})$;

profitability = return on assets: operating income after depreciation / total assets.

¹ For *factor productivity*, the predicted values from the estimation of this Cobb-Douglas production function represent the expected sales for a firm within a particular industry-year group given particular levels of fixed assets (i.e., property, plant, and equipment) and human capital (i.e., employees). Thus, the residuals represent firms’ unexpected sales, a measure of factor productivity (Faleye, Mehrotra, & Morck, 2006; Faleye & Trahan, 2011).

Moderating variables. We also examine the moderating effect of engagement in R&D activities on the associations between *LGBT policy* and our four response variables. Following Faleye and Trahan (2011), we use research and development expenditures to reflect the need for employees with technical expertise in their fields. Specifically, we include the following variable in our model:

R&D = an indicator variable coded 1 if research and development expense > 0, and 0 otherwise.

We also interact this variable with our explanatory variable of interest (*LGBT policy* × *R&D*). The coefficient for the *LGBT policy* × *R&D* interaction tests whether, among firms with engagement in R&D activities (*R&D*=1), firms with LGBT-supportive policies experience higher firm value, productivity, and profitability relative to companies without LGBT-supportive policies. A positive coefficient for this interaction would provide support for Hypothesis 2.

We also examine whether the presence of an anti-discrimination law at the state level influences the performance outcomes associated with implementing LGBT-supportive policies at the firm level. To examine this issue empirically, we include the following variable in our model:

state law = an indicator variable coded 1 if the state in which the firm is located prohibits employment discrimination based on sexual orientation in year *t*, and 0 otherwise.

We also interact this variable with our explanatory variable of interest (*LGBT policy* × *state law*). The coefficient for the *LGBT policy* × *state law* interaction tests whether the associations between LGBT-supportive policies and firm-performance outcomes differ among firms headquartered in states with anti-discrimination laws (*state law*=1). A negative coefficient for this interaction would provide support for Hypothesis 3.

Control variables. Prior research (e.g., Faleye & Trahan, 2011) finds that firms with

“labor-friendly corporate practices” such as employee stock-ownership and profit-sharing programs experience favorable corporate outcomes. To avoid a potential correlated-omitted-variables problem (i.e., firms with LGBT-supportive corporate policies may have other labor-friendly corporate policies or, more broadly, superlative CSP that drives higher levels of our four response variables), we include control variables for the seven ratings categories in MSCI ESG STATS. Specifically, we include seven count variables equal to the sums of the “strength” ratings from the *community*, *governance*, *diversity*, *employee relations*, *environment*, *human rights*, and *product* categories. Because the “Gay & Lesbian Policies” rating, our explanatory variable of interest, is one of the strengths in the diversity category, we subtract this variable from the sum of the diversity strengths variable to separately examine the influences of LGBT-supportive policies and other diversity-enhancing policies on firm outcomes.

Consistent with Faleye and Trahan (2011, Table VII: 16), we include seven additional control variables. We use data from the Compustat Fundamentals Annual database to control for *size*, *leverage*, and *investment opportunity*. We use data from the RiskMetrics Governance database to control for the presence or absence of a *classified board* and from the RiskMetrics Directors database to control for *board size* and *board independence*. Finally, to control for *CEO ownership*, we use data from the Compustat Execucomp Annual Compensation database to measure the percentage of shares owned by the CEO. Prior research (Bebchuk & Cohen, 2005; Faleye, 2007; Faleye & Trahan, 2011; Morck, Shleifer, & Vishny, 1988; Yermack, 1996) demonstrates that these variables influence firm value, productivity, and profitability and thus represent necessary controls when examining the association between LGBT-supportive corporate policies and our four response variables. We include indicator variables to capture industry- and year-specific influences on our four response variables. An Appendix provides

definitions of all variables used in this study.

Analytical Approach

We use a hierarchical linear model (HLM) to test our hypotheses. HLM accounts for the nested nature of our data: in examining the association between firm-level LGBT-supportive policies and firm-performance outcomes, we must consider that firms are headquartered within states, some of which have enacted state-level anti-discrimination policies. Specifically, we use Proc Mixed in SAS with restricted maximum likelihood estimation (Singer, 1998; Suzuki & Sheu, 1999; Bell, Ene, Smiley, & Schoenberger, 2013). This procedure provides simultaneous analysis of within- and between-group variance in a regression framework, thus allowing for the examination of higher-level units (i.e., states) on lower-level outcomes (i.e., firm performance) while maintaining the appropriate level of analysis (Hofmann, 1997)—in this case, firm performance variables. This procedure takes into account the non-independence of our nested data (i.e., firms within states). Before testing our multilevel model, we followed procedures outlined in the multilevel literature (Raudenbush & Bryk, 2002; Hofmann, 1997; Hofmann, Griffin, & Gavin, 2000), namely testing a null model with no predictor variables to check for systematic between-group variance in our Level 2 variable (i.e., state-level anti-discrimination policies).

We estimate this model four times, once for each of our four response variables. Thus, in our primary analysis, we nest firms within states and utilize a “levels” specification, regressing the levels of *firm value*, *factor productivity*, *employee productivity*, and *profitability* on the presence or absence of LGBT-supportive corporate policies, as well as interactions of this *LGBT policy* variable with measures of both engagement in R&D activities (*R&D*) and state anti-discrimination laws (*state law*), while controlling for other factors known to affect our response

variables.

Results

Descriptive Statistics

Table 1 presents descriptive statistics. Table 2 shows the percentage of sample firms with LGBT-supportive corporate policies by year. We present these annual percentages for observations without (N=26,243) and with (N=4,619) control variables but discuss only those for the reduced sample. In 1996, the first year in our sample period, this percentage is 4.26% (four of 94 firms). By 2009, the last year in our sample, this percentage climbs to 20.58% (135 of 656 firms). While this increase reflects changing societal views of homosexuality, it also may reflect boards and managers acting in the best interest of shareholders by enacting policies that enhance firm value, productivity, and profitability as our hypotheses contend.

----- Insert Tables 1 and 2 here -----

Bivariate Correlations

Table 3 presents bivariate correlations between each of the response and explanatory variables from our primary analysis. The correlation coefficients show that *LGBT policy* is positively and significantly associated with *firm value*, *factor productivity*, *employee productivity*, and *profitability*. These correlation coefficients provide preliminary evidence, consistent with Hypothesis 1, that the presence of LGBT-supportive corporate policies is associated with higher firm value, productivity, and profitability. Most of the control variables from our primary analysis are significantly correlated with both the response variables (*firm value*, *factor productivity*, *employee productivity*, and *profitability*) and the explanatory variable of interest (*LGBT policy*), emphasizing the importance of including them as controls in our model.

----- Insert Table 3 here -----

Results of Hierarchical Linear Model

Before we estimate our four regression models, we assess the appropriateness of HLM (untabulated). First, in all four models, the covariance parameter estimate for the intercept is significant ($p < 0.01$), indicating significant variation in each of our four response variables among the states. Second, in the *profitability* model, the covariance parameter estimate for *state law* is significant ($p < 0.05$), indicating that the effect of state anti-discrimination laws on profitability varies significantly among the states. Taken together, these results justify our use of HLM rather than simple OLS regression to test our hypotheses.

Table 4 presents the results of carrying out our primary analysis. In the *firm value* model, the coefficient for the *LGBT policy* main effect (0.02) is non-significant, but the coefficient for the *LGBT policy* \times *R&D* interaction (0.47) is positive and significant ($p < 0.01$), indicating that a positive relation does exist between LGBT-supportive corporate policies and firm value, but only among firms engaging in R&D activities ($R\&D=1$). In the *factor productivity* and *employee productivity* models, the coefficients for the *LGBT policy* main effect (0.16 and 0.13, respectively) are positive and significant ($p < 0.01$), but the coefficients for the *LGBT policy* \times *R&D* interactions (0.01 and 0.05, respectively) are non-significant, indicating that the positive relations between LGBT-supportive corporate policies and both measures of productivity do not differ between firms that do ($R\&D=1$) and do not ($R\&D=0$) invest in research and development. In the *profitability* model, the coefficient for the *LGBT policy* main effect (-0.02) is negative and significant ($p < 0.05$), indicating that firms without engagement in R&D activities ($R\&D=0$) actually experience *decreases* in profitability if they implement LGBT-supportive corporate policies (i.e., the costs outweigh the benefits). However, the coefficient for the *LGBT policy* \times

R&D interaction (0.03) and the sum of the main effect and interaction coefficients ($-0.02 + 0.03 = 0.01$) are positive and significant ($p < 0.05$), indicating that the presence of LGBT-supportive corporate policies increases profitability for firms needing highly skilled labor ($R\&D=1$). Thus, we provide evidence consistent with Hypotheses 1 and 2 that (a) LGBT-supportive corporate policies are positively associated with firm value, productivity, and profitability and (b) the firm value- and profitability-enhancing influences of LGBT-supportive corporate policies are larger for firms needing employees with technical expertise in their fields, reflecting that such policies augment the pool of prospective employees from which these companies may hire.

----- Insert Table 4 here -----

In the *firm value* and *profitability* models, the coefficients for the *LGBT policy* \times *state law* interaction (0.07 and 0.01, respectively) are non-significant, indicating that state anti-discrimination laws do not influence the association between LGBT-supportive corporate policies and either firm value or profitability. However, in the *factor productivity* and *employee productivity* models, the coefficients for the *LGBT policy* main effect (0.16 and 0.13, respectively) are positive and significant ($p < 0.01$), but the coefficients for the *LGBT policy* \times *state law* interaction (-0.14 and -0.16, respectively) are negative and significant ($p < 0.01$), and the sums of the main effect and interaction coefficients ($0.16 + -0.14 = 0.02$ and $0.13 + -0.16 = -0.03$, respectively) are non-significant, indicating that the positive association between LGBT-supportive corporate policies and productivity exists only in states that *permit* employment discrimination based on sexual orientation. These results suggest that LGBT-supportive corporate policies do not enhance productivity in the presence of state anti-discrimination laws.

In the *factor productivity* and *employee productivity* models, the coefficients for *diversity* are positive and significant, indicating that policies promoting other types of workforce diversity

also improve productivity. Consistent with Faleye and Trahan (2011), the coefficients for *employee relations* are positive and significant in all four models. The coefficients for certain other explanatory variables (e.g., *size*, *leverage*, *investment opportunity*, *board size*, and *CEO ownership*) are significant in Table 4, indicating the importance of controlling for these factors in our primary analysis.²

Practical Significance

In the *firm value* model, for firms *without* R&D activities ($R\&D=0$), mean *firm value* increases from 2.12 (*intercept*) to 2.14 (*intercept* + *LGBT policy*), indicating a 0.94% higher firm value for companies with LGBT-supportive policies, but this difference is not statistically significant. For firms *with* R&D activities ($R\&D=1$), mean *firm value* increases from 2.37 (*intercept* + *R&D*) to 2.87 (*intercept* + *LGBT policy* + *R&D* + *LGBT policy*×*R&D*), indicating a 21.10% higher firm value for companies with LGBT-supportive policies, and this difference is statistically significant ($p<0.01$).

In the *employee productivity* model, for firms *without* R&D activities ($R\&D=0$), mean *employee productivity* increases from 5.28 (*intercept*) to 5.42 (*intercept* + *LGBT policy*), indicating a 2.65% higher employee productivity for companies with LGBT-supportive policies, and this difference is statistically significant ($p<0.01$). For firms *with* R&D activities ($R\&D=1$), mean *employee productivity* increases from 5.28 (*intercept* + *R&D*) to 5.46 (*intercept* + *LGBT policy* + *R&D* + *LGBT policy*×*R&D*), indicating a 3.41% higher employee productivity for companies with LGBT-supportive policies, and this difference is statistically significant ($p<0.01$). Results are similar in the *factor productivity* model.

² When we re-estimate our models without the 14 control variables (untabulated), we find that the signs and significance levels of the coefficients on our variables and interactions of interest persist. Also, the R^2 statistics decrease by between 2.5% (in the *employee productivity* model) and 7.65% (in the *firm value* model), indicating that these control variables contribute significant predictive power to the models. These results are available upon request from the corresponding author.

In the *profitability* model, for firms *without* R&D activities ($R\&D=0$), mean *profitability* decreases from 0.08 (*intercept*) to 0.06 (*intercept* + *LGBT policy*), indicating a 25.00% decrease in profitability for companies with LGBT-supportive policies, and this difference is statistically significant ($p<0.05$). For firms *with* R&D activities ($R\&D=1$), mean *profitability* increases from 0.08 (*intercept* + *R&D*) to 0.09 (*intercept* + *LGBT policy* + *R&D* + *LGBT policy*×*R&D*), indicating a 12.50% increase in profitability for companies with LGBT-supportive policies, and this difference is statistically significant ($p<0.05$).

Supplemental Analyses

To address potential endogeneity (i.e., whether implementing LGBT-supportive corporate policies may result in enhanced firm value, productivity, and profitability, or better performing firms may be more likely to implement such policies), we conduct two supplemental analyses: (1) estimating a “changes” specification of the model from our primary analysis and (2) causality tests based on temporal precedence. While we do not tabulate the results of these supplemental analyses, they are available by request from the corresponding author.

“Changes” Specification

Hypothesis 1 predicts an association between LGBT-supportive corporate policies and firm performance. This association may result from financially strong firms adopting LGBT-supportive policies. However, our literature review and theory development suggests that this relationship is such that adoption of policies may *cause* a change in financial performance. Therefore, we provide a more robust test of the proposition that adoptions of LGBT-supportive policies are related to firm performance. We predict that LGBT-supportive policies promote better performance by testing the association of changes in firm performance with implementations and discontinuations of LGBT-supportive policies.

We first address this endogeneity concern using a “changes” specification. Specifically, we regress the change in *firm value*, *factor productivity*, *employee productivity*, and *profitability* from year t-1 to year t on the implementation, continuation, or discontinuation of LGBT-supportive employment policies. Thus, we code the explanatory variable of interest (Δ *LGBT policy*) as follows: 1 for firms that implement a policy (i.e., *LGBT policy*=0 in year t-1 and 1 in year t), 0 for firms that neither implement (i.e., *LGBT policy*=0 in years t-1 and t) nor discontinue (i.e., *LGBT policy*=1 in years t-1 and t) a policy, and -1 for firms that discontinue (i.e., *LGBT policy*=1 in year t-1 and 0 in year t) a policy in the current year. In addition to Δ *LGBT policy*, we measure all other explanatory variables (except *R&D*, *state law*, industry and year fixed effects) as changes from year t-1 to year t. For parsimony, we omit interactions of Δ *LGBT policy* with *R&D* and *state law* and instead focus on the Δ *LGBT policy* main effect. The coefficient for Δ *LGBT policy* tests whether firms that implement (discontinue) LGBT-supportive employment policies experience increases (decreases) in firm value, productivity, and profitability relative to companies that neither implement nor discontinue such policies. Results reveal that the coefficient for Δ *LGBT policy* is positive and significant for all four response variables. Thus, we provide evidence that firms implementing (discontinuing) LGBT-supportive employment policies experience increases (decreases) in firm value, productivity, and profitability relative to companies that neither implement nor discontinue such policies.

A total of 127 firm-year observations either implement (Δ *LGBT policy* = 1) or discontinue (Δ *LGBT policy* = -1) LGBT-supportive policies during our sample period. In an additional supplemental analysis (untabulated), we separate observations that implement (N=105) from those that discontinue (N=22) such policies. The coefficient for implementing observations is marginally significant ($p < 0.1$) in the *firm value*, *factor productivity*, and

employee productivity models and significant ($p < 0.05$) in the *profitability* model. The coefficient for discontinuing observations is non-significant ($p > 0.1$) in the *firm value* and *profitability* models, marginally significant ($p < 0.1$) in the *factor productivity* model, and significant ($p < 0.05$) in the *employee productivity* model.

Causality Tests Based on Temporal Precedence

The results of the “changes” specification provide evidence that adoptions (terminations) of LGBT-supportive corporate policies are associated with improvements (impairments) in firm value, productivity, and profitability. This is important in the context of this study because firms may be less likely to behave in a socially responsible way when they are performing less well financially (Campbell, 2007). To examine the direction of causality in these results, we rely on temporal precedence (Granger, 1969). First, we estimate a model to discern if the contemporaneous performance improvements associated with adoptions of LGBT-supportive policies persist in the year after adoption. In the *firm value*, *factor productivity*, and *employee productivity* models, results indicate that the positive outcomes associated with adopting LGBT-supportive corporate policies not only persist but also grow in the year after adoption.

Second, we estimate the logistic model from Li and Nagar (2013) to discern if past performance outcomes influence firms’ decisions to adopt LGBT-supportive corporate policies. Consistent with our primary analyses, the contemporaneous measures of *firm value*, *factor productivity*, *employee productivity*, and *profitability* are positively and significantly associated with adoptions of LGBT-supportive policies. However, neither the one-year nor the two-year-lagged measure of these variables is associated with these adoption decisions. Taken together, the results of these causality tests provide evidence that past firm value, productivity, and profitability do not influence adoptions of LGBT-supportive corporate policies, but adoptions of

these policies do result in future improvements in firm value and productivity.

Discussion

The over-arching purpose of this study was to develop and test a cross-level theoretical model of firm performance outcomes associated with LGBT-supportive policies. The CSR literature has shown that socially responsible behavior is related to firm performance. The diversity management literature and the literature on LGBT workers complement the CSR perspective to support a rationale for positive links between LGBT-supportive policies and firm performance, at least conceptually, given that these links are not straightforward due to the relatively controversial nature of LGBT-supportive policies. Ours is the first study to date to directly test this relationship, not only with a longitudinal approach, but also with rigorous tests to address potential endogeneity concerns and tests of theoretically relevant moderators. Given that ours is the first study to test this relationship, this is an important first step towards understanding firm performance outcomes of LGBT-supportive policies and boundary conditions of those relationships.

Implications for Theory

Previous research has found that LGBT-supportive policies are associated with positive stock market performance, but the reasons underlying investors' positive assessments of these policies were heretofore uninvestigated. We therefore addressed calls from previous scholars (e.g., Wang & Schwarz, 2010) to develop and test logic for why these relationships may exist. In order to do so, we integrated key propositions from the CSP model of CSR and the business case for diversity. We also leveraged the resource-based view of the firm and perceived organizational support theory to develop logic for moderators of relationships between LGBT-supportive policies and firm performance.

LGBT-supportive policies are controversial, stigmatized, and may have negative consequences for firms that adopt them (Creed et al., 2002; Kaplan, 2006; Chuang et al., 2011). Often, firms expect backlash from anti-gay groups and organizations (Clermont, 2006); for example, when the American Family Association (AFA) targeted several companies (e.g., Disney, Ford, Kraft Foods, Procter & Gamble, and PepsiCo.) because of their LGBT-supportive policies (Iwata, 2006). Although companies maintaining their LGBT-supportive policies in the face of protests may actually garner both favor and firmer commitment from “pink dollar” consumers (Baker, Strub, & Henning, 1995), it is not clear that LGBT-supportive policies will, on average, be related to improved financial performance. In fact, some firms may also perceive a financial burden in connection with the enrollment of gay employees’ dependents in various employee-benefit programs. Even though enrollment statistics nationwide suggest actual increased enrollment due to domestic partners reaches only a fraction of a percent in most cases (Cordes, 2012), stakeholders may not react as positively to the adoption of LGBT-supportive policies as compared to other diversity-supportive policies.

Although firms may and do experience backlash due to LGBT-supportive policy adoption, our underlying argument is that these policies are increasingly important because attitudes towards gay men and lesbians are changing. In other words, the CSP model is helpful but insufficient when it comes to developing a theory of firm performance outcomes of LGBT-supportive policies and should be complemented by the business case for diversity. The business case for diversity suggests that when firms adopt policies that encourage all employees to bring their whole selves to the workplace, they tend to be more productive and may benefit by becoming an employer of choice (see Kossek & Pichler, 2007). Thus, organizations can

potentially benefit from LGBT-supportive policies in terms of financial performance even when they experience backlash.

As previous scholars in this literature have suggested (e.g., Wang & Schwarz, 2010), it is important to understand not only *if* firms that adopt LGBT-supportive policies perform better than others, but *why* and *under what conditions*. We were interested in why some firms benefit more than others when it comes to adopting policies that are not necessarily broadly seen as socially responsive, an important insight into CSR theory. The resource-based view posits that resources, including human resources, can be valuable if they are uniquely matched to an organization's characteristics in a way that is difficult to imitate. The strategic CSR literature also suggests that when CSR practices are tied to the ways in which firms compete, these practices should be more strongly related to financial performance (Porter & Kramer, 2006). Hence, we proposed that firms with engagement in R&D activities are more likely to perform better when adopting LGBT-supportive policies because these firms have a greater need to be seen as an employer of choice.

Another condition under which firms might benefit more from adopting controversial policies is when they are perceived as truly socially responsive. Here, we leveraged perceived organizational support theory (Eisenberger et al., 1986), which posits that employers are more likely to be perceived as genuinely supportive when they voluntarily adopt policies. Thus, the potential performance-enhancing benefits firms garner – in this case those related to being perceived as an employer of choice and socially responsive in the eyes of consumers – may be diminished. We see this as an important insight into CSR theory.

Implications for Research and Human Resources Management

In the case of LGBT-supportive policies, there is currently no federal legislation

requiring or even promoting adoption; it is at the discretion of the employer organization. In general, our findings may be of particular interest to corporations considering the enactment of LGBT-supportive policies but are on the fence about it in some way. Because fiscal demonstrations are oftentimes the best motivator for companies questioning the expansion of diversity initiatives (Fassinger, 2008), and few such demonstrations exist (Metcalf & Rolfe, 2011), our study helps fill the gap in the existing literature on this dimension. Our results, combined with those from previous studies (Johnston & Malina, 2008; Li & Nagar, 2013; Wang & Schwarz, 2010), suggest that firms with LGBT-supportive policies benefit on key factors of financial performance, which, in turn, increase the investor perception of the firm.

We believe our results support the notion that LGBT-supportive policies are important, in part, because they maximize a firm's ability to attract highly skilled labor in tight labor markets. In other words, when firms manage social responsiveness in the form of diversity-enhancing policies and labor demand effectively, this represents an opportunity for increasing competitive advantage. This integration of perspectives from the CSR and RBV literatures is consistent with anecdotal evidence that organizational attraction and recruitment are important reasons to adopt such policies. We recommend firms with R&D activities consider leveraging these policies.

We also tested the role of state-level anti-discrimination laws as a moderator of relationships between firm-level policies and firm performance measures, and in this sense we are among the first to develop and test a multilevel model of support for LGBT workers. We developed rationale for cross-level moderation based on an integration of propositions from the CSP model of CSR and perceived organization support theory. Results here are mixed in the sense that firm-level policies are related to some, but not all, measures of operational performance when testing state laws as a boundary condition. First, this suggests that state laws

are important (e.g., Barron & Hebl, 2010; Ragins & Cornwell, 2001). This also suggests that state laws may be a boundary condition that limits the benefits to firms adopting LGBT-supportive policies. This could suggest that firms who are first-movers might garner the most benefits in terms of adoption, an important consideration for firms that have been reticent to adopt supportive policies.

Although we feel that ours is a meticulously designed study, we encourage others to continue investigating the types of questions that are at the heart of this research. We hope to promote more interest in and around the topic of rationales for adoption of LGBT-supportive policies and LGBT workers more generally (King & Cortina, 2010; Pichler & Ruggs, in press), a relatively under-studied group in the management and organization literature (Pichler, 2007).

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APPENDIX

Variable definitions (MSCI ESG STATS, Compustat, and RiskMetrics variable names appear in parentheses)

Variable	Definition
firm value	Tobin's Q: [total assets (AT) - total common equity (CEQ) + fiscal year closing price (PRCC_F) × common shares outstanding (CSHO)] / total assets (AT)
factor productivity	the residual from the Cobb-Douglas production function ^a : $\ln[\text{net sales (SALE)}] = \alpha + \beta_1 \ln[\text{net property, plant, and equipment (PPENT)}] + \beta_2 \ln[\text{employees (EMP)}] + \varepsilon$
employee productivity	$\ln[\text{net sales (SALE)} / \text{employees (EMP)}]$
profitability	return on assets: operating income after depreciation (OIADP) / total assets (AT)
LGBT policy	an indicator variable coded 1 if Gay & Lesbian Policies (DIV_STR_G)=1, and 0 otherwise
community	total number of Community strengths (COM_STR_NUM)
governance	total number of Corporate Governance strengths (CGOV_STR_NUM)
diversity	total number of Diversity strengths (DIV_STR_NUM) - Gay & Lesbian Policies (DIV_STR_G)
employee relations	total number of Employee Relations strengths (EMP_STR_NUM)
environment	total number of Environment strengths (ENV_STR_NUM)
human rights	total number of Human Rights strengths (HUM_STR_NUM)
product	total number of Product strengths (PRO_STR_NUM)
size	$\ln[\text{total assets (AT)}]$
leverage	total long-term debt (DLTT) / total assets (AT)
investment opportunity	capital expenditures (CAPX) / total assets (AT)
classified board	an indicator variable coded 1 if the firm has a classified board (CBOARD), and 0 otherwise
board size	the total number of directors on the board
board independence	the percentage of independent directors on the board: independent directors (IND=1) / total directors
CEO ownership	the percentage of the firm's shares owned by the CEO (SHROWN_EXCL_OPTS_PCT)
R&D	an indicator variable coded 1 if research and development expense (XRD) > 0, and 0 otherwise
state law	an indicator variable coded 1 if the state in which the firm is located prohibits employment discrimination based on sexual orientation in year t, and 0 otherwise

^a We estimate this model within each industry-year group, where industry is defined by two-digit SIC code.

TABLE 1
Descriptive statistics

Variable	N	Mean	Std. Dev.	Minimum	Median	Maximum
firm value	4,619	1.97	1.29	0.52	1.56	15.94
factor productivity	4,619	0.13	0.50	-2.19	0.08	3.40
employee productivity	4,619	5.57	0.83	1.75	5.50	9.58
profitability	4,619	0.10	0.09	-0.85	0.09	0.79
LGBT policy	4,619	0.15	0.36	0	0	1
community	4,619	0.14	0.44	0	0	4
governance	4,619	0.12	0.34	0	0	3
diversity	4,619	0.42	0.74	0	0	5
employee relations	4,619	0.29	0.59	0	0	4
environment	4,619	0.11	0.38	0	0	4
human rights	4,619	0.00	0.06	0	0	1
product	4,619	0.07	0.26	0	0	2
size	4,619	7.46	1.39	3.96	7.29	13.20
leverage	4,619	0.16	0.15	0	0.14	0.85
investment opportunity	4,619	0.05	0.05	0	0.03	0.48
classified board	4,619	0.70	0.46	0	1	1
board size	4,619	9.05	2.43	4	9	34
board independence	4,619	0.69	0.16	0	0.71	1.00
CEO ownership	4,619	0.04	0.07	0	0.01	0.58
R&D	4,619	0.55	0.50	0	1	1
state law	4,619	0.45	0.50	0	0	1

We winsorize all continuous variables at the 1st and 99th percentiles within each industry-year group.

TABLE 2

Percentage of sample firms with "Gay & Lesbian Policies" by year

Year	Sample without control variables (N=26,243)			Sample with control variables (N=4,619)		
	N	N with LGBT policy=1	Percentage	N	N with LGBT policy=1	Percentage
1996	652	31	4.75%	94	4	4.26%
1997	653	38	5.82%	97	5	5.15%
1998	658	41	6.23%	110	8	7.27%
1999	662	78	11.78%	132	18	13.64%
2000	658	107	16.26%	150	23	15.33%
2001	1,106	149	13.47%	220	24	10.91%
2002	1,108	147	13.27%	291	31	10.65%
2003	2,963	266	8.98%	549	62	11.29%
2004	3,034	375	12.36%	582	80	13.75%
2005	3,015	455	15.09%	540	96	17.78%
2006	2,962	472	15.94%	540	99	18.33%
2007	2,937	496	16.89%	329	52	15.81%
2008	2,923	504	17.24%	329	50	15.20%
2009	2,912	484	16.62%	656	135	20.58%
	26,243	3,643	13.88%	4,619	687	14.87%

TABLE 3
Correlation coefficients

	firm value	factor productivity	employee productivity	profitability	LGBT policy	community	governance	diversity	employee relations	environment
factor productivity	0.09									
employee productivity	-0.07	0.58								
profitability	0.53	0.06	-0.06							
LGBT policy	0.09	0.15	0.10	0.03						
community	-0.02	0.10	0.08	0.00	0.24					
governance	0.01	-0.04	-0.04	0.00	0.01	0.10				
diversity	0.07	0.13	0.00	0.05	0.34	0.21	0.01			
employee relations	0.09	0.10	0.13	0.03	0.20	0.13	0.03	0.16		
environment	-0.02	-0.01	0.05	0.01	0.15	0.17	0.14	0.13	0.26	
human rights	0.02	0.04	0.01	0.05	0.09	0.22	0.12	0.03	0.02	0.15
product	0.10	0.02	0.00	0.01	0.08	0.06	0.02	0.13	0.23	0.19
size	-0.21	0.11	0.32	-0.15	0.30	0.25	-0.08	0.17	0.16	0.08
leverage	-0.27	-0.05	0.02	-0.14	-0.05	0.00	-0.12	-0.04	-0.03	0.09
investment opportunity	0.14	-0.18	-0.16	0.18	-0.07	-0.08	0.01	-0.04	0.04	0.05
classified board	-0.16	-0.01	0.05	0.06	-0.02	-0.01	-0.01	-0.04	-0.02	0.06
board size	-0.21	0.01	0.10	-0.09	0.14	0.21	0.01	0.11	0.09	0.13
board independence	-0.13	0.05	0.13	-0.09	0.12	-0.01	-0.10	0.02	0.02	0.10
CEO ownership	0.11	-0.06	-0.12	0.09	0.00	0.03	0.15	0.01	-0.06	-0.08
R&D	0.22	0.05	-0.17	0.06	-0.02	-0.07	-0.06	-0.01	0.02	0.08
state law	0.09	0.12	0.08	-0.06	0.14	0.07	-0.01	0.07	-0.01	-0.03

	human rights	product	size	leverage	investment opportunity	classified board	board size	board independence	CEO ownership	R&D
product	0.01									
size	0.04	0.08								
leverage	-0.01	-0.05	0.20							
investment opportunity	0.01	0.04	-0.14	0.06						
classified board	-0.03	-0.03	0.02	0.03	0.01					
board size	0.07	0.06	0.50	0.09	-0.12	0.09				
board independence	-0.02	-0.06	0.05	0.06	-0.09	0.22	0.01			
CEO ownership	-0.01	0.05	-0.08	-0.14	0.03	-0.06	-0.09	-0.27		
R&D	-0.02	0.07	-0.34	-0.11	0.03	-0.02	-0.24	0.05	-0.05	
state law	0.02	0.02	-0.06	-0.15	-0.13	-0.03	-0.12	0.07	-0.05	0.16

TABLE 4
Results of hierarchical linear model (HLM)

Explanatory Variables	Response Variables						
	firm value		factor productivity		employee productivity		profitability
Intercept	2.12 *** (6.88)		-0.06 (-0.49)		5.28 *** (34.49)		0.08 *** (3.49)
LGBT policy	0.02 (0.22)		0.16 *** (4.16)		0.13 *** (2.90)		-0.02 ** (-2.33)
R&D	0.25 *** (4.98)		0.02 (0.76)		0.00 (-0.10)		-0.01 (-1.60)
LGBT policy × R&D	0.47 *** (5.02)		0.01 (0.22)		0.05 (0.98)		0.03 *** (4.31)
state law	0.08 (0.76)		0.04 (1.56)		0.03 (0.79)		0.00 (0.02)
LGBT policy × state law	0.07 (0.76)		-0.14 *** (-3.41)		-0.16 *** (-3.42)		0.01 (1.59)
community	-0.03 (-0.70)		0.02 (1.29)		0.02 (0.77)		0.01 (1.62)
governance	-0.07 (-1.43)		-0.04 * (-1.79)		-0.05 (-1.84)		-0.01 ** (-2.06)
diversity	0.04 (1.44)		0.04 *** (3.92)		0.04 *** (2.98)		0.00 (0.78)
employee relations	0.11 *** (3.61)		0.07 *** (5.14)		0.12 *** (7.46)		0.00 * (1.92)
environment	-0.05 (-1.12)		-0.08 *** (-3.76)		-0.04 (-1.56)		0.01 * (1.66)
human rights	0.31 (1.11)		0.22 * (1.90)		0.18 (1.30)		0.03 (1.45)
product	0.20 *** (2.85)		-0.01 (-0.27)		-0.03 (-0.82)		-0.01 (-1.34)
size	-0.06 *** (-3.39)		0.04 *** (5.60)		0.09 *** (10.06)		0.00 ** (-2.13)
leverage	-1.58 *** (-11.98)		-0.27 *** (-5.03)		-0.12 * (-1.86)		-0.09 *** (-8.59)
investment opportunity	4.01 *** (9.43)		-2.55 *** (-14.52)		-0.43 ** (-2.03)		0.29 *** (8.96)
classified board	-0.20 *** (-4.87)		0.03 * (1.96)		0.01 (0.28)		0.00 (-0.41)
board size	-0.04 *** (-5.14)		-0.01 *** (-2.90)		-0.02 *** (-3.62)		0.00 ** (-2.16)
board independence	-0.37 *** (-3.08)		0.04 (0.82)		-0.09 (-1.47)		-0.01 (-1.15)
CEO ownership	0.89 *** (3.42)		-0.41 *** (-3.83)		-0.71 *** (-5.52)		0.03 (1.63)
Observations	4,619		4,619		4,619		4,619
R ²	30.51%		19.87%		58.22%		19.35%

We winsorize all continuous variables at the 1st and 99th percentiles within each industry-year group.
We report *t*-values in parentheses.
We do not report industry and year indicator variables for concision.

*** The coefficient is significant at the 0.01 level.

** The coefficient is significant at the 0.05 level.

* The coefficient is significant at the 0.1 level.

Figure 1
Cross-level theoretical model of firm performance outcomes of LGBT-supportive policies

