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Abstract

We study the effect of firms' LGBTQ+-friendliness on their labor investment efficiency and find that an improvement in firms' LGBTQ+-friendliness leads to greater labor investment inefficiencies, and that more LGBTQ+-friendly firms tend to underinvest in labor. However, we show that this relationship diminishes over time as societal and legal support for LGBTQ+ equal rights increases. A variety of firm and societal characteristics moderate the negative link between corporate LGBTQ+-friendliness and labor investment efficiency.

Keywords: LGBTQ+-friendliness; labor investment efficiency; diversity

1. Introduction

The number of individuals identifying as lesbian, gay, bisexual, transsexual, queer and related communities (LGBTQ+) are on the rise, with over 5.6% of Americans identifying as LGBTQ+ in 2020 as opposed to 3.5% in 2012.[1] The support for LGBTQ+ rights has also increased substantially over the last few decades with a 2020 report documenting that most countries around the globe experienced a double digit increase in acceptance of homosexuality from 2002 to 2019, with the US rising from 51% acceptance to 72%.[2,3] Further, key members of management teams of large firms have come out as LGBTQ+ over recent years (such as Tim Cook, CEO of Apple, Peter Thiel, co-founder of Paypal, and Chris Hughes, co-founder of Facebook). Therefore given the rising numbers of employees openly identifying as LGBTQ+ as well as the increased awareness and support for LGBTQ+ rights, corporate firms have begun to introduce LGBTQ+ policies in order to support their LGBTQ+ employees and ensure there is no discrimination against the LGBTQ+ workforce. In this paper, we empirically investigate the interplay between firms' LGBTQ+-friendliness and the labor investment efficiency of those firms.

Our analysis is motivated by the increased focus on the importance of LGBTQ+-friendly policies and their impact on corporate outcomes.[4] LGBTQ+-friendly firms have been argued to be competitive in the labor market by fostering the firm's ability to attract, recruit and retain talented employees (e.g., Day and Greene, 2008; Metcalf and Rolfe, 2011; Badgett et al., 2013; Trau, 2015; Wettstein and Baur, 2016). LGBTQ+-friendliness has also been associated with improved job satisfaction, increased employee productivity, more altruistic workplace behaviour (e.g., Huffman et al., 2008; Day and Schoenrade, 1997; Button, 2001; Ragins and Cornwell, 2001; Ragins et al., 2007; Badgett et al., 2013; Shan et al., 2017) as well as higher customer satisfaction (Patel and Feng,

[1] Source: https://news.gallup.com/poll/329708/LGBTQ+-identification-rises-latest-estimate.aspx.
[2] Source: https://www.pewresearch.org/global/2020/06/25/global-divide-on-homosexuality-persists/.
[3] However, Coffman et al. (2017) show that the extent of antigay sentiment might be misrepresented and that a higher number of people exhibit antigay sentiment, especially in the workplace, than is reported in other statistics.
[4] For a recent review of the finance literature and LGBT orientation, see Brahma et al. (2023).

2021). This body of research suggests that LGBTQ+-friendly firms seem to develop intangible returns related to human capital, stakeholder relations and firm reputation. In addition, several recent studies have documented that the adoption of LGBTQ+-friendly policies can lead to tangible returns in terms of positive financial outcomes for the firm, such as higher profitability (Fatmy et al., 2022), higher stock market valuations (Shan et al., 2017; Pichler et al., 2018; Fatmy et al., 2022), improved credit ratings (Chintrakarn et al., 2020) and more innovation (Hossain et al., 2020). Investors are also found to experience the benefit of LGBTQ+-supportive policies, with Johnston and Malina (2008) documenting a significant increase in stock prices on announcement days of the adoption of LGBTQ+-supportive policies while Li and Nagar (2013) find an excess annual return of 14% after the adoption of same-sex domestic partner benefits. Recently, Ayed and Waxin (2023) document a significant market downturn after the announcement of an LGBT misconduct incident. These findings suggest that the adoption of LGBTQ+-friendly policies may be linked to the financial rewards and the 'business case' that these policies deliver. However, the literature is not unanimous in the positive benefits of LGBTQ+ policies. A recent study by Kyaw et al. (2021) finds that firms with more co-opted directors are more likely to be LGBT-friendly, suggesting that the adoption of LGBTQ+ policies may be driven by other non-financial motives and could be the result of agency conflicts. Our study aims to contribute to this stream of the literature by analysing whether the adoption of LGBTQ+-friendly corporate policies leads to more or less efficient labor investments, i.e. investments justified by firms' economic fundamentals.[5]

Labor costs and corporate investment in labor are an important consideration for modern companies which rely on a highly skilled workforce to remain competitive and innovative (Zingales, 2000). Labor costs constitute a considerable share of firms' overall costs with some estimates indicating that labor costs account for up to two-thirds of economy-wide value added in

[5] A detailed definition of how we define and measure labor investment efficiency can be found in Section 3.2.

the US (Bernanke, 2004; Hamermesh, 1996). The costs of replacing employees can also be substantial (Dube et al., 2010), suggesting that inefficient labor investment is a concern for companies.[6] Overinvestment in labor is costly as it diverts companies' financial resources away from other investment forms and may threaten a firm's competitiveness. Underinvestment in labor, however, is also disadvantageous as firms may have to give up on profitable investment opportunities due to lack of available staff. As a result, several recent studies have investigated the factors that are linked to more efficient labor investment by firms. These studies have identified firms' information environment (Jung et al., 2014; Ben-Nasr and Alshwer, 2016; Ha and Feng, 2018; Zhang et al., 2020), their governance and ownership structure (Ghaly et al., 2020; Khedmati et al., 2020; Sualihu et al., 2021), their competitive positioning in the market (Habib and Hasan, 2021; Boubaker et al., 2022) and their stock liquidity (Ee et al., 2022) to affect firms' labor investment efficiency. In addition, a recent study by Cao and Rees (2020) finds that employee friendly treatment reduces firms' labor investment inefficiency. Using firms' employee relations as a sub-category of firms' overall corporate social responsibility (CSR) performance, the authors show that more employee friendly firms show lower over- and underinvestment in labor.

Although LGBTQ+ policies are often subsumed under a firm's overall CSR performance, recent studies have shown that a firm's LGBTQ+-friendliness is conceptually different from other CSR policies and practices. Firstly, support for LGBTQ+ issues and corporate LGBTQ+ policies is more contested than for other categories of CSR (Mohliver and Hawn, 2021; Gonzalez et al, 2022). For instance, Pichler et al. (2018) report that discrimination and negative attitudes towards the LGBTQ+ community are more socially accepted, compared to other forms of prejudice,[7] and Coffman et al. (2017) find that antigay sentiment is likely underestimated in the workplace. In

[6] Looking at Californian business between 2003 and 2008, Dube et al. (2010) report average worker replacement costs of $4000, with $2000 of costs for the replacement of blue collar workers and $7000 of costs when replacing professional and managerial employees. They further estimate that employee replacements costs account for around 9% of companies' overall wage bill.

[7] See also Mejia & Parker (2021) who show persistent bias against the LGBT population in ride hailing services.

addition, Chuang et al. (2011) illustrate that adoption of LGBTQ+-supportive policies among Fortune 500 companies is relatively controversial with those firms adopting these benefits often facing backlash from parts of their stakeholder groups (see also Kaplan, 2006).[8] Secondly, Gonzalez et al. (2022) find that corporate LGBTQ+-friendliness is only weakly correlated with firms' overall CSR performance and the determinants of companies' overall CSR performance partially differ from those that are linked to corporate LGBTQ+-friendliness. Taken together, these findings suggest that results of previous studies regarding the relation between general employee friendliness and labor investment efficiency (e.g. Cao and Rees, 2020) cannot be generalised to LGBTQ+-friendly policies, but instead the relation between a firm's LGBTQ+-friendliness and labor investment efficiency deserves further empirical investigation.

The expected relationship between a firm's LGBTQ+-friendliness and its labor investment efficiency is not known a priori. On the one hand, stakeholder theory postulates that improving the conditions for important stakeholders of a firm, such as LGBTQ+ employees, can have positive benefits, including attracting and retaining employees who are either part of the LGBTQ+ community or support LGBTQ+ equality. On the other hand, the agency theory view proposes that managers adopt LGBTQ+ policies to further their own personal interests so that the adoption of LGBTQ+-friendly policies may be less a reflection of the economic benefits of LGBTQ+ policies to the firm but rather driven by managers' personal attitudes towards LGBTQ+ issues. Finally, according to institutional theory, companies may adopt societally approved policies and practices, such as LGBTQ+-friendly policies, to gain legitimacy and stability, even at the expense of financial interests. In this context, when firms face resource limitations and divert resources away from other employees or stakeholder groups to favour LGBTQ+ employees, these practices may result in greater labor investment inefficiencies.

[8] For instance, Disney's decision to offer health benefits to same sex partners among their employees was met with expressions of support from LGBTQ+ activists, while it led to the boycott of its products by members of the Southern Baptist Convention (see Chuang et al., 2011).

To examine how the LGBTQ+-friendliness of firms affects their labor investment efficiency, we utilise the Corporate Equality Index (CEI). The CEI is generated by the Human Rights Campaign (HRC) which conducts an annual survey of firms regarding their LGBTQ+ policies and then publishes a rating for each firm indicating its LGBTQ+-friendliness. Our sample comprises data on 369 large publicly listed US firms spanning the years 2003 to 2020. In particular, firms with LGBTQ+-friendly policies are linked to less efficient labor investment practices. Our results show that greater LGBTQ+-friendliness increases underinvestment in labor, meaning that more LGBTQ+-friendly firms have less employees than would be optimal given their economic fundamentals. However, subsequent analysis shows that the negative impact of LGBTQ+-friendliness on labor investment efficiency diminishes over time and becomes statistically insignificant after 2015, as the societal and legal support for LGBTQ+ equal rights increases. To further understand the drivers of our results, we test the moderating effect of a variety of firm and societal characteristics on the link between LGBTQ+-friendliness and labor investment efficiency. Our results indicate that only in firms with lower free cash flows and higher financial constraints, firms with lower human and organisational capital intensity and firms located in states with a lower share of LGBTQ+ population does an increase in a firm's LGBTQ+ rating result in more inefficient labor investment. We argue that these findings can be understood in a context where firms respond to the societal pressures and norms of the institutional context in which they operate which can lead to inefficient investment decisions, especially when the societal support for LGBTQ+ equal rights is lower.

Our study makes several contributions. Firstly, we contribute to the growing literature that investigates the drivers of labor investment efficiency from a firm perspective. Unlike other employee friendly policies (see Cao and Rees, 2020), we show that improving LGBTQ+-support is associated with less efficient labor investment. Therefore, firms are unlikely to use their LGBTQ+-friendliness as a means to improve their labor investment efficiency. These results are

in line with a contemporaneous study to ours by Chowdhury et al. (2023) who also document a positive association between corporate LGBTQ+ ratings and firms' labor investment inefficiency. However, unlike Chowdhury et al. (2023), we find that the link between LGBTQ+-friendliness and labor investment inefficiency diminishes as the public support for LGBTQ+ rights and equal treatment increases and the link becomes insignificant since 2015 with the declaration of the same-sex marriage equality in the US – highlighting the importance of the institutional context in which firms operate.[9] In addition, our results complement Chowdhury et al.'s (2023) findings as we show that the impact of LGBTQ+-friendly policies on corporate labour investment efficiency depends on a variety of internal factors (such as financial constraints) and external factors (such as the proportion of LGBTQ+ residents in the overall state population).

We also contribute to the small but growing literature on LGBTQ+ policies within firms, where the literature has shown that the adoption of LGBTQ+ policies improves a firm's ability to attract, recruit and retain talented employees (e.g., Huffman et al., 2008; Day and Greene, 2008; Metcalf and Rolfe, 2011; Badgett et al., 2013; Trau, 2015; Wettstein and Baur, 2016). We argue that a more nuanced view of the benefits of adopting LGBTQ+-friendly policies from a human capital perspective is asked for – and that while advocacy for LGBTQ+ rights may bring a variety of benefits and may be a moral and ethical imperative for firms, from a labor investment perspective the 'business case' for adopting LGBTQ+ policies is less clear.

Our results further relate to the literature that looks at the differences between corporate LGBTQ+-friendliness and general CSR policies. In line with Gonzalez et al. (2022), our findings show that corporate support for LGBTQ+ issues is conceptually different from other aspects of firms' CSR performance and LGBTQ+ policies may have a different impact on corporate

[9] In contrast to Chowdhury et al., (2023), our post-2015 sample covers the years 2016-2020 while theirs only covers the years 2016-2017, hence allowing us to capture a longer period of time in which LGBTQ+ sentiment and policies have changed significantly.

outcomes than other general measures of employee friendliness. The latter literature has explored the drivers of corporate employee relations and employee-friendly initiatives (Matsa and Miller 2013; Brockman et al 2020; Liu, 2021) and has established employees as a stakeholder group that is vital to the success of firms (Edmans 2011; Edmans 2012; Ben-Nasr and Ghouma 2018) and affects a variety of firm outcomes (Verwijmeren and Derwall, 2010; Macias and Pirinsky, 2015). Our study finds that LGBTQ+-friendly policies are different from general employee-friendly initiatives. As such our study encourages a nuanced view when investigating the impact of different forms of CSR policies on corporate outcomes and we advocate to view corporate LGBTQ+ policies as an independent subject of research focus instead of aggregating it under more general employee-friendliness or CSR performance metrics.

Finally, while our findings show that improving LGBTQ+ policies may not lead to more efficient labor investments, they do not imply that corporate LGBTQ+-friendliness is harmful to firms. Previous studies have shown a variety of financial benefits of corporate LGBTQ+-friendliness (e.g. Fatmy et al., 2022; Shan et al., 2017; Pichler et al., 2018; Chintrakarn et al., 2020; Hossain et al., 2020) and while our full sample results suggest that corporate LGBTQ+-friendliness increases labor investment inefficiency, we do find that in more recent times this negative impact of LGBTQ+-friendliness disappears.

The remainder of the study is organised as follows: Section 2 reviews the literature and competing views on the link between corporate LGBTQ+-friendliness and labor investment efficiency. Section 3 introduces the data and methodology employed in our study. Section 4 presents the results. In Sections 5 and 6 we conduct further tests to account for endogeneity concerns and to check the robustness of our results. Section 7 concludes.

2. Literature Review and Conceptual Frameworks

The academic literature offers competing views whether the adoption of LGBTQ+-friendly policies may have a positive or negative impact on labor investment efficiency.

According to stakeholder theory (Freeman, 1984), it is a firm's purpose to create value for all its stakeholders, not just shareholders. As employees are a key stakeholder to the firm, the adoption of LGBTQ+-friendly policies by an increasing number of firms may be seen as a way to improve the attractiveness of the firm to LGBTQ+ employees and to create more comfortable working environments for a share of the workforce that has historically faced a high degree of discrimination and adversity (Badgett et al., 2013). In turn, companies may benefit from these policies via improved employee motivation and engagement, labor stability and productivity, as well as increased competitiveness in the labor market. In line with this view, a variety of studies in the Human Resources literature has explored the impact of LGBTQ+-supportive policies on firms, documenting that LGBTQ+-friendly firms tend to experience better employee recruitment (Clermont, 2006; Metcalf and Rolfe, 2011), lower employee turnover (Jauhari and Singh, 2013; Metcalf and Rolfe, 2011) and improved productivity (Shan et al., 2017; Badgett et al., 2013). Therefore, consistent with stakeholder theory, intangible investments in employee welfare and satisfaction may ultimately improve firms' labor investment efficiency by attracting valuable talent and avoiding costly employee turnover. Hence, following this line of argument, one might expect that LGBTQ+-friendliness will operate through similar channels and enable firms to reach a level of labor investment close to their optimum and hence improve labor investment efficiency.

In contrast, agency theory suggests that the adoption of LGBTQ+-friendly policies may be a result of a misalignment of managerial and shareholder interests (Jensen and Meckling, 1976). For instance, several studies have shown that some employee-focused CSR policies, such as generous employee welfare packages and higher employee pay, are linked to agency conflicts between managers and shareholders and result in less efficient corporate practices and worse financial outcomes for shareholders (Ben-Nasr and Ghouma, 2018; Cronqvist et al., 2009). In this vein,

LGBTQ+ policies could similarly be driven by the self-interests of managers. LGBTQ+-friendly managers may adopt corporate LGBTQ+ policies to align corporate practices with their personal attitudes or to gain personal benefits such as improved social relations with their workforce. For instance, a recent study by Weng et al. (2023) show that liberal CEOs are more likely to support LGBTQ+ employees by implementing LGBTQ+-friendly policies, while Kyaw et al. (2021) document that more co-opted directors in firms are linked to increased adoption of LGBTQ+ policies in firms. These agency conflicts could result in either over- or underinvestment in labor. On the one hand, self-interested managers with a tendency for empire building (Jensen, 1986) may use LGBTQ+ policies to attract and retain additional workforce beyond a firm's optimal level, resulting in over-hiring of labor. On the other hand, self-interested managers might prefer the 'quiet life' (Bertrand and Mullainathan, 2003) and as such turn down profitable investment opportunities that would require additional staff investment, leading to labor underinvestment. In this context, managers' support of LGBTQ+-friendly policies might be seen as a means to enhance their relations with their existing employee base and avoid potential conflicts with their employees that could disrupt their 'quiet life'.

While agency theory focuses on the self-interests of managers to explain potential deviations from efficient investment practices, institutional theory, as a third conceptual framework to explain companies' adoption of LGBTQ+ policies (e.g. Stavrou and Ierodiakonou, 2018; Roumpi et al., 2019), centres less on the managerial perspective but emphasises the broader institutional and societal context in which companies operate. In particular, institutional theory postulates that when specific norms and practices are perceived as societally accepted and regarded as a 'social fact', companies may aim to adopt these societally approved policies and practices in order to gain legitimacy and stability, even if such practises conflict with efficiency criteria (Oliver, 1991; Meyer and Rowan, 1997). For instance, Gonzales et al. (2012) show that companies are more likely to adopt LGBTQ+ policies when they receive LGBTQ+-related shareholder proposals, suggesting

that companies aim to align their policies with the preferences of their shareholders to gain legitimacy. Therefore, companies may choose to improve workplace equality via LGBTQ+-friendliness beyond the limit that is legally necessary and financially optimal. In particular, when firms face resource limitations and divert resources away from other employees or stakeholder groups to favour LGBTQ+ employees, these practices may result in greater labor investment inefficiencies and in particular divert resources away from investment in new employees, creating a labor underinvestment problem.

On the backdrop of these competing views, it is interesting to consider Hillman and Keim's (2001) framework of CSR investment that differentiates between CSR policies that serve the aim of stakeholder management – and hence lead to competitive advantage and positive financial benefits to the firm – and CSR policies that represent social issue participation and therefore might be more in line with the motives suggested in the agency view and institutional theory view of LGBTQ+ policy adoption. Hence, the impact of LGBTQ+ policies on labor investment efficiency might depend on whether these policies are primarily driven by stakeholder management concerns or social issue participation. Gonzalez et al. (2022) in their analysis of the determinants and characteristics of corporate LGBTQ+ policies find that firms adopt LGBTQ+-supportive policies that target both stakeholder management and social issue participation issues. Therefore, based on Hillman and Keim's (2001) framework, it remains an empirical question whether corporate LGBTQ+-friendliness will improve labor investment efficiency or reduce it. In the next chapter we set out to answer this question.

3. Data and Methodology

3.1. LGBTQ+-friendliness data

In line with recent work by Everly and Schwarz (2015), Shan et al. (2017) and Hossain et al. (2020), we use the Corporate Equality Index (CEI), constructed by the Human Rights Campaign (HRC), to measure firm-level LGBTQ+-friendliness. The HRC is a large civil rights organization in the U.S. and it has published the CEI every year since 2002. The CEI provides an assessment of a firm's LGBTQ+-friendliness in terms of corporate policies to lesbian, gay, bisexual and transgender employees and public advocacy related to the rights of sexual minorities. The HRC compiles and constructs the CEI based on self-reported surveys as well as SEC filings, employee resource groups, press releases, and news articles during the year leading up to the date of publication. The surveys underlying the CEI are sent to the S&P 500 firms, the Fortune 1000 firms, the firms in the Forbes' list of 200 largest privately held companies, and other U.S. firms with at least 500 employees. The CEI is based on five main criteria related to firms' employee policies: workplace equality, diversity culture and competency, and public statements and actions related to either advocacy or discrimination of sexual minorities.

Each of the considered criteria is given a specific number of points and the CEI is then constructed for each firm as the sum of the points of the individual evaluation criteria. Consequently, the CEI may take values between -25 and 100 with higher values of the index corresponding to more LGBTQ+-friendly corporate policies and practices. In our empirical analysis, we follow Fatmy et al. (2022) and restrict the sample to publicly traded firms with positive CEI scores to alleviate potential self-selection bias.[10] In recent publications, the CEI reports values for firms that have not responded to the survey and often these firms receive CEI scores of zero. Since these firms' values may be downwardly biased, we only examine firms that respond to the survey. The CEI is released every fall but since 2007, the CEI has been published in a forward-looking manner so that

[10] If a firm does not return any data, the CEI gives the firm a value of zero. To avoid potential self-reporting bias, we do not include firms with a zero rating.

the report published in the fall of a given year is labelled as the CEI for the upcoming calendar year.

We study the CEI data from 2003 to 2020 therefore incorporating 18 years of CEI scores where we have CEI data on 1,503 firms with 12,225 firm-year observations. However, for a number of firms CEI scores are only available for a few years therefore gaining any insights from these firms is difficult. Thus, we follow Fatmy et al. (2022) and remove firms with less than five consecutive years of CEI scores as well as unlisted firms. We also remove observations with missing financial data. This leaves us with 369 unique firms and 3,461 firm-year observations. Appendix B provides an overview of the distribution of sample firms across industries together with the average LGBTQ+ rating by industry. Manufacturing firms represent the largest proportion of our sample with 43.36% of all observation, followed by firms from the Transportation, Communication and Utilities industries with 17.57% and Services industries with 16.67%.[11] Figure 2 provides on overview of the development of LGBTQ+ ratings by industries over time. The figure shows that there is considerable heterogeneity across industries in the development of LGBTQ+-friendliness.

3.2. Empirical Models

[11] To account for the large proportion of Manufacturing firms in our sample, we test for the robustness of our results to excluding Manufacturing firms from our sample. Results are reported in Section 6.5.

Initially, we measure labor investments by studying a firms' net hiring which is the percentage change in the number of employees (Pinnuck and Lillis, 2007). We follow previous literature and estimate the abnormal net hiring as the absolute value of the difference between the observed level of labor investment and that justified by economic fundamentals. Abnormal net hiring can therefore be expressed as the absolute value of residuals from the following model:

$$\begin{aligned} Net\ Hire_{it} = {} & \beta_0 + \beta_1 SalesGrowth_{it-1} + \beta_2 SalesGrowth_{it} + \beta_3 \Delta ROA_{it-1} \\ & + \beta_4 \Delta ROA_{it} + \beta_5 ROA_{it} + \beta_6 Return_{it} + \beta_7 Size_{it-1} + \beta_8 Liq_{it-1} \\ & + \beta_9 \Delta Liq_{it-1} + \beta_{10} \Delta Liq_{it} + \beta_{11} Lev_{it-1} + \beta_{12} LossBin1_{it-1} \\ & + \beta_{13} LossBin2_{it-1} + \beta_{14} LossBin3_{it-1} + \beta_{15} LossBin4_{it-1} \\ & + \beta_{16} LossBin5_{it-1} + \beta_{17} ProfitBin1_{it-1} + \beta_{18} ProfitBin2_{it-1} \\ & + \beta_{19} ProfitBin3_{it-1} + \beta_{20} ProfitBin4_{it-1} + \beta_{21} ProfitBin5_{it-1} \\ & + Industry\ FE + \varepsilon_{it} \end{aligned} \quad (1)$$

Where $NET\ Hire$ is the percentage change in employees, S$alesGrowth$ is the percentage change in sales revenue, ROA is net income scaled by lagged total assets, $Return$ is the annual stock return, $Size$ is the percentile of the log of market value of equity at the beginning of the year, Liq is the ratio of cash and short-term investments plus receivables to current liabilities, Lev is the ratio of long-term debt to total assets at the beginning of the year, $LossBin$ is an indicator variable for each 0.005 interval of prior-year ROA from 0 to -0.025, $ProfitBin$ is an indicator variable for each 0.005 interval of prior-year ROA from 0 to 0.025 and in all cases, *i* indicates the firm and *t* the year.

In our main analysis, we follow the model in Ben-Nasr and Alshwer (2016), Khedmati et al. (2019), and Cao and Rees (2020) that uses the absolute residual of equation (1) as a proxy for labour investment inefficiencies. Our model of the relationship between LGBTQ+-friendliness of firms and their labor investment inefficiency can therefore be expressed as follows:

$$
\begin{aligned}
&AB\ NET\ Hire_{it} \\
&\quad = \beta_0 + \beta_1 LGBT_{it-1} + \beta_2 MTB_{it-1} + \beta_3 Size_{it-1} + \beta_4 Liq_{it-1} \\
&\quad + \beta_5 Lev_{it-1} + \beta_6 Div_{it-1} + \beta_7 Tang_{it} + \beta_8 Loss_{it-1} \\
&\quad + \beta_9 Labint_{it-1} + \beta_{10} SD\ CFO_{it-1} + \beta_{11} SD\ Sales_{it-1} \\
&\quad + \beta_{12} SD\ NET\ Hire_{it-1} + \beta_{13} LnBoardSize_{it-1} \\
&\quad + \beta_{14} BoardIndependence_{it-1} + \beta_{15} FemaleCEO_{it-1} \\
&\quad + \beta_{16} CEO\_ChairDuality_{it-1} + Firm\ FE + Year\ FE + \varepsilon_{it}
\end{aligned} \tag{2}
$$

Where $AB\ NET\ Hire$ is the absolute value of the difference between actual net hiring and the expected level estimated in equation (1), $LGBT$ is the LGBTQ+ rating of the firm from the CEI database, MTB is the ratio of market-to-book value of common equity at the beginning of the year, $Size$ is the log of market value of equity at the beginning of the year, Liq is the ratio of cash to short-term investments plus receivables to current liabilities, Lev is the ratio of long-term debt to total assets at the beginning of the year, Div is an indicator variable equal to one if the firm pays dividends in the previous year, and zero otherwise, $Tang$ is the ratio of property, plant and equipment to total assets at the beginning of the year, $Loss$ is an indicator variable equal to one if the firm reported a loss in the previous year, and zero otherwise, $Labint$ is the ratio of employees to total assets at the beginning of the year, $SD\ CFO$ is the standard deviation of cash flow from operation over year *t-5* to *t-1*, $SD\ Sales$ is the standard deviation of sales revenue over year *t-5* to *t-1*, $SD\ NET\ Hire$ is the standard deviation of the percentage change in employees over year *t-5* to *t-1*, $LnBoardSize$ is the natural logarithm of the number of directors in the firm, $BoardIndependence$ is the proportion of non-executive directors in firm i at the end of year t, $FemaleCEO$ is a dummy variable that equals 1 if a CEO is female and 0 otherwise, $CEO\_ChairDuality$ is a dummy variable that equals 1 if a CEO is Chairman and 0 otherwise. We also include firm and year fixed effects to control for time-invariant unobservable firm

characteristics and time-specific economic conditions. All regressions in our analysis are estimated with heteroscedasticity robust standard errors that are clustered by firm.

3.3. Descriptive Statistics

Table 1 reports the descriptive statistics of the variables employed in model (2), where we winsorise all continuous variables at the 1st and 99th percentiles of their respective distributions to reduce the influence of outliers. The mean value of our dependent variable, $AB\ NET\ Hire$, is 0.2106 which is somewhat higher than reported in previous studies such as Cao and Rees (2020) who find a mean $AB\ NET\ Hire$ of 0.121. This difference might be explained by the reduced size of our sample relative to Cao and Rees's (2020) study due to the more limited coverage of CEI scores for companies. We split our sample into two sub-samples based on the sign of the residual estimated in equation (1): firms that have a positive residual (positive abnormal hiring, OVER LABOR) and hence overinvest in labor; and firms that have a negative residual (negative abnormal hiring, UNDER LABOR) and hence underinvest in labor. We find that more firms underinvest in labor (2,495 of total firm-year observations) than overinvest (966 of total firm-year observations) and that the mean net underinvestment is larger (-0.2468) than the mean net overinvestment (0.1136). Our main independent variable of interest is the LGBTQ+ rating by CEI, which may take values between 0 and 100. We can see that the average LGBTQ+ rating is 79.4106 with a minimum of 14 and a maximum of 100 indicating the range of ratings the sample firms receive. Table 1 also reports the descriptive statistics of all independent and control variables which are generally consistent with the previous literature, such as 5% of our CEOs are female and 17% of CEOs also hold the chair position. Table 2 reports the correlation coefficients between our independent variables, and there is no indication of multicollinearity given all the correlations are within the band [-0.5, 0.5].

4. Results

4.1. Baseline results

In Table 3, we show the main regression results for the relationship between LGBTQ+-friendliness and labor investment efficiency where the dependent variable is net abnormal hiring (AB NETHIRE), measured as the absolute value of the residual from equation (1). We find a significant positive relationship between abnormal net hiring and LGBTQ+-friendliness, indicating that higher LGBTQ+-friendliness of firms is associated with higher deviations of labor investment from the level justified by firms' economic fundamentals. Specifically, our findings suggest that a one standard deviation increase in LGBTQ+ rating is associated with a 9.06% increase in labor investment inefficiency.[12] Our results also suggest that smaller firms, firms that pay less dividends, firms with a small standard deviation of net hires and firms where the CEO is the chairman experience significantly higher abnormal net hiring. In the second (third) column of Table 3, we report the model based on the subsample of firms that exhibit labor over- (under-) investment, that is, firms where actual net hiring is greater (lower) than expected. For ease of interpretation, and in line with previous studies (e.g. Cao and Rees, 2020), we use absolute values of net over- and underinvestment, so that a positive coefficient on the independent variables in columns (2) and (3) signifies more labor over- and underinvestment, respectively. Our results suggest that LGBTQ+-friendliness is significantly related to firms' underinvestment in labor, while there is no significant relationship between firms' LGBTQ+ rating and their labor overinvestment tendency. Therefore, firms with high LGBTQ+-friendliness seem to show less efficient labor investment and particularly are more prone to underinvest in labor. These findings are consistent with agency theory and the institutional theory perspective of corporate LGBTQ+-friendliness

[12] The sample average value of *AB NETHIRE* is 0.2106, the coefficient for *LGBTQ+* is equal to 0.000785 and its standard deviation is equal to 24.3003. A one standard deviation increase in *LGBTQ+* is associated with a 9.06% increase in labor investment inefficiency (24.3003*0.000785/0.2106 = 0.0906).

which suggests that firms adopting LGBTQ+ policies may be willing to sacrifice investment efficiency in order to advance employee welfare and LGBTQ+ equality issues.

To further investigate the dynamics of the relationship between corporate LGBTQ+-friendliness and labor investment efficiency we examine how this association changes over time, in particular in relation to a shift in societal (and legal) support for LGBTQ+ equality. We use the year of 2015 to split our sample into two sub-samples. 2015 marks a historic year for LGBTQ+ rights in the US as on 28th June 2015 the US Supreme Court declared same-sex marriage an institutional right resulting in marriage equality across all 50 US states, after several individual states had legalised same-sex marriage in the years prior (see Zhu and Smieliauskas, 2020, for a detailed record of same-sex marriage legalisation by state). This development is regarded as "the fastest and most significant shift in public opinion that has been seen in modern American politics" (Zhu and Smieliauskas, 2020: 58). For corporate LGBTQ+-support it also indicated a shift in the societal legitimacy of firm's LGBTQ+-friendly policies and firms' provision of same-sex domestic partner benefits which represent an important part of firms' LGBTQ+ policies (Li and Nagar, 2013). We aim to understand whether the effect of firms' LGBTQ+-friendliness on labor investment inefficiency changes after the US Supreme Court ruling and the increased legitimacy of LGBTQ+ rights. If managerial agency conflicts were driving the positive impact of LGBTQ+-friendliness on labor underinvestment, we don't expect to find a difference in the impact of the CEI rating on abnormal hiring after 2015 as managers' incentives to extract personal benefits from the company via support for LGBTQ+ policies should not have been affected by the ruling. If, however, firms' institutional and societal environment affected its decision to support LGBTQ+-friendly policies, we'd expect that the 2015 ruling as a signal of a societal shift towards greater LGBTQ+-friendliness might affect the relation between firms' CEI rating and their labor investment efficiency. In particular, we'd expect that the link between LGBTQ+-friendliness and labor

investment inefficiency in the form of labor underinvestment might decline as the wider societal support for LGBTQ+ policies make it less costly for companies to engage in these policies.

Table 4 reports the results prior to 2015 and the results post 2015. We can see that the positive and significant effect of LGBTQ+-friendliness on labor investment inefficiency and specifically labor underinvestment is only present in the pre-2015 sample while it disappears after 2015. In the post-2015 sample, the impact of a firm's CEI rating is slightly negative but insignificant. Furthermore, the results suggest that post 2015 corporate LGBTQ+-friendliness may even help to reduce labor overinvestment as indicated by the negative and significant coefficient estimate on the CEI rating in column (8).

Overall, our baseline results suggest that firms' LGBTQ+-friendliness leads to greater labor investment inefficiencies, but this effect seems to disappear over time and is no longer present after 2015, as societal (and legal) LGBTQ+-support increased. These results are in line with institutional theory which suggests that firms respond to their institutional context and societal norms to gain legitimacy from major stakeholders, potentially even at the expense of efficiency criteria. However, as certain policies and practices become more societally expected the efficiency costs may decline.

4.2. Moderators of the relationship between LGBTQ+-friendliness and labor investment inefficiency

To further examine what might be driving the dynamic link between firms' LGBTQ+-friendliness and labor investment inefficiency, we study the cross-section of companies to identify the channels and moderators through which LGBTQ+-friendliness is linked to labor investment inefficiency. By understanding which factors moderate the relationship between LGBTQ+-friendly policies and labor investment inefficiency, we can further establish whether this relationship is driven by

stakeholder concerns, agency conflicts or responses to firms' institutional environment. First, we examine the impact of the firms' financial situation on the relation between LGBTQ+-friendliness and labor investment inefficiency. Then we look at further firm characteristics related to firms' business activities and core organisational capital, before focusing on the impact of their geographical location on the relation between LGBTQ+-friendliness and labor investment. Our findings are reported in Table 5.[13]

We start by investigating whether the link between a firm's LGBTQ+-friendliness and its labor investment inefficiency is mediated by a firm's financial situation regarding its access to free cash flow and its financial constraints. Labor investments require adjustment costs and these costs can be large, frequent and require financing (Khedmati et al., 2020). Benmelech et al. (2011) argue that labor is a quasi-fixed factor, thus, in addition to the firm spending vastly on the variable component such as the wage bill, it also incurs significant, largely fixed costs related to hiring, firing and training employees. Therefore, labor investments require financing, either internal financing via free cash flows or external sources of financing. Agency theory implies that managers are able to divert investments towards pet projects that serve their own self-interests if they have access to free cash flow. In this line of argument, we expect the relationship between firms' LGBTQ+-friendliness and their labor investment inefficiency to be more pronounced in firms with high levels of free cash flows as well as in firms that are less financially constrained. In contrast, if a firm adopts LGBTQ+-friendliness due to institutional pressures and to gain social legitimacy, such actions may only lead to efficiency losses if the firm faces resource limitations and has to divert resources away from other employees and stakeholder groups towards LGBTQ+ employee support. Hence,

[13] This table reports the baseline regression of abnormal net hiring on LGBT policies for subsamples based on Free Cash Flow, Financial Constrain, Organization Capital, Human Capital, % of LGBT population in state, and Political Party wins more than 55% in presidential election. We define firms with above(below)-median as High(Low) subsample. Financial Constrains are defined as the Size_Age Index by following Khedmati et al. (2020). We define Organization Capital by following Peters and Taylor (2017, p.257). Human Capital-Intensive Industries include Biotechnology, Computer, Electronics, and Retail as shown in Li and Zeng (2019). Following Chintrakarn et al., (2020), we get the % of LGBT population in state from the Gallup Survey which conducted telephone interviews with a random sample of 710,252 adults from 1st January 2015 to 30th December 2016. Political Party wins more than 55% in presidential election is based on the US presidential election results throughout the full sample period.

following institutional theory, we'd expect that the negative impact of LGBTQ+-friendliness on labor investment efficiency is more pronounced in firms with low free cash flows and firms that are financially constrained. In addition, as societal and legal support and provisions for LGBTQ+ people increase, we'd expect this link to diminish in the post-2015 sample.

To test these inferences, we divide our sample firms into sub-samples based on firms' level of free cash flows and based on their degree of financial constraints using Hadlock and Pierce's (2010) size-age index. Table 5, Panel A, presents the results for the full sample period and the pre-2015 and post-2015 sub-periods. We find that the coefficient on the LGBTQ+ rating is positive and significant only for firms whose level of free cash flows is below the sample median and for firms which are highly financially constrained. We also observe that these significant moderating effects of firms' financial situation are only significant in the pre-2015 period and they lose their significance after 2015. Taken together, these findings are not in line with the standard assumptions of agency theory where agency conflicts are stronger the more free cash flow is available to manager. Instead our findings suggest that firms facing limited resources might favour to advance the welfare of their existing (LGBTQ+) employee base over investments in new employees – and that such behaviour becomes less costly in terms of investment efficiency losses with increasing societal and legal support for LGBTQ+ rights.

In our next set of analyses, we examine the moderating effect of firms' labor and capital characteristics on the impact of LGBTQ+-friendliness on labor investment inefficiency (Panel B of Table 5). Firstly, we look at firms' organizational capital as a potential moderator. A firm's organizational capital is part of its intangible assets: Firms with a high level of organizational capital invest heavily in hiring and training key employees but this talent can move firms, hence incentivising firms to spend more resources on retaining talent. If LGBTQ+-friendly policies foster greater employee retention and employee retention is particularly valuable for firms with high organisational capital, we expect that LGBTQ+-friendliness will not negatively affect labor

investment efficiencies in firms with high organisational capital. However, for firms with low organisational capital, additional investments in employees via LGBTQ+ policies may not improve their labor investment efficiency as they are less dependent on retaining their existing staff. Following Peters and Taylor (2017), we measure a firm's organizational capital by its past selling, general and administrative (SG&A) spending, and report the results of running our baseline regression on firms with high and low levels of organizational capital. We find that there is a significant relationship between LGBTQ+-friendliness and abnormal net hiring only for firms with low organization capital, while there is no significant relationship for firms that have high organization capital. Furthermore, when comparing the pre-2015 and post-2015 results, it appears that the moderating role of organizational capital on the LGBTQ+-friendliness – labor investment efficiency relationship is only present prior to 2015 and vanishes after 2015.

Next, we look at the moderating role of firms' human capital intensity, which captures that the business activity of the firm requires employees with a higher level of expertise, education and labor skills. Employee acquisition and retention in human capital intensive industries is thought to be of greater strategic importance as labor adjustment costs increase for high skilled employees and firms face greater competition for these employees. Hence, in a similar vein to organizational capital, we'd expect that for human capital intensive firms investment in their LGBTQ+ labor force via LGBTQ+-friendly policies might be of greater strategic importance and hence less likely to result in an investment efficiency loss; whereas for low human capital intensive firms such resource allocations might be less efficient, resulting in a negative effect of LGBTQ+-friendliness on labor investment efficiency. We follow the existing literature by defining firms in the following industries as human capital intensive: Biotechnology, Computer, Electronics, and Retail (Ertugrul, 2013; Ghaly et al., 2015; Ben-Nasr and Ghouma, 2018; Li and Zeng, 2019; Cao and Rees, 2020). The results of our analysis for the full sample show that only for firms in lower human capital intensive industries does improving corporate LGBTQ+-friendliness lead to a decline in labor

investment efficiency, while for human capital intensive firms this effect is not significant. We again find that the moderating effect of human capital intensity on the impact of LGBTQ+-friendliness on labor investment inefficiency is only observed pre-2015 and disappears in the post-2015 sample. Taken together, these findings suggest that for firms for which retaining existing staff due to their accumulated organisational capital and their human capital intensity is more value relevant, advancing LGBTQ+-friendliness is not linked to labor investment inefficiencies.

We also study the impact of societal and political factors linked to firms' geographical location on the relation between LGBTQ+-friendliness and firm's labor investments (Panel C of Table 5). We split our sample into states with a below and above median share of people identifying as LGBTQ+ relative to the state's total population. We find that the significant relationship between firms' LGBTQ+-friendliness and labor investment inefficiency is only present in states with a low representation of LGBTQ+ citizens in the overall population. Furthermore, the moderating impact of the state's share of residents identifying as LGBTQ+ remains significant in the pre-2015 and post-2015 period. This suggests that even as overall societal support and legal rights for LGBTQ+ issues have increased in the US overall, in states with a lower representation of the LGBTQ+ population indicating lower support for LGBTQ+ issues, corporate support for LGBTQ+ issues can still result in labor investment efficiency losses. These findings support the important role of the institutional context in which firms operate and the societal norms and pressures that they are facing in their immediate geographical environment. They are also in line with findings by Mohliver and Hawn (2021) who show that political leaning and acceptance of LGBTQ+ policies is heterogenous across states, therefore firms located in states with a below median share of LGBTQ+ population are more detrimentally affected in terms of labor efficiency when openly supporting LGBTQ+ initiatives.

As the final moderator, we study the impact of the state's political leaning on the link between LGBTQ+-friendliness and labor investment efficiency. To do so, we divide states into either Republican or Democrat based on which political party wins more than 55% of the state Presidential elections (consistent with Fatmy et al., 2022). Prior research has shown that political ideologies play an important role in determining whether firms adopt LGBTQ+-supportive policies (Gupta et al., 2017). Furthermore, investors' reaction towards firms' LGBTQ+-friendliness is shown to depend on the political leaning of the state with investors reacting positively to firms with high LGBTQ+ ratings in liberal states, while they react positively to firms with low LGBTQ+ ratings in conservative states (Mohliver and Hawn, 2021). Looking at the results for the full sample period, it appears that the state's political leaning does not seem to have a strong moderating effect on the relationship between firms' LGBTQ+-friendliness and labor investment inefficiency since we find a significant effect for firms located in Democratic-leaning and Republican-leaning states. When comparing the pre-2015 and post-2015 results, we however find that the negative effect of LGBTQ+-friendliness on labor investment efficiency is only present for Republican leaning states prior to 2015 and becomes insignificant for the other three sub-groups. These results suggest that the proportion of LGBTQ+ residents in the overall state population serves as a more meaningful indicator of societal support for LGBTQ+ rights and a more powerful moderator for the relationship between corporate LGBTQ+-friendliness and labour investment efficiency than the political leaning of the state.

Overall, our analyses of the moderating impact of firms' financial and labor capital characteristics and the state's degree of support for LGBTQ+ issues highlight the important role of the institutional context and societal norms in how corporate LGBTQ+-friendliness affects labor investment efficiency.

5. *Endogeneity*

A common concern in the literature that investigates the impact of corporate policies on firms' financial and investment outcomes is that firms' choice of implementing such policies is not exogenously determined but that firms which implement such policies differ from those that do not in observable and unobservable ways which can affect the outcome variable. For instance, firms that are facing labor investment inefficiencies might be introducing LGBTQ+-friendly policies to address their labor investment issues. To address such concerns of endogeneity, we employ a variety of tests, including (1) multiple, high-dimensional Fixed Effects regressions; (2) the Heckman two-stage method; (3) the Entropy Balancing approach; (4) tests for reverse causality; and (5) Difference-in-Difference analysis. While none of these tests can irrefutably rule out the endogenous relationship between corporate LGBTQ+-friendliness and labor investment inefficiency, taken together they provide strong suggestive evidence that the identified relationship between these two variables is causal in nature. We present the results of these tests below.

5.1. *Industry fixed effects and high-dimensional fixed effects*

While our previous analyses control for unobserved firm fixed effects, labor investment efficiency might also be subject to unobservable within-group heterogeneity. For example, LGBTQ+-friendliness and labor investment efficiency among firms may depend on heterogeneity across industries, which may be time-varying (Gormley and Matsa, 2014). Therefore, we re-estimate our baseline regressions but include industry fixed effects and multiple high-dimensional fixed effects (in a similar manner to Li and Zeng, 2019, and Schopohl et al., 2021). The results using the full-sample are reported in Table 6. Our findings are highly consistent with our baseline regressions in that LGBTQ+-friendliness is associated with significant abnormal net hiring and that firms with higher LGBTQ+ ratings tend to significantly underinvest in labor.

5.2. *Heckman 2-stage approach*

In this section, we address the potential concern of a sample selection issue regarding the LGBTQ+ ratings that might affect our baseline results. As explained in Section 3.1, HRC relies on the voluntary reporting of firms as to their LGBTQ+ policies. However, firms that respond to the HRC's survey on their LGBTQ+ policies are likely to be more LGBTQ+-friendly than their peers. Therefore, we use the Heckman two-stage method to mitigate against this endogeneity concern. In the first stage, we construct a Probit model to estimate the probability of firms having a high LGBTQ+ rating, with the dependent variable being a binary indicator that takes the value of one if the firm has a LGBTQ+-rating higher than the median, and zero otherwise. To explain firms' LGBTQ+ rating, we consider a host of factors such as the market-to-book ratio, size, liquidity as well as whether the board is independent and whether the CEO is also the chair. Since the Heckman model requires an exogenous variable, we use the percentage of the LGBTQ+ population in the state in which the firm is located.[14] The first stage regression generates the inverse Mills ratio (IMR), and we include the lagged IMR in the second stage regression to control for self-selection bias. We run this model in Table 7 where we report the first stage Probit model and also the second stage regression which employs the same control variables as in our baseline specification. Our findings are similar to our baseline results suggesting that they are unlikely driven by firm self-selection bias.

5.3. Entropy Balancing Approach

We also employ the Entropy Balancing Approach to match firms that are LGBTQ+-friendly with those of their peers in order to control for potential selection bias and possible covariate imbalance. Entropy balancing works by re-weighing each firm-year observation in the control group to make the distribution of their covariates (i.e., mean, variance and skewness) comparable between the treatment and control groups (Hainmueller, 2012). In our case, the treatment group

[14] This variable choice is inspired by Ali et al. (2022) and Schopohl et al. (2021).

comprises firms with above-median LGBTQ+ ratings for a given year, and the control group includes firms with below-median LGBTQ+ ratings in the same year. The entropy balancing approach has been implemented in comparable studies to ours (e.g. Ali et al., 2022; Chowdhury et al., 2023) and has been argued to be superior to other matching approaches, such as Propensity Score Matching, as it is less subject to researcher discretion and statistical bias (King and Nielsen, 2019; McMullin and Schonberger, 2020). The results of the Entropy Balancing approach are reported in Table 8, Panel A (before Entropy Balancing), Panel B (after Entropy Balancing), and Panel C re-estimates the results of our baseline specification (columns (1) through (3) in Table 3) based on the treated balance.

We can see that the approach succeeded in making the covariates of the control variables between treatment (LGBTQ+-friendly firms) and control groups (less LGBTQ+-friendly firms) comparable. We also see that, after the re-weighing of the control group observations, the main result of a significantly positive effect of LGBTQ+-friendliness on labor investment inefficiency remains qualitatively the same as in our baseline specifications in Table 3. Specifically, the entropy balancing specification reveals that more LGBTQ+-friendly firms show less efficient labor investment and are more prone to underinvest in labor.

5.4. Reverse Causality Tests

Finally, we control for a potential reverse causality problem in the LGBTQ+-friendliness – labour investment inefficiency relationship, i.e. instead of LGBTQ+-friendly firms affecting labor investment efficiency, it could be that labor efficiency is in fact affecting the LGBTQ+-friendliness of firms. To investigate this, we re-estimate our baseline regression but lag all independent variables, including the CEI LGBTQ+ rating, by two years and then three years. The results are reported in the first two columns of Table 9. The results suggest that lagging our independent variables does not affect our baseline findings.

To further address the robustness of this finding we also employ the instrumental variable approach to extract the exogenous component of LGBTQ+-friendly firms and use it to explain labor investment efficiency. The 2SLS requires an instrumental variable that is strongly correlated with firm's LGBTQ+-friendly policies but does not have a direct impact on labor investment efficiency. Following Ali et al. (2022), we use the average CEI LGBTQ+ rating of all the firms (excluding firm *i*'s score) in the given fiscal year as an instrumental variable. The intuition behind using the market-average LGBTQ+ rating (Market_LGBTQ+) as an instrumental variable is that a firm's employee-friendly polices might be highly associated with those of its peers due to labor mobility and competition for talent, but the market average LGBTQ+-friendliness is unlikely to directly impact a firm's labor investment. Further to this, executives may influence LGBTQ+-friendly policies of their own firm but should have little or no influence on the LGBTQ+-friendly policies of other firms. Given these arguments, Market_LGBTQ+ should be a valid instrument: It is unrelated to firm-level labor investment but related to firm-level LGBTQ+-friendly policies. The results of the 2SLS approach are reported in columns (3) and (4) of Table 9. The coefficient on Market_LGBTQ+ is negative and statistically significant at the 1% level, suggesting that market-level LGBTQ+ policies strongly explain firm-level LGBTQ+ policies. This shows that market-level LGBTQ+ policy is a valid instrumental variable because of its statistical power to explain firm-level LGBTQ+-friendliness. Moreover, the instrumental variable also passes the relevance test as the F-statistic is well above 10 and is significant at the 1% level.[15] Column (4) reports the second-stage regression results, where abnormal net hiring (labor investment inefficiency) is the dependent variable. We replace CEI LGBTQ+ Rating with the fitted LGBTQ+-friendly policy (Fitted_LGBTQ+) from the first-stage regression. The coefficients on Fitted_LGBTQ+ are statistically significant and positive for labour investment inefficiency and labor underinvestment. These findings confirm the earlier findings, that is, strong LGBTQ+-

[15] In case there is only one instrumental variable, the F-statistic is the square of the t-statistic of the instrument's coefficient in the first stage, 2,143.69 = (-46.30)^2.

friendly policies reduce labor investment efficiency. Thus, we conclude that the main results are robust to the use of the 2SLS approach.

5.5. Difference-in-Difference Analysis

In our main analysis, we argue that 2015, the year when the US Supreme Court declared same-sex marriage as an institutional right, represented a historic shift in the landscape of LGBTQ+ rights in the US. As a final endogeneity test, we run a Difference-in-Difference analysis with the year 2015 as our 'treatment' year. We follow Bai et al. (2019) in the regression specification and report the results of our Difference-in-Difference analysis in Table 10. In particular, we include a dummy variable 'Year >=2015' that takes the value of one if the observation corresponds to the year 2015 or later in the regression together with an interaction term of the 'Year>=2015' dummy and the LGBTQ+ rating. Our variable of interest is the coefficient on this interaction term. In line with our expectation that the year 2015 represented a shift in (corporate) attitudes towards LGBTQ+-friendliness, we find the coefficient on the interaction term is not significant, suggesting that after 2015, firms' LGBTQ+-friendliness no longer significantly explains their labor investment behaviour. Thus, the results of this Difference-in-Difference analysis are in line with our baseline findings that the link between LGBTQ+-friendliness and labor investment inefficiency in the form of labor underinvestment declines as the societal support for LGBTQ+ policies increases. To account for state-specific variability in the effect of the 2015 Supreme Court ruling, we also include higher dimensional State-Year fixed effects in our regressions, reported in specifications (4) to (6) of Table 10. The result shows that the insignificant effect of LGBTQ+-friendliness on labor investment efficiency after 2015 continues to hold.

Overall, the results of our endogeneity tests lessen the concern that the significant impact of corporate LGBTQ+-friendliness on firms' labor investment inefficiency is the result of endogeneity.

6. *Further Robustness Tests*

In this section, we conduct additional analyses to test the robustness of our findings to the inclusion of general CSR ratings, board diversity measures, alternative definitions of our dependent variable, and modifications to the CEI rating scores.

6.1. CSR ratings

One concern about our previous analysis is that there may be some overlap between the CSR ratings of firms and our measure of corporate LGBTQ+-friendliness. Cao and Rees (2020) find that employee-friendly treatment, measured as a sub-category of a firm's CSR performance,[16] improves labor investment efficiency. While our findings on firms' LGBTQ+-friendly policies suggest the opposite relation to labor investment efficiency, we nevertheless want to ensure that our findings are not driven by the link of our LGBTQ+-friendliness measure to firms' general employee-friendly policies or other sub-categories of a firm's CSR performance. To measure a firm's CSR performance, we rely on the ESG scores from Refinitiv Eikon, which measure companies' performance along three dimensions, environmental (E), social (S) and governance (G).[17] It could be argued that LGBTQ+-friendliness may be correlated to a firm's performance on the social pillar, which captures policies and issues related to a firm's workforce, human rights, community and product responsibility.[18] Table 11 reports our baseline model from equation (2) when we include these additional three CSR dimensions as well as an overall ESG score that captures a firm's aggregate ESG performance across the three dimensions. Across each regression,

[16] Cao and Rees (2020) use the 'employee relations' dimensions of the MSCI ESG ratings (formerly KLD). However, as this dataset has been discontinued in 2018, we rely on an alternative measure of firms' CSR performance.
[17] The Refinitiv ESG scores, previously known as Asset 4, have been commonly used by other studies, for instance, Stellner, Klein and Zwergel (2015), Aouadi and Marsat (2016), Hawn and Ioannou (2016), Ferrell, Liang and Renneboog (2016), and Gonenc and Scholtens (2017).
[18] For more information on the ESG pillar scores and their methodologies, see https://www.esade.edu/itemsweb/biblioteca/bbdd/inbbdd/archivos/Thomson_Reuters_ESG_Scores.pdf.

the coefficient on firms' LGBTQ+-friendliness remains positive and significant, while the environmental, social and governance scores are positive and marginally significant for the environmental and social pillars and insignificant for the governance pillar.[19] Hence, even after the inclusion of firms' overall CSR ratings, our results remain robust and consistent, implying that firms' LGBTQ+-friendliness as measured by the CEI rating is conceptually different from other elements of firms' employee treatment as well as its broader social, environmental and governance performance (see also Gonzalez et al., 2022).

6.2. Board diversity

So far in our analysis, we have followed the literature on labor investment efficiency in our choice of control variables. However, it could be argued that firms' LGBTQ+-friendliness is driven by the firm's overall approach to diversity and inclusion and the type of diversity already present in the firm. Specifically, firms that are more diverse in terms of gender, nationality, age and tenure may be conducive to a friendly LGBTQ+ environment and promote more LGBTQ+ policies within the firm. There is a large and growing literature studying the impact of diversity at the CEO and board level on employee-related outcomes (e.g. Kabongo et al., 2013; Li et al., 2018; Creek et al., 2019; Arco-Castro et al., 2020), with the most related studies to our work finding that more diverse boards are more likely to adopt employee-friendly and LGBTQ+-friendly policies (Cook and Glass, 2016; Creek et al., 2019, Steiger and Henry, 2020). Therefore to ensure that our findings are not driven by other aspects of firms' diversity and inclusion practices, we re-estimate our regressions but include variables for the gender ratio, nationality mix, board age diversity and

[19] These findings of the positive impact of the general ESG scores on labor investment inefficiency are different to the results reported in Cao & Rees (2020). Unlike Cao & Rees (2020), who use a measure for employee friendliness derived from KLD data, we employ Refinitiv due to its more recent sample coverage. Berg et al. (2022) show strong differences and low correlations between ESG scores from different providers, which may explain our different results (i.e. a positive link between the social pillar score and labor investment inefficiency) relative to Cao & Rees (2020). In addition, our study's sample period covered a more recent year range as well as a smaller set of companies, which could also drive differences in the findings.

tenure diversity of the board.[20] Table 11 reports our findings where we initially include each diversity measure separately and then include all four measures jointly. We show that none of the board diversity measures is significantly related to labor investment inefficiency and that our main results remain robust to the inclusion of these additional variables.

6.3. Alternative measures of abnormal net hiring

In our baseline analysis, we follow the methodology of Ben-Nasr and Alshwer (2016) to capture the labor investment inefficiency of firms. However, in the literature, there are studies that use alternative measures of abnormal net hiring to capture labor investment inefficiency. To ensure that our findings are not confined to the choice of methodology, we re-estimate our baseline analysis but now use three alternative specifications, specifically from Biddle et al. (2009), Pinnuck and Lillis (2007), and Cella (2020). The findings are presented in Table 12. We find consistent evidence of the significant effect of LGBTQ+ ratings on abnormal net hiring across all alternative measures indicating that our findings are robust to variations of measuring labor investment inefficiency.

6.4. Inflation of CEI ratings

One possible concern with our analysis is the growing number of firms with a CEI rating of 100, i.e. the maximum value. Figure 1 documents the average LGBTQ+ rating across our sample period where we can see a general increase in the average LGBTQ+ ratings, with the exceptions of a larger drop following the global financial crisis. In 2003, the average LGBTQ+ rating was 55.9 while in 2020 it has increased to 90.2. Therefore, our results could be affected by the general inflation of LGBTQ+ rating scores over time and an increased number of firms achieving the

[20] All of these variables are sourced by Boardex where more information can be sought at https://www.boardex.com.

maximum score.[21] To mitigate against this concern, we re-estimate our baseline regressions but remove firms that have a CEI rating of 100 for more than 4, 5, 6 or 7 consecutive years in our sample. In this way, we remove firms that consistently receive high LGBTQ+ ratings and give more attention to firms that are increasing (or decreasing) their ratings. Table 13 reports the findings. The findings are robust and consistent with our baseline results. Hence, the inflation of CEI ratings over time and especially the increasing number of firms with maximum rating scores do not seem to drive the positive association between corporate LGBTQ+-friendliness and labor investment inefficiency.

6.5. Manufacturing versus Non-Manufacturing firms

As a final robustness check, we test whether our results are driven by a specific industry. Appendix B shows that Manufacturing firms represent the largest proportion of sample firms, making up just below 44% of all observations. Figure 2 illustrates considerable between-industry heterogeneity in the development of LGBTQ+ ratings over time. Hence, we divide our sample into Manufacturing firms and Non-Manufacturing firms and run our baseline regression on these two sub-samples. Table 14 reports the results and we find that LGBTQ+-friendliness is positively related to labor investment inefficiency, and in particular labor underinvestment, in both Manufacturing and Non-Manufacturing firms, suggesting that our results are unlikely driven by a specific industry.

7. Conclusion

[21] We also report in Figure 2 the average LGBTQ+ rating over time across our different industries and see a general increase in their ratings over time except for the mining and nonclassifable sectors. There is only one observation in the agriculture sector hence it is not presented here.

In this study, we have investigated the relationship between a firm's LGBTQ+-friendly corporate policies and its labor investment efficiency. We find that, overall, greater LGBTQ+-friendliness leads to less efficient labor investments and that firms which are more LGBTQ+-friendly tend to underinvest in labor. However, further analyses reveal that the link between corporate LGBTQ+-friendliness and labor investment inefficiency diminishes and becomes insignificant from 2015 onwards, the year in which same-sex marriage was declared a constitutional right by the US Supreme Court. To further understand the channels that drive the dynamic relationship between LGBTQ+-friendliness and labor investment inefficiency, we test a variety of moderators to this relationship and find that greater LGBTQ+-friendliness only leads to less efficient labor investments in firms that have fewer financial resources (i.e. lower free cash flows, more financial constraints) and firms with lower organisational and human capital. However, the significant effect of these moderators vanished post 2015. In addition, the share of people identifying as LGBTQ+ in the state's population affects the relationship between corporate LGBTQ+-friendliness and labor investment efficiency: only in states with a low share of LGBTQ+ population does LGBTQ+-friendliness lead to inefficient labor investments – and this moderating effect persists throughout our entire sample period.

We employ three theories to explain our findings – stakeholder theory, agency theory and institutional theory – and conclude that our results are most consistent with the implications of institutional theory which posits that firms respond to their institutional environment and align their corporate behaviours and actions with institutional and societal pressures and norms to gain legitimacy and stability, even at the expense of financial efficiency. In our context, firm's LGBTQ+-friendly policies can be regarded as a response to institutional and societal norms of equality and equity, which can result in losses to labor investment efficiency, especially where attraction and retention of employees is less strategically important (i.e. low human capital intensive firms and low organisational capital firms) or where financial resources are restricted. In

such cases, firms' LGBTQ+ policies might be regarded as social issue participation (Hillman and Keim, 2001; Gonzalez et al., 2022). However, as equal rights for the LGBTQ+ community become more socially accepted (post-2015) and where LGBTQ+ employees represent a larger share of the population and hence are more central corporate stakeholder, corporate LGBTQ+-friendliness no longer incurs labor investment efficiency losses.

Our findings have several important implications for firms who aim to adopt LGBTQ+-friendly policies. Firstly, our results suggest that improving corporate LGBTQ+-friendliness is not an effective measure to improve a firm's labor investment efficiency. While in more recent years an improvement in LGBTQ+-friendliness does not seem to be associated with labor investment efficiency losses, our findings highlight the importance to account for the moderating effects of a firm's financial resources, the strategic importance of human and organisation capital to its business operations and the presence of and support for the LGBTQ+ community in their local environment. Overall, while firms might choose to adopt LGBTQ+-supportive policies for a variety of reasons, including to contribute to equal treatment for all their employees, seeing corporate LGBTQ+-friendliness as a means to improve their labor investment efficiency is not supported by our data.

Secondly, and more generally, our results highlight the importance of considering the institutional context in which firms operate and its moderating impact on the effect of their policies and actions on corporate outcomes. In this way, our study emphasises the usefulness of employing institutional theory to understand the varying application of corporate policies, such as LGBTQ+-friendly treatment, among US firms, as well as their differing effect on other corporate financial outcomes, such as labor investment efficiency.

Finally, our findings suggest that firms should not regard LGBTQ+-friendliness as a substitute for or complement to other more general CSR policies and expect the same effects on corporate

outcomes. In line with several recent studies (e.g. Gonzalez et al., 2022), we show that CSR and LGBTQ+ policies are conceptually different and can have distinct effects on corporate outcomes.

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Table 1: Descriptive Statistics. All continuous variables are winsorized at 1% and 99% levels.

Variable	Obs	Mean	Std. Dev.	Min	Max
AB_NETHIRE	3,461	0.2106	0.2817	0.0013	1.4917
Over_Labor	966	0.1136	0.1646	0.0007	0.9963
Under_Labor	2,495	-0.2468	0.3032	-1.5031	-0.0030
CEI LGBTQ+ Rating	3,461	79.4106	24.3003	14	100
MtB	3,461	3.8087	9.1898	-44.3954	51.0233
Size	3,461	9.6716	1.4283	6.3125	12.8051
LIQ	3,461	1.0419	0.7311	0.1042	4.3547
LEV	3,461	0.2832	0.1722	0	0.8471
DIVD	3,461	0.7807	0.4138	0	1
Tangibles	3,461	0.2792	0.2356	0.0157	0.8527
Loss	3,461	0.0835	0.2767	0	1
Labint	3,461	0.0045	0.0070	0.0001	0.0463
SD_Scaled CFO	3,461	0.0283	0.0208	0.0040	0.1120
SD_Scaled Sales	3,461	0.1037	0.0989	0.0098	0.5250
SD_NetHire	3,461	0.1027	0.0996	0.0100	0.5429
LnBoardSize	3,461	2.3953	0.1720	1.9459	2.7726
BoardIndependence	3,461	0.9076	0.1483	0.6667	1.6667
Female_CEO	3,461	0.0537	0.2255	0	1
CEO_Chair	3,461	0.1702	0.3758	0	1

Table 2: Correlation matrix of our independent variables.

	CEI LGBTQ+ Rating	MtB	Size	LIQ	LEV	DIVD	Tang	Loss	Labint	CFO	Sales	NetHire	BdSize	BdIndence	F_CEO	CEO_Chair
CEI LGBTQ+ Rating	1.0000															
MtB	0.0542	1.0000														
Size	0.2894	0.1551	1.0000													
LIQ	0.0760	0.0279	0.1050	1.0000												
LEV	-0.0596	-0.0773	-0.1172	-0.2498	1.0000											
DIVD	0.0464	0.0467	0.2768	-0.1484	0.0530	1.0000										
Tangibles	-0.1324	-0.0673	-0.0083	-0.3476	0.2386	0.1923	1.0000									
Loss	-0.0276	-0.0520	-0.2646	-0.0229	0.0709	-0.2464	-0.0065	1.0000								
Labint	-0.0872	0.0380	-0.2466	-0.1472	0.0012	0.0046	0.1428	-0.0261	1.0000							
SD_Scaled CFO	-0.0392	0.0157	-0.1783	0.2246	-0.0390	-0.1962	-0.1596	0.1288	0.0793	1.0000						
SD_Scaled Sales	-0.0744	-0.0095	-0.2080	0.0011	-0.0846	-0.1361	-0.1590	0.0824	0.1793	0.3808	1.0000					
SD_NetHire	-0.0026	-0.0443	-0.0765	0.0436	0.0338	-0.1462	-0.1192	0.1325	-0.0595	0.1332	0.3144	1.0000				
LnBoardSize	0.0753	0.0574	0.3707	-0.1134	0.0170	0.2598	0.1022	-0.1146	-0.1170	-0.2284	-0.1332	-0.0255	1.0000			
BoardIndependence	0.0625	-0.0399	0.0445	-0.1143	0.1529	0.0999	0.0866	-0.0405	-0.0719	-0.0811	-0.0682	0.0065	0.0957	1.0000		
Female_CEO	0.0583	0.0298	-0.0436	-0.0735	0.0341	0.0520	0.0029	-0.0117	0.0265	-0.0597	-0.0582	-0.0013	-0.0153	-0.0346	1.0000	
CEO_Chair	-0.1620	-0.0098	-0.0029	-0.0702	-0.1194	0.0356	0.0689	-0.0088	0.0509	0.0603	0.0047	0.0259	0.0804	-0.0534	-0.0772	1.0000

Table 3: Baseline Results. This table reports the baseline regression of abnormal net hiring on LGBTQ+ policies. Column 1 shows the results when regressing abnormal net hiring on the LGBTQ+ rating and control variables, while column 2 (3) shows the results regressing labor over-investment (under-investment) on the LGBTQ+ ratings and control variables. All specifications use fixed effects regressions with year and firm fixed effects. Standard errors are clustered at firm level. ***, ** and * indicate significance at the 1%, 5% and 10% levels, respectively.

	Abnormal Net Hiring	**Overinvestment**	**Underinvestment**
CEI LGBTQ+ Rating	0.000785***	0.000000614	0.00121***
	(2.80)	(0.00)	(3.24)
MtB	-0.000243	0.000362	-0.000886
	(-0.52)	(1.09)	(-1.27)
Size	-0.0497***	-0.0182	-0.0659***
	(-3.53)	(-1.00)	(-3.53)
LIQ	0.0128	0.0324*	0.00755
	(1.12)	(1.78)	(0.38)
LEV	-0.0717	-0.164***	0.00448
	(-1.63)	(-2.69)	(0.07)
DIVD	-0.0643**	-0.0171	-0.0862**
	(-1.97)	(-0.45)	(-2.10)
Tangibles	0.133	-0.0914	0.248*
	(0.97)	(-0.53)	(1.82)
Loss	-0.00912	-0.0214	-0.0151
	(-0.36)	(-0.88)	(-0.46)
Labint	-2.820	-5.323**	-0.797
	(-1.47)	(-2.04)	(-0.37)
SD_Scaled CFO	0.149	0.523	0.177
	(0.51)	(1.21)	(0.49)
SD_Scaled Sales	0.0258	-0.110	0.00881
	(0.28)	(-0.78)	(0.08)
SD_NetHire	-0.224***	-0.517***	-0.0201
	(-3.29)	(-5.61)	(-0.26)
LnBoardSize	0.0245	-0.0550	0.0311
	(0.62)	(-1.03)	(0.64)
Board Independence	0.000433	-0.0246	-0.0181
	(0.01)	(-0.63)	(-0.30)
Female_CEO	-0.0282	0.0283	-0.0552
	(-0.97)	(0.79)	(-1.28)
CEO_Chair Duality	0.0389**	0.0235	0.0338
	(2.30)	(0.87)	(1.56)
Constant	0.583***	0.552**	0.655***
	(3.51)	(2.58)	(3.14)
Year FE	Yes	Yes	Yes
Firm FE	Yes	Yes	Yes
No. of Obs.	2939	822	2117
adj. R-sq	0.0215	0.0667	0.0283

Table 4: Subsample Baseline Results. This table reports the baseline regression of abnormal net hiring (ANH) on LGBTQ+ policies prior and after 2015. Columns 1 to 3 show the results for the pre-2015 sub-sample, while the results for the post 2015 are reported in columns 4 to 6. The dependent variable in columns 1 and 4 is abnormal net hiring, while the dependent variable in columns 2 and 5 (columns 3 and 6) is labor over-investment (under-investment). All specifications use fixed effects regressions with year and firm fixed effects. Standard errors are clustered at firm level. ***, ** and * indicate significance at the 1%, 5% and 10% levels, respectively.

	Prior to 2015 - lower acceptance for LGBT			**Post 2015 - higher acceptance for LGBT**		
	ANH	**Overinvestment**	**Underinvestment**	**ANH**	**Overinvestment**	**Underinvestment**
CEI LGBTQ+ Rating	0.000800**	0.000530	0.000959**	-0.000173	-0.00471***	0.00129
	(2.37)	(0.95)	(2.04)	(-0.13)	(-4.14)	(1.32)
MtB	-0.000432	-0.0000694	-0.00105	0.00138	0.000499	0.00244
	(-0.88)	(-0.16)	(-1.23)	(1.33)	(0.50)	(1.05)
Size	-0.0734***	-0.0149	-0.100***	-0.0233	-0.0360	-0.0297
	(-3.87)	(-0.66)	(-4.03)	(-0.48)	(-0.48)	(-0.38)
LIQ	0.0114	0.0264	0.0194	0.0272	0.0479*	-0.0205
	(0.76)	(1.08)	(0.83)	(1.56)	(1.68)	(-0.37)
LEV	-0.108*	-0.205***	0.00543	0.0500	-0.838**	0.319
	(-1.69)	(-2.60)	(0.06)	(0.23)	(-2.51)	(0.87)
DIVD	-0.0560	-0.00115	-0.0913*	0.0322	0	0.0215
	(-1.35)	(-0.02)	(-1.84)	(1.04)	(.)	(0.51)
Tangibles	0.0811	-0.138	0.216	0.124	-1.462*	0.528
	(0.49)	(-0.75)	(1.23)	(0.28)	(-1.74)	(1.17)
Loss	-0.0222	-0.0251	-0.0163	0.00188	0.104*	-0.0609
	(-0.69)	(-0.70)	(-0.39)	(0.04)	(1.89)	(-0.93)
Labint	-2.109	-7.225	-0.165	2.353	-17.55	11.74***
	(-0.64)	(-1.15)	(-0.04)	(0.37)	(-0.75)	(2.88)
SD_Scaled CFO	-0.158	0.396	0.0715	0.0487	0.250	-1.435
	(-0.45)	(0.71)	(0.17)	(0.06)	(0.15)	(-0.99)
SD_Scaled Sales	-0.0901	-0.202	-0.173	0.490	0.826	0.337
	(-0.82)	(-1.01)	(-1.39)	(1.30)	(0.82)	(0.78)
SD_NetHire	-0.269***	-0.515***	-0.130	-0.777**	-1.030***	0.474
	(-3.21)	(-4.59)	(-1.38)	(-2.15)	(-6.15)	(0.81)
LnBoardSize	0.0106	-0.0682	0.0255	0.00136	0.0588	-0.0668
	(0.24)	(-0.89)	(0.51)	(0.01)	(0.44)	(-0.45)
Board Independence	0.0171	-0.0968*	-0.00389	0.0286	-0.177	0.222
	(0.34)	(-1.74)	(-0.05)	(0.29)	(-1.10)	(1.23)
Female_CEO	-0.0272	0.0706**	-0.0718	-0.0560	0	0.0191
	(-0.68)	(1.97)	(-1.22)	(-0.46)	(.)	(0.15)
CEO_Chair Duality	0.0430**	0.0278	0.0390*	0	0	0
	(2.42)	(0.99)	(1.73)	(.)	(.)	(.)
Constant	0.872***	0.623**	1.036***	0.361	1.355	0.0427
	(4.18)	(2.18)	(3.98)	(0.69)	(1.34)	(0.05)
Year FE	Yes	Yes	Yes	Yes	Yes	Yes
Firm FE	Yes	Yes	Yes	Yes	Yes	Yes
No. of Obs.	2165	597	1568	774	225	549
adj. R-sq	0.0332	0.0687	0.0421	0.0188	0.3547	0.0099

Table 5: Moderating Effects. This table reports the baseline regression of abnormal net hiring on LGBT policies for subsamples based on Free Cash Flow, Financial Constrain, Organization Capital, Human Capital, % of LGBT population in the state, and based on which Political Party wins more than 55% of state's votes in the presidential election. We define firms with above(below)-median as High(Low) subsample, with the exception for the 'Democrat Political Party wins more than 55% in state' specifications where the 'High' sub-sample includes states where the Democratic political party gained more than 55% of votes in a state, and the 'Low' sub-sample includes firms in states where the Republican political party reached more than 55% of the votes. Standard errors are clustered at firm level. ***, ** and * indicate significance at the 1%, 5% and 10% levels< respectively.

	Full Sample		**Pre-2015**		**Post-2015**		**Full Sample**		**Pre-2015**		**Post-2015**	
	High	**Low**	**High**	**Low**	**High**	**Low**	**High**	**Low**	**High**	**Low**	**High**	**Low**
				Free Cash Flow						**Financial Constrained**		
CEI LGBTQ+ Rating	0.000258	0.00109**	-0.000187	0.00132**	-0.000204	-0.00118	0.00116***	0.000227	0.00109***	0.000484	0.00153	-0.00235
	(0.88)	(2.06)	(-0.50)	(1.98)	(-0.24)	(-0.44)	(3.19)	(0.52)	(2.71)	(0.96)	(1.20)	(-0.92)
Constant	0.610***	0.322	1.036***	0.557*	0.549	0.190	0.500**	1.108***	0.744***	1.584***	-0.340	0.485
	(3.24)	(1.18)	(4.09)	(1.77)	(0.85)	(0.21)	(2.24)	(4.12)	(2.69)	(4.97)	(-0.62)	(0.41)
Control Variables	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Firm FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
No. of Obs.	1470	1469	1079	1086	391	383	1444	1495	1056	1109	388	386
adj. R-sq	0.0298	0.0286	0.0399	0.0457	0.2506	0.0226	0.0214	0.0405	0.0325	0.0657	0.0525	0.0592
				Organization Capital						**Human Capital**		
CEI LGBTQ+ Rating	0.000530	0.00124***	0.000622	0.000959**	-0.00240	0.00100	0.000317	0.000832**	0.000287	0.000854*	-0.000139	-0.0000980
	(1.30)	(2.89)	(1.25)	(2.28)	(-1.00)	(0.85)	(0.90)	(2.37)	(0.66)	(1.95)	(-0.13)	(-0.06)
Constant	0.566**	0.870***	1.084***	0.934***	0.353	0.366	0.952***	0.574***	1.071**	1.037***	1.309*	0.0866
	(2.36)	(3.18)	(3.77)	(2.72)	(0.48)	(0.38)	(3.56)	(2.61)	(2.60)	(4.13)	(1.82)	(0.13)
Control Variables	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Firm FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
No. of Obs.	1815	1124	1326	839	489	285	902	2037	686	1479	216	558
adj. R-sq	0.0234	0.0274	0.0394	0.0375	-0.0000	0.0991	0.0546	0.0215	0.0680	0.0409	0.2286	0.0029
				% of LGBT population in state						**Democrat Political Party wins more than 55% in state**		
CEI LGBTQ+ Rating	0.000503	0.00144***	0.000543	0.00130***	-0.00284	0.00222*	0.00113**	0.00181**	0.000845	0.00154**	0.000704	-0.00142
	(1.20)	(3.54)	(1.07)	(2.97)	(-1.08)	(1.95)	(2.55)	(2.46)	(1.65)	(2.12)	(0.33)	(-0.86)
Constant	0.290	1.115***	0.631***	1.452***	-0.327	1.529	0.457*	0.549	1.057***	0.586	-0.760	5.297
	(1.45)	(4.03)	(2.72)	(4.01)	(-0.55)	(1.34)	(1.94)	(1.14)	(3.48)	(0.95)	(-1.08)	(1.43)
Control Variables	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Firm FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
No. of Obs.	1721	1218	1262	903	459	315	1227	410	886	321	341	89
adj. R-sq	0.0178	0.0417	0.0267	0.0594	0.0358	0.0572	0.0244	0.0561	0.0426	0.0547	0.0180	0.5655

Table 6: Endogeneity (High dimensional fixed effects and industry fixed effects). This table reports the high-dimensional fixed effects model estimation results of the impact of LGBTQ+-friendly policy on firms' abnormal net hiring (ANH). In columns 1 to 3, we control for industry and year fixed effects. In columns 4 to 6, we control for the firm and interacted industry-year fixed effects. All variables are defined in Appendix A. The t-values reported in parentheses are based on standard errors clustered by firm and year. ***, **, and * denote statistical significance at the 1%, 5%, and 10% level, respectively.

	Industry Fixed Effects			High-Dimensional Fixed Effects		
	ANH	Overinvestment	Underinvestment	ANH	Overinvestment	Underinvestment
CEI LGBTQ+ Rating	0.000785***	0.000000614	0.00121***	0.000742***	-0.0000782	0.00115***
	(2.80)	(0.00)	(3.24)	(3.03)	(-0.21)	(3.20)
MtB	-0.000243	0.000362	-0.000886	-0.000212	0.000380	-0.000882
	(-0.52)	(1.09)	(-1.27)	(-0.47)	(1.50)	(-1.30)
Size	-0.0497***	-0.0182	-0.0659***	-0.0509**	-0.00944	-0.0738**
	(-3.53)	(-1.00)	(-3.53)	(-2.75)	(-0.73)	(-2.79)
LIQ	0.0128	0.0324*	0.00755	0.0138	0.0375*	0.00911
	(1.12)	(1.78)	(0.38)	(1.17)	(1.93)	(0.48)
LEV	-0.0717	-0.164***	0.00448	-0.0797	-0.164***	-0.0205
	(-1.63)	(-2.69)	(0.07)	(-1.70)	(-3.00)	(-0.32)
DIVD	-0.0643**	-0.0171	-0.0862**	-0.0626*	-0.0364	-0.0888*
	(-1.97)	(-0.45)	(-2.10)	(-2.08)	(-0.84)	(-2.02)
Tangibles	0.133	-0.0914	0.248*	0.116	-0.0110	0.229
	(0.97)	(-0.53)	(1.82)	(0.73)	(-0.06)	(1.45)
Loss	-0.00912	-0.0214	-0.0151	-0.00648	-0.0403	-0.0111
	(-0.36)	(-0.88)	(-0.46)	(-0.27)	(-1.69)	(-0.32)
Labint	-2.820	-5.323**	-0.797	-4.183**	-5.034**	-2.121
	(-1.47)	(-2.04)	(-0.37)	(-2.25)	(-2.68)	(-0.95)
SD_Scaled CFO	0.149	0.523	0.177	0.211	0.665*	0.218
	(0.51)	(1.21)	(0.49)	(0.64)	(1.94)	(0.47)
SD_Scaled Sales	0.0258	-0.110	0.00881	0.00366	-0.158	0.00820
	(0.28)	(-0.78)	(0.08)	(0.03)	(-1.11)	(0.07)
SD_NetHire	-0.224***	-0.517***	-0.0201	-0.233***	-0.487***	-0.0132
	(-3.29)	(-5.61)	(-0.26)	(-3.49)	(-6.08)	(-0.16)
LnBoardSize	0.0245	-0.0550	0.0311	0.0283	-0.0349	0.0395
	(0.62)	(-1.03)	(0.64)	(0.79)	(-0.73)	(0.71)
Board Independence	0.000433	-0.0246	-0.0181	-0.00854	-0.0286	-0.0203
	(0.01)	(-0.63)	(-0.30)	(-0.24)	(-0.77)	(-0.35)
Female_CEO	-0.0282	0.0283	-0.0552	-0.0245	0.0403	-0.0462
	(-0.97)	(0.79)	(-1.28)	(-0.98)	(1.00)	(-1.27)
CEO_Chair Duality	0.0389**	0.0235	0.0338	0.0369*	0.0275	0.0340
	(2.30)	(0.87)	(1.56)	(1.76)	(0.91)	(1.17)
Constant	0.583***	0.552**	0.655***	0.639***	0.397**	0.791***
	(3.51)	(2.58)	(3.14)	(3.13)	(2.62)	(3.19)
Year FE	Yes	Yes	Yes	No	No	No
Industry FE	Yes	Yes	Yes	No	No	No
Firm FE	No	No	No	Yes	Yes	Yes
Year # Industry FE	No	No	No	Yes	Yes	Yes
No. of Obs.	2939	822	2117	2886	744	2046
adj. R-sq	0.0215	0.0667	0.0283	0.4153	0.1966	0.4332

Table 7: Heckman Model. This table reports the results of a 2-stage Heckman model. In the first stage, we use LGBTQ+-Friendly dummy$_t$ as the dependent variable and run a Probit regression. LGBTQ+-Friendly dummy variable = 1 if the LGBTQ+ Rating > the median of LGBTQ+ Rating in the given fiscal year; and LGBTQ+-Friendly dummy variable = 0 otherwise. % of LGBT Population in a state is an exogenous variable. The % of LGBT Population is from the Gallup Survey which conducted telephone interviews with a random sample of 710,252 adults from 1st January 2015 to 30th December 2016. In the second stage, we add IMR$_{t-1}$ (inverse Mills ratio) from the first stage in our regression and run the regression of CEI LGBTQ+ Rating$_{t-1}$ on Labor Investment Efficiency. t-statistics are reported in parentheses and ***, ** and * indicate significance at the 1%, 5% and 10% level respectively. Standard errors are clustered at firm level. ANH is the shortcut for abnormal net hiring.

Stage 1: Probit regression		Stage 2: OLS regression	ANH	Overinvestment	Underinvestment
MtB	0.000334	High CEI LGBTQ+ Rating	0.000943***	-0.000237	0.00140***
	(0.09)		(2.95)	(-0.40)	(3.13)
Size	0.331***	MtB	-0.000541	0.000436	-0.00120
	(4.05)		(-1.04)	(1.13)	(-1.53)
LIQ	-0.0285	Size	-0.0566***	-0.0389	-0.0526**
	(-0.33)		(-2.71)	(-1.36)	(-2.07)
Board Independence	-0.422	LIQ	0.0230	0.0334*	0.0325
	(-1.32)		(1.45)	(1.82)	(1.10)
CEO_Chair Duality	0.150	LEV	-0.0210	-0.118	0.0452
	(1.04)		(-0.38)	(-1.43)	(0.54)
% of LGBT Population	-82.71*	DIVD	-0.0708	-0.0132	-0.0980*
	(-1.85)		(-1.51)	(-0.23)	(-1.78)
Constant	1.751	Tangibles	0.206	0.0702	0.358**
	(0.76)		(1.12)	(0.27)	(2.06)
Year FE	Yes	Loss	-0.0250	-0.0630***	-0.0195
Firm FE	Yes		(-0.78)	(-2.63)	(-0.46)
No. of Obs.	2242	Labint	-1.254	-7.482	0.976
pseudo R-sq	0.2820		(-0.42)	(-1.03)	(0.33)
		SD_Scaled CFO	0.0636	0.641	0.108
			(0.15)	(0.87)	(0.20)
		SD_Scaled Sales	0.0585	0.0310	0.00775
			(0.44)	(0.12)	(0.05)
		SD_NetHire	-0.223**	-0.563***	0.0191
			(-2.18)	(-3.75)	(0.16)
		LnBoardSize	0.0492	-0.0610	0.0461
			(0.95)	(-0.81)	(0.71)
		Board Independence	0.0170	-0.0306	-0.0370
			(0.32)	(-0.45)	(-0.51)
		Female_CEO	-0.0345	0.00734	-0.0638
			(-0.92)	(0.18)	(-1.09)
		CEO_Chair Duality	0.0425*	0.0399	0.0396
			(1.84)	(0.94)	(1.32)
		IMR	-0.0308	-0.0961	0.0514
			(-0.42)	(-0.91)	(0.53)
		Constant	0.418*	0.716**	0.302
			(1.66)	(2.13)	(0.94)
		Year FE	Yes	Yes	Yes
		Firm FE	Yes	Yes	Yes
		No. of Obs.	1959	536	1423
		adj. R-sq	0.3957	0.2503	0.4109

Table 8: Entropy Balancing. This table presents the results of entropy balancing estimates of equation (2) with firm and year FE. Panels A and B report the means, variances and skewnesses for the covariates for the treatment group (i.e., CEI LGBTQ+ Rating higher than sample median) and control groups (CEI LGBTQ+ Rating lower than sample median) before and after balancing, respectively. We reach convergence or perfect balancing using Hainmueller's Stata code given that there is no mean, variance and skewness difference between the treatment and control groups after the balancing. Panel C presents the regression based on the entropy balancing method. ANH is the shortcut for abnormal net hiring.

Panel A: Before Entropy Balancing

	Treatment			Control		
	mean	variance	skewness	mean	variance	skewness
MtB	3.961	87.4	-0.0169	2.931	66.74	1.28
Size	9.831	1.922	-0.173	8.756	1.734	0.593
LIQ	1.059	0.561	2.049	0.943	0.372	1.488
LEV	0.271	0.0265	0.658	0.352	0.0420	0.590
DIVD	0.794	0.164	-1.452	0.706	0.208	-0.903
Tangibles	0.267	0.0536	0.985	0.348	0.0614	0.453
Loss	0.0767	0.0708	3.182	0.123	0.108	2.298
Labint	0.00415	0.0000405	3.858	0.00642	0.0000964	2.774
SD_CFO_AT	0.0278	0.000419	1.646	0.0309	0.000507	1.639
SD_Sales_AT	0.101	0.00950	2.254	0.121	0.0111	1.813
SD_NetHire	0.102	0.00963	2.3	0.108	0.0116	1.757
LnBoardSize	2.407	0.0294	-0.341	2.327	0.0254	-0.108
Board_Independence	0.9095	0.0230	3.313	0.897	0.0158	3.558
Female_CEO	0.0529	0.050	3.994	0.058	0.0552	3.763
CEO_Chair	0.178	0.146	1.683	0.125	0.109	2.271

Panel B: After Entropy Balancing

	Treatment			Control		
	mean	variance	skewness	mean	variance	skewness
MtB	3.961	87.4	-0.0169	3.962	87.43	-0.0171
Size	9.831	1.922	-0.173	9.833	1.923	-0.178
LIQ	1.059	0.561	2.049	1.059	0.561	2.048
LEV	0.271	0.0265	0.658	0.271	0.0265	0.657
DIVD	0.794	0.164	-1.452	0.794	0.164	-1.455
Tangibles	0.267	0.0536	0.985	0.267	0.0536	0.984
Loss	0.077	0.0708	3.182	0.0766	0.0709	3.184
Labint	0.00415	0.0000405	3.858	0.00415	0.0000405	3.857
SD_CFO_AT	0.0278	0.000419	1.646	0.0278	0.000419	1.645
SD_Sales_AT	0.101	0.0095	2.254	0.101	0.009497	2.253
SD_NetHire	0.102	0.0096	2.3	0.102	0.00964	2.299
LnBoardSize	2.407	0.029	-0.341	2.408	0.0294	-0.350
Board_Independence	0.9095	0.02304	3.313	0.9097	0.02304	3.308
Female_CEO	0.05292	0.05013	3.994	0.05287	0.05017	3.996
CEO_Chair	0.1781	0.1464	1.683	0.1777	0.1464	1.686

Panel C: Entropy Balancing Regression Results

	ANH
LGBTQ+-Friendly	0.0315**
	(2.15)
Constant	-0.0512
	(-0.36)
Control Variables	Yes
Year FE	Yes
Firm FE	Yes
No. of Obs.	2,939
adj. R-sq	0.2440

Table 9: Reverse causality results. This table reports the baseline regression of abnormal net hiring on LGBTQ+ policies where all the independent variables are lagged by 2 and 3 years relative to the dependent variable while the final two columns report the 2SLS first and second stage results. In column 4, we replace "CEI LGBTQ+ Rating" with "Fitted LGBTQ+"All specifications use fixed effects regressions with year and firm fixed effects. Standard errors are clustered at firm level and ***, ** and * indicate significance at the 1%, 5% and 10% levels respectively.

	2-year lag	3-year lag	2SLS First Stage	2SLS Second Stage
CEI LGBTQ+ Rating	0.00105***	0.000831**		0.000624**
	(3.18)	(2.49)		(2.18)
Market_ LGBTQ+			-172.1***	
			(-46.30)	
MtB	-0.000814**	-0.000454	0.000612	-0.000252
	(-2.19)	(-0.95)	(0.03)	(-0.51)
Size	-0.0252*	0.00212	0.620	-0.0493***
	(-1.82)	(0.14)	(1.02)	(-3.27)
LIQ	0.0285*	-0.00562	-0.197	0.0128
	(1.71)	(-0.38)	(-0.35)	(1.05)
LEV	-0.0128	0.0245	1.306	-0.0745
	(-0.22)	(0.40)	(0.35)	(-1.57)
DIVD	-0.0553*	-0.0589	1.250	-0.0640*
	(-1.81)	(-1.41)	(1.29)	(-1.83)
Tangibles	0.147	0.0484	-9.783*	0.131
	(0.96)	(0.36)	(-1.80)	(0.89)
Loss	0.00590	0.0255	1.599**	-0.00821
	(0.23)	(0.89)	(2.56)	(-0.31)
Labint	0.734	0.136	-20.05	-2.814
	(0.29)	(0.07)	(-0.25)	(-1.37)
SD_Scaled CFO	0.229	0.207	-5.906	0.148
	(0.74)	(0.46)	(-0.42)	(0.47)
SD_Scaled Sales	-0.0504	-0.0955	-3.560	0.0287
	(-0.66)	(-1.19)	(-1.00)	(0.29)
SD_NetHire	-0.149**	-0.153**	-0.0879	-0.223***
	(-2.26)	(-2.09)	(-0.03)	(-3.07)
LnBoardSize	0.0563	-0.0374	-0.226	0.0233
	(1.15)	(-0.76)	(-0.14)	(0.56)
Board Independence	0.0133	-0.0926	1.997	0.000384
	(0.17)	(-0.86)	(0.84)	(0.01)
Female_CEO	0.0195	-0.00277	-0.233	-0.0276
	(0.81)	(-0.08)	(-0.16)	(-0.88)
CEO_Chair Duality	0.0191	0.0167	-0.613	0.0392**
	(0.83)	(0.85)	(-0.67)	(2.16)
Constant	0.215	0.329	9666.6***	0.452***
	(1.21)	(1.52)	(46.76)	(2.67)
Year FE	Yes	Yes	Yes	Yes
Firm FE	Yes	Yes	Yes	Yes
No. of Obs.	2531	2213	2117	2939
adj. R-sq	0.0202	0.0188	0.9608	0.4155

Table 10: Difference-in-Difference Analysis. This table reports the results of a Difference-in-Difference analysis of the effect of LGBTQ+-friendliness on labor investment inefficiency. The treatment variable is the year 2015 and the coefficient of interest is the interaction term between the LGBTQ+ rating and the 'Year>=2015' dummy, which indicates if the observation corresponds to the year 2015 or later. Specifications (1) to (3) contain year and firm fixed effects, while specifications (4) to (6) also contain State-Year fixed effects. Standard errors are clustered at firm level and ***, ** and * indicate significance at the 1%, 5% and 10% levels, respectively.

	(1)	(2)	(3)	(4)	(5)	(6)
	ANH	Overinvestment	Underinvestment	ANH	Overinvestment	Underinvestment
LGBTQ+ Rating × Year >= 2015	**0.000148**	**-0.00111***	**0.000827**	**-0.0000719**	**-0.00106**	**0.000272**
	(0.30)	**(-1.65)**	**(1.30)**	**(-0.14)**	**(-1.04)**	**(0.40)**
Year >= 2015	0.0396	0.0542	0.0589	0.0567	0.403	0.356
	(0.76)	(0.68)	(0.92)	(0.74)	(1.30)	(1.27)
CEI LGBTQ+ Rating	0.000747**	0.000247	0.00101**	0.000721**	0.000342	0.000830
	(2.39)	(0.61)	(2.35)	(2.03)	(0.46)	(1.52)
MtB	-0.000245	0.000378	-0.000899	-0.000927*	0.000396	-0.00148**
	(-0.52)	(1.14)	(-1.28)	(-1.75)	(0.65)	(-1.98)
Size	-0.0500***	-0.0172	-0.0682***	-0.0438***	0.0253	-0.0714***
	(-3.57)	(-0.95)	(-3.69)	(-2.76)	(1.01)	(-3.21)
LIQ	0.0129	0.0315*	0.00789	0.0195	0.00554	0.0208
	(1.13)	(1.75)	(0.40)	(1.43)	(0.32)	(0.82)
LEV	-0.0720	-0.170***	0.000370	-0.126**	-0.143*	-0.0480
	(-1.63)	(-2.82)	(0.01)	(-2.19)	(-1.73)	(-0.57)
DIVD	-0.0646**	-0.0147	-0.0874**	-0.0787**	-0.0575	-0.117***
	(-1.98)	(-0.39)	(-2.14)	(-2.48)	(-1.51)	(-2.89)
Tangibles	0.134	-0.0992	0.255*	0.198	-0.0248	0.385***
	(0.98)	(-0.58)	(1.90)	(1.23)	(-0.11)	(2.64)
Loss	-0.00926	-0.0179	-0.0159	-0.00588	-0.00206	-0.0137
	(-0.37)	(-0.73)	(-0.48)	(-0.21)	(-0.08)	(-0.36)
Labint	-2.827	-5.080*	-0.760	-3.920*	-7.362	-2.281
	(-1.47)	(-1.89)	(-0.35)	(-1.71)	(-1.28)	(-0.75)
SD_Scaled CFO	0.145	0.558	0.150	0.197	0.227	0.251
	(0.50)	(1.29)	(0.42)	(0.63)	(0.39)	(0.59)
SD_Scaled Sales	0.0262	-0.107	0.0149	0.0101	-0.140	-0.00834
	(0.29)	(-0.77)	(0.13)	(0.10)	(-0.84)	(-0.05)
SD_NetHire	-0.224***	-0.502***	-0.0157	-0.258***	-0.365***	-0.0813
	(-3.28)	(-5.47)	(-0.20)	(-3.33)	(-2.87)	(-0.80)
LnBoardSize	0.0245	-0.0519	0.0313	0.0294	-0.0358	0.0326
	(0.62)	(-0.98)	(0.64)	(0.68)	(-0.37)	(0.58)
Board_Independence	0.000153	-0.0318	-0.0218	0.0314	-0.0191	0.0560
	(0.00)	(-0.83)	(-0.35)	(0.57)	(-0.26)	(0.67)
Female_CEO	-0.0283	0.0294	-0.0558	-0.0380	-0.0383	-0.0561
	(-0.98)	(0.82)	(-1.31)	(-1.04)	(-0.50)	(-1.10)
CEO_Chair Duality	0.0389**	0.0230	0.0335	0.0434**	0.00552	0.0300
	(2.30)	(0.85)	(1.55)	(2.07)	(0.15)	(1.10)
Constant	0.588***	0.525**	0.689***	0.514***	-0.219	0.554**
	(3.58)	(2.48)	(3.34)	(2.76)	(-0.56)	(2.01)
Year FE	Yes	Yes	Yes	Yes	Yes	Yes
Firm FE	Yes	Yes	Yes	Yes	Yes	Yes
State#Year FE	No	No	No	Yes	Yes	Yes
No. of Obs.	2939	822	2117	2939	822	2117
adj. R-sq	0.0213	0.0704	0.0290	0.0682	0.2764	0.1007

Table 11: Controlling for ESG and diversity. This table reports the regression of abnormal net hiring (ANH) on LGBTQ+ policies by adding ESG scores as additional controls as well as various diversity measures. All specifications use fixed effects regressions with year and firm fixed effects. Standard errors are clustered at firm level and ***, ** and * indicate significance at the 1%, 5% and 10% levels, respectively.

	ANH	ANH	ANH	ANH	ANH	ANH	ANH	ANH	ANH
CEI LGBTQ+ Rating	0.000667**	0.000678**	0.000668**	0.000697**	0.000789***	0.000799***	0.000820***	0.000785***	0.000834***
	(2.15)	(2.19)	(2.13)	(2.25)	(2.81)	(2.85)	(2.92)	(2.77)	(2.95)
ESGScore	0.000908**								
	(2.01)								
Environmental Pillar Score		0.000654*							
		(1.90)							
Social Pillar Score			0.000792*						
			(1.93)						
Governance Pillar Score				0.000103					
				(0.37)					
GenderRatio					0.0402				0.0455
					(0.47)				(0.53)
NationalityMix						0.0276			0.0176
						(0.61)			(0.39)
BoardAgeDiversity							0.0375		0.0379
							(1.38)		(1.39)
TenureDiversity								-0.00389	-0.00723
								(-0.27)	(-0.49)
Constant	0.609***	0.631***	0.608***	0.602***	0.551***	0.581***	0.533***	0.584***	0.492***
	(3.35)	(3.47)	(3.35)	(3.29)	(3.29)	(3.49)	(3.09)	(3.52)	(2.84)
Control Variables	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Firm FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
No. of Obs.	2666	2666	2666	2666	2939	2939	2939	2926	2926
adj. R-sq	0.0246	0.0245	0.0247	0.0233	0.0213	0.0213	0.0222	0.0220	0.0221

Table 12: Alternative Measures of Abnormal Net Hiring. This table reports the regression of abnormal net hiring on LGBTQ+-friendly policies by using alternative definition of labor investment efficiency. All specifications use fixed effects regressions with year and firm fixed effects. Standard errors are clustered at firm level and ***, ** and

	Biddle et al. (2009)	Pinnuck and Lillis (2007)	Cella (2020)
CEI LGBTQ+ Rating	0.000354**	0.000701**	0.000279*
	(2.26)	(2.49)	(1.83)
MtB	0.000199	-0.000178	0.000247
	(0.94)	(-0.41)	(1.10)
Size	-0.0244**	-0.0221	-0.0148*
	(-2.11)	(-1.51)	(-1.73)
LIQ	0.0184*	0.0270**	0.0136
	(1.86)	(2.14)	(1.46)
LEV	-0.125	-0.0353	-0.0624*
	(-1.29)	(-0.79)	(-1.87)
DIVD	-0.0146	-0.0595*	-0.0235
	(-1.00)	(-1.74)	(-1.11)
Tangibles	0.211	0.127	-0.0550
	(1.45)	(0.95)	(-0.58)
Loss	-0.00420	-0.00427	0.0134
	(-0.34)	(-0.17)	(0.98)
Labint	-4.964**	-3.343*	-2.881**
	(-2.06)	(-1.87)	(-2.03)
SD_Scaled CFO	0.349	0.0807	-0.0175
	(1.62)	(0.26)	(-0.09)
SD_Scaled Sales	-0.0868	0.0380	0.0650
	(-0.97)	(0.41)	(1.15)
SD_NetHire	-0.193	-0.255***	-0.379***
	(-1.38)	(-3.65)	(-8.04)
LnBoardSize	-0.00447	0.0242	0.00782
	(-0.15)	(0.60)	(0.30)
Board Independence	-0.0485	0.0145	-0.00814
	(-1.53)	(0.32)	(-0.43)
Female_CEO	0.0248	-0.0478	-0.00335
	(1.12)	(-1.55)	(-0.20)
CEO_Chair Duality	0.0119	0.0439**	0.0176
	(1.04)	(2.40)	(1.47)
Constant	0.362***	0.282*	0.301***
	(3.19)	(1.67)	(2.99)
Year FE	Yes	Yes	Yes
Firm FE	Yes	Yes	Yes
No. of Obs.	1544	2939	2939
adj. R-sq	0.0470	0.3492	0.0487

Table 13: Controlling for inflation of CEI LGBTQ+ rating scores. This table reports the regression of abnormal net hiring on LGBTQ+ policies by removing firms for which the CEI LGBT Rating is 100 (maximum score) for 7, 6, 5 or 4 consecutive years. All specifications use fixed effects regressions with year and firm fixed effects. Standard errors are clustered at firm level and ***, ** and * indicate significance at the 1%, 5% and 10% levels, respectively.

	in 7 consecutive years	in 6 consecutive years	in 5 consecutive years	in 4 consecutive years
CEI LGBTQ+ Rating	0.000862***	0.000802**	0.000844**	0.000833**
	(2.67)	(2.31)	(2.34)	(2.09)
MtB	-0.000245	0.000335	0.000232	0.000746
	(-0.38)	(0.62)	(0.43)	(0.89)
Size	-0.0438**	-0.0501***	-0.0461**	-0.0418**
	(-2.49)	(-2.74)	(-2.44)	(-2.04)
LIQ	-0.000531	-0.00688	-0.00748	-0.00802
	(-0.04)	(-0.48)	(-0.51)	(-0.42)
LEV	-0.0655	-0.0918	-0.106*	-0.119
	(-1.26)	(-1.63)	(-1.70)	(-1.64)
DIVD	-0.0604	-0.0387	-0.0323	-0.0206
	(-1.55)	(-1.27)	(-1.07)	(-0.63)
Tangibles	0.114	0.0986	0.0941	0.114
	(0.66)	(0.50)	(0.43)	(0.49)
Loss	-0.0300	-0.0217	-0.0254	-0.0196
	(-1.06)	(-0.72)	(-0.78)	(-0.57)
Labint	-3.924*	-4.206*	-3.821	-5.393**
	(-1.73)	(-1.67)	(-1.47)	(-2.11)
SD_Scaled CFO	0.237	0.244	0.246	0.0631
	(0.63)	(0.61)	(0.60)	(0.14)
SD_Scaled Sales	0.121	0.144	0.149	0.161
	(1.17)	(1.26)	(1.11)	(1.12)
SD_NetHire	-0.185**	-0.202**	-0.192**	-0.226**
	(-2.01)	(-2.36)	(-2.11)	(-2.27)
LnBoardSize	-0.0129	0.0114	-0.000722	0.0169
	(-0.26)	(0.20)	(-0.01)	(0.26)
Board Independence	0.0493	0.0585	0.0608	0.0615
	(0.86)	(0.94)	(0.94)	(0.90)
Female_CEO	-0.0405	-0.0473	-0.0454	-0.0483
	(-1.34)	(-1.46)	(-1.37)	(-1.38)
CEO_Chair Duality	0.0579***	0.0340	0.0370	0.0409
	(2.65)	(1.52)	(1.60)	(1.49)
Constant	0.605***	0.623***	0.609***	0.544**
	(2.86)	(2.81)	(2.61)	(2.16)
Year FE	Yes	Yes	Yes	Yes
Firm FE	Yes	Yes	Yes	Yes
No. of Obs.	2020	1817	1667	1443
adj. R-sq	0.0157	0.0149	0.0141	0.0154

Table 14: Manufacturing vs. Non-Manufacturing firms. This table reports the regression of abnormal net hiring (ANH) on LGBTQ+ ratings for Manufacturing and Non-Manufacturing firms. All specifications use fixed effects regressions with year and firm fixed effects. Standard errors are clustered at firm level and ***, ** and * indicate significance at the 1%, 5% and 10% levels, respectively.

	Manufacturing			**Non-Manufacturing**		
	ANH	Overinvestment	Underinvestment	ANH	Overinvestment	Underinvestment
CEI LGBTQ+ Rating	0.000733**	-0.000166	0.00157***	0.000886*	0.000162	0.00115**
	(2.28)	(-0.46)	(3.00)	(1.91)	(0.09)	(2.19)
MtB	-0.000186	0.000240	-0.000942	-0.000308	0.00170***	-0.000989
	(-0.45)	(0.61)	(-1.30)	(-0.34)	(2.69)	(-0.88)
Size	-0.0311*	0.00580	-0.0587*	-0.0647***	-0.0624	-0.0659***
	(-1.70)	(0.37)	(-1.86)	(-3.45)	(-1.30)	(-2.98)
LIQ	0.0223	0.0388*	0.0244	-0.00285	-0.0118	-0.0114
	(1.44)	(1.84)	(0.65)	(-0.18)	(-0.33)	(-0.58)
LEV	-0.149**	-0.151**	-0.0962	-0.01000	-0.0948	0.0685
	(-2.51)	(-2.24)	(-0.97)	(-0.15)	(-0.64)	(0.83)
DIVD	-0.0220	-0.0407	-0.0130	-0.0909**	-0.0172	-0.122**
	(-0.43)	(-0.85)	(-0.18)	(-2.08)	(-0.29)	(-2.47)
Tangibles	0.298	0.133	0.365	-0.00923	-0.499**	0.166
	(1.62)	(0.86)	(1.58)	(-0.06)	(-2.14)	(1.01)
Loss	-0.0251	-0.0393	-0.0348	0.000891	-0.0184	-0.00836
	(-0.79)	(-1.29)	(-0.70)	(0.02)	(-0.37)	(-0.19)
Labint	-14.50	-1.674	-11.24	-1.083	-4.940**	0.805
	(-1.25)	(-0.15)	(-0.80)	(-0.63)	(-2.12)	(0.42)
SD_Scaled CFO	0.224	0.898	-0.0355	0.0603	-0.171	0.379
	(0.61)	(1.64)	(-0.08)	(0.13)	(-0.18)	(0.65)
SD_Scaled Sales	0.111	-0.413*	0.257	-0.0101	0.0650	-0.0956
	(0.84)	(-1.96)	(1.61)	(-0.08)	(0.37)	(-0.63)
SD_NetHire	-0.326***	-0.383***	-0.178	-0.179*	-0.736***	0.0401
	(-3.89)	(-3.77)	(-1.56)	(-1.78)	(-5.22)	(0.39)
LnBoardSize	-0.0239	-0.0257	-0.0631	0.0644	-0.149	0.0813
	(-0.50)	(-0.49)	(-0.77)	(1.14)	(-1.31)	(1.31)
Board_Independence	-0.0603	-0.00589	-0.116	0.0634	-0.243*	0.0425
	(-1.17)	(-0.15)	(-0.92)	(0.99)	(-1.84)	(0.67)
Female_CEO	-0.0621**	0.0182	-0.0993*	0.0173	0.172*	-0.0127
	(-1.99)	(0.53)	(-1.80)	(0.38)	(1.92)	(-0.21)
CEO_Chair Duality	0.0620***	0.0122	0.0810**	0.0242	0.101	0.0137
	(2.76)	(0.40)	(2.44)	(0.94)	(1.20)	(0.46)
Constant	0.462**	0.158	0.738**	0.693***	1.462***	0.585**
	(2.12)	(0.79)	(2.37)	(2.99)	(2.88)	(2.17)
Year FE	Yes	Yes	Yes	Yes	Yes	Yes
Firm FE	Yes	Yes	Yes	Yes	Yes	Yes
No. of Obs.	1306	552	754	1633	270	1363
adj. R-sq	0.0502	0.0699	0.0795	0.0133	0.1673	0.0236

Figure 1: A time-series graph of the average LGBTQ+ rating across all firms in our sample.

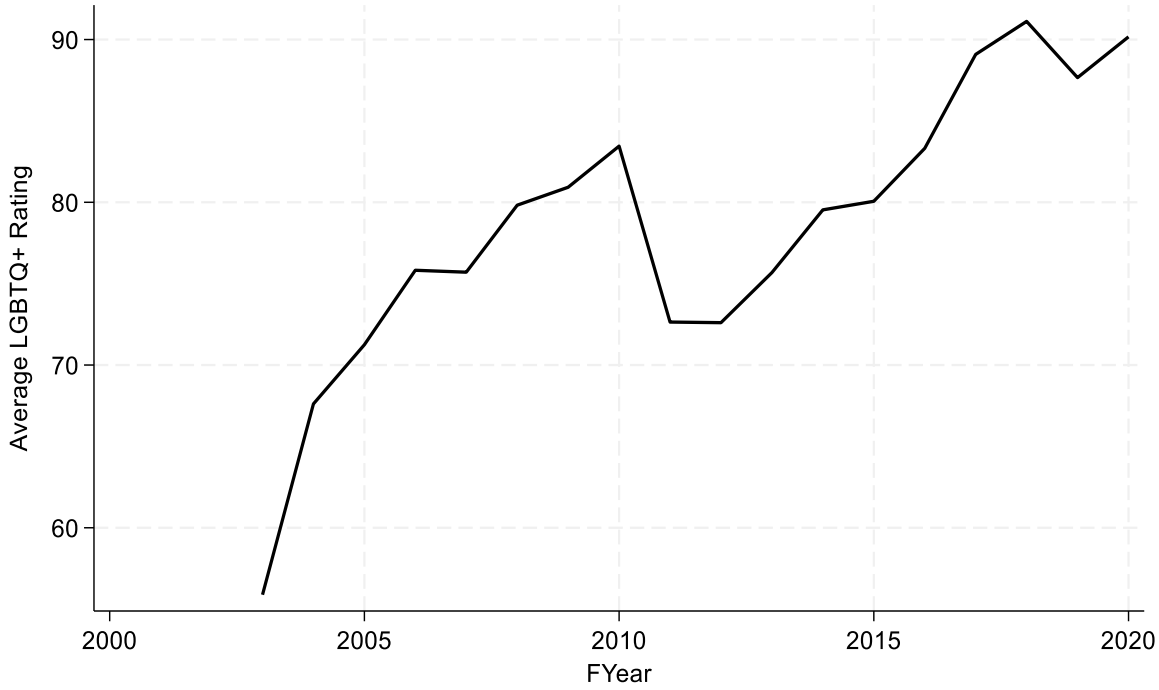
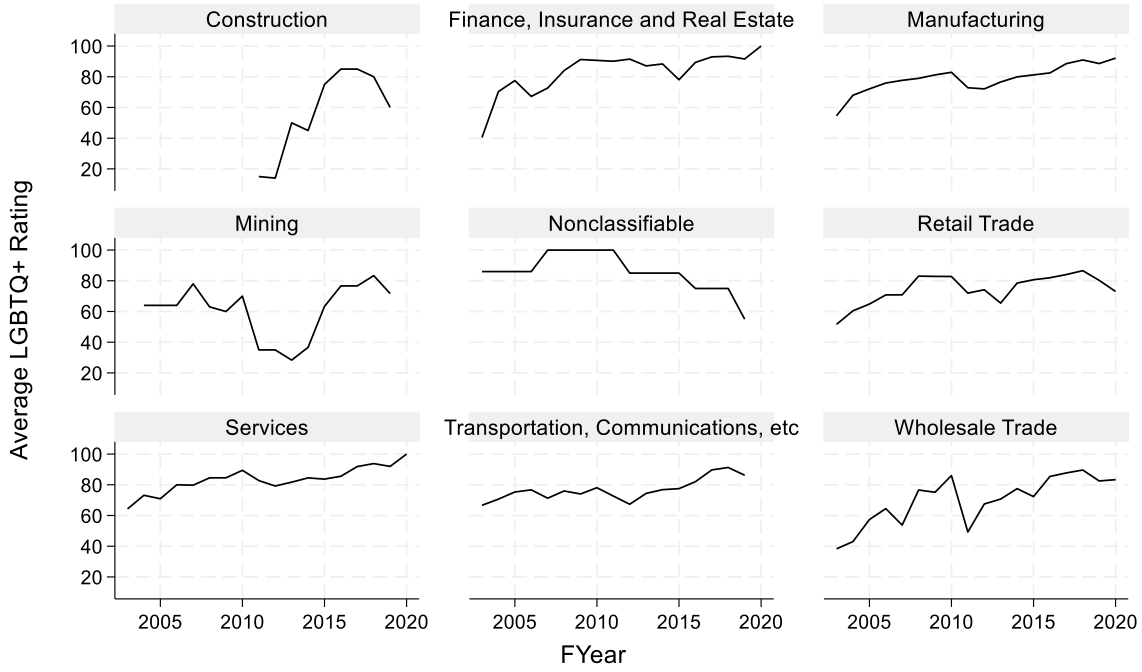


Figure 2: Average LGBTQ+ Rating by Industry. This graph shows the average LGBTQ+ rating by industry per year. Note that 'Agriculture, Forestry and Fishing' is not included in the graph as this industry only has one firm-year observation.



Appendix A: Variable Definitions

Variable	Definition	Source
Net_Hire	Percentage change in the number of employees from year t-1 to year t for firm i (EMP/L.EMP -1).	COMPUSTAT
AB_NETHIRE	Abnormal net hiring is the absolute value of the difference between the observed level of labor investment and that justified by economic fundamentals based on Pinnuck and Lillis (2007).	COMPUSTAT
Over_Labor	Over_Labor is the positive abnormal net hiring as the measure for labor over-investment.	COMPUSTAT
Under_Labor	Under_Labor is the negative abnormal net hiring as the measure for labor under-investment.	COMPUSTAT
CEI LGBTQ+ Rating	Rating of a firm's LGBTQ+-friendliness in terms of corporate policies to lesbian, gay, bisexual and transgender employees and public advocacy related to the rights of sexual minorities, with higher values indicating a higher LGBTQ+-friendliness	CEI
MtB	Market-to-book ratio in year t for firm i (CSHO * PRCC_F/CEQ).	COMPUSTAT
Size	The natural logarithm of market value at the end of fiscal year t for firm i (ln(CSHO*PRCC_F)).	COMPUSTAT
LIQ	Quick ratio at the end of year t for firm i ((CHE + RECT)/LCT).	COMPUSTAT
LEV	Leverage for firm i, measured as the sum of debt in current liabilities and total long-term debt at the end of year t, divided by end of year t total assets ((DLC+DLTT)/AT).	COMPUSTAT
DIVD	Indicator variable coded as 1 if the firm paid dividends in year t for firm (DVPSP_F) .	COMPUSTAT
Tangibles	Property, plant, and equipment at the end of year t, divided by total assets at the end of year t, for firm i (PPENT/AT).	COMPUSTAT
Loss	Indicator variable coded as 1 if the firm had negative net income for year t firm i (NI).	COMPUSTAT
Labint	Labor intensity, measured as the number of employees divided by total assets at the end of year t-1 for firm i (EMP/L.AT).	COMPUSTAT
SD_Scaled CFO	Standard deviation of firm i's cash flows from operation scaled by total assets from year t-4 to t (OANCF/AT).	COMPUSTAT
SD_Scaled Sales	Standard deviation of firm i's sales scaled by total assets from year t-4 to t (REVT/AT).	COMPUSTAT
SD_NetHire	Standard deviation of firm i's change in the number of employees from year t-4 to t.	COMPUSTAT
LnBoardSize	The natual logarithm of number of directors.	BoardEx
BoardIndependence	The proportion of non-executive directors in firm i at the end of year t.	BoardEx
Female_CEO	An indicator variable that equals one if a CEO is female and zero otherwise.	ExecuComp
CEO_Chair	An indicator variable that equals one if a CEO is Chairman and zero otherwise.	ExecuComp
GenderRatio	The proportion of male directors at the Annual Report Date selected.	BoardEx
NationalityMix	Proportion of Directors from different countries at the Annual Report Date selected.	BoardEx
BoardAgeDiversity	The natural logarithm of standard deviation of the population of the ages of directors for all the directors at the Annual Report Date selected.	BoardEx
TenureDiversity	The natual logarithm of standard deviation of the population of Time on Board values for all the Directors at the Annual Report Date selected.	BoardEx
ESGScore	ESG Score	Refinitiv
ESG_C	ESG Controversies Score	Refinitiv
ESG_E	ESG Environmental Pillar Score	Refinitiv
ESG_S	ESG Social Pillar Score	Refinitiv
ESG_G	ESG Governance Pillar Score	Refinitiv

Appendix B: Descriptive statistics of the firms in our sample by industry.

Industry	N of Unique Firms	Firm-Year Obs.	% of Firm-Year Obs.	Avg. LGBTQ+
Agriculture, Forestry and Fishing	1	1	0.03	30.00
Construction	1	9	0.26	56.56
Finance, Insurance and Real Estate	21	175	5.06	85.25
Manufacturing	147	1,510	43.63	79.11
Mining	3	33	0.95	59.03
Retail Trade	49	395	11.41	75.96
Services	68	577	16.67	84.71
Transportation, Communications and Utilities	60	608	17.57	78.32
Wholesale Trade	18	136	3.93	73.68
Non-classifiable	1	17	0.49	86.12
Sum	*369*	*3,461*	*100.00*	