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The Impact of Foreign-born CEOs and Female CEOs on LGBT-friendly HR policies and Firm Performance

Evidence from Fortune 500 Corporations 2008-2017

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Abstract

This study examines the relationship between whether a CEO is foreign-born or female and a series of organizational outcomes, including LGBT-friendly human resources policies and firm financial performance. For the empirical analysis I use a rich longitudinal data on the companies that are listed in Fortune 500 list and have scored on corporate equality index list over a 10-year period. Corporate equality index is used as proxy for LGBT-friendly human resources policies, ROA and Tobin's Q are used as proxies for firm financial performance.

The empirical analysis applies ordinary least square regressions and fixed effects regressions. I find a positive correlation between foreign-born CEOs/female CEOs and firm's corporate equality index score. This association disappears, however, once I control for unobserved firm-specific characteristics. I further find that the interaction between female CEOs and organization's mimetic behavior is contribute to the advancement of LGBT-friendly human resources policies. In addition to LGBT-friendly human resources policies, my findings suggest that being a foreign-born CEO or not is positively correlated to firm's Tobin's Q, the positive correlation disappears after controlling for firm fixed effects. In my sample, I don't observe a significant positive correlation between female CEOs and firm performance. Finally, my findings suggest that the interaction between foreign-born CEOs and firm internationalization strategy has significant positive effect on firm's ROA.

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1. Introduction

Globalization is changing the profile of U.S.-based companies. American CEOs have become more diverse over the past three decades (Hambrick, Finkelstein, Cho, & Jackson, 2005). For example, an influx of foreign-born managers are now heading as CEOs some of the most iconic American corporations, such as PepsiCo, 3M, Microsoft (Crain's Chicago Business, 2017). Women have also increased their presences among business leaders. However, foreign-born CEOs and female CEOs still remain numerically rare on the upper echelons of large American corporations. For instance, there are 11.8% of Fortune 500 CEOs born outside of the U.S. (Boardroom Insiders, 2016). Compared with a relatively sizeable share of foreign-born CEOs in Fortune 500, there are just 24 female CEOs leading the Fortune 500 corporations (CNBC, 2018).

The paucity of foreign-born CEOs and female CEOs in large U.S. corporations suggests that they may change firms in terms of organization, corporate social responsibility and financial performance including competitiveness. Foreign-born CEOs and female CEOs are not merely a symbolic posture of diverse and inclusive corporate culture, their presences in the highest organizational rank are more specifically a reflection of firms' commitment to managing increasingly diverse workforce, managing international complexity, and sustaining competitive advantage in today's business world. With this in mind, this study aims to address the following questions: does foreign-born CEO or female CEO have a positive effect on the adoption of LGBT-friendly human resource (HR) policies and firm performance? This study further examines the interactive effect between organizational leaders and contextual factors on organizational outcomes.

But why should businesses care about the LGBT-friendly HR policies? LGBT refers collectively to lesbian, gay, bisexual, and transgender people. The number of LGBT persons is estimated to account for 4% of the total population in the U.S., namely, 9

million people (Gates, 2011). The figure itself indicates that LGBT community is sizeable for the consumer and labor markets as it represents a strong buying power which is estimated to be \$917 billion (Catalyst, 2018) and comprises up to 12% of the workforce (Day & Greene, 2008). LGBT-friendly HR policies have also been viewed as an increasingly important aspect of corporate management because they are associated with numerous benefits ranging from improved financial performance to employee commitment (Cook & Glass, 2016). However, extant research has primarily focused on the impact of external pressures (e.g. state nondiscrimination laws) on organizations' implementation of LGBT-friendly HR policies (Everly & Schwarz, 2015; Li & Nagar, 2013). Little is known to us on the internal predictors of adopting LGBT-friendly HR policies (Cook & Glass, 2016), more specifically, the role of organizational leaders in promoting workplace diversity practices. Thus, I aim to address this research gap by examining the impact of foreign-born CEOs and female CEOs on LGBT-friendly HR policies respectively.

The second question I ask is whether foreign-born CEOs and female CEOs improve firm performance because of their unique and valuable human capital resources. It has been argued that organizations are reflections of their top managers (Hambrick & Mason, 1984). Upper echelons theory suggests that certain top managers' backgrounds could impact firm strategic choices and performance in some ways. However, as noted by Carpenter, Sanders and Gregersen (2001), upper echelons theory doesn't predict how such backgrounds translate into actual competitive advantage. In the resource-based review (Barney, 1991), firm resources, tangible and intangible, that are valuable, rare, and inimitable can contribute to competitive advantage for those firms owning them. Given that certain CEO characteristics and experiences are tacit by nature and are difficult to imitate, like foreign-born CEOs' life experiences outside the U.S., female CEOs' leadership style, I posit that foreign-born CEOs/female CEOs have unique and valuable managerial resources, which could benefit those firms that possess these resources.

In addition to examine the direct impact of foreign-born CEOs/female CEOs on organizational outcomes. I also investigate two interaction effects between organizational leaders and contextual factors on organizational outcomes. Given the fact that large American corporations are dominated by U.S.-born white men, which is also referred to the normative in-group (Stainback, Tomaskovic-Devey & Skaggs, 2010), nontraditional leaders like foreign-born CEOs and female CEOs are facing the pressure to “conform the values, attitudes, and orientations of the dominant group” (Cook & Glass, 2015, p.203). In response to the pressure or uncertainty, organization are most likely to model themselves on similar organizations in their field to seek for legitimacy, these modeling behaviors, according to DiMaggio and Powell (1983), are called mimetic processes, or put simply, adoption by similar others. I therefore assume adoption by similar others will buffer the conformity pressures on foreign-born CEOs/female CEOs to promote LGBT-friendly HR policies.

The second interaction effects I test is the jointly impact of foreign-born CEOs and firm internationalization strategy on firm performance. Resource-based view also suggests that intangible resources that are socially complex and embedded in human capital, such as foreign-born CEOs’ life experience outside the U.S. and their familiarity with at least two institutional environments, are mostly likely to create values for those firms possessing them when they are “bundled” with other firm complementary resources, like firms’ degree of internationalization. Therefore, I assume that foreign-born CEOs’ valuable managerial resources may complement or support resources such as firm internationalization strategy to generate rents for firms.

This study aims to contribute to three strands of research topics: diversity issues in the workplace, CEO characteristics, and research that are grounded in the resource-based view. First, this study responds to the call for studying the intersection effects of internal status dynamics (e.g. leadership commitment) and external organizational environments (e.g. legal rules and normative practices) on organizational inequalities, such as diversity program adoption (Stainback, Tomaskovic-Devey & Skaggs, 2010).

More specifically, I study the intersection of foreign-born CEOs/female CEOs and adoption by similar others and their joint effects on firm's promotion of LGBT-friendly HR policies. Second, this study is related to a growing literature emphasizing the importance of CEO characteristics on firm policies and financial performance (Benmelech & Frydman, 2015; Bertrand & Schoar, 2003; Dahl, Dezsó & Ross, 2012; Malmendier & Tate, 2009). These studies show that CEOs with person-specific backgrounds or managerial styles that contribute to heterogeneities in firm financial policies, performance, and firm's wage policy. This thesis investigates a critical but understudied CEO characteristic: national origin. Limited extant studies on executives' national origin are mostly outside the U.S. and are confined to group setting, for example, Nielsen (2010), Nielsen & Nielsen (2013), who find that nationality diversity on top management team affects firm performance by using a sample of Swiss companies. My study is therefore complementary to theirs by using a sample of American corporations. Finally, this thesis adds to resource-based review literature by empirically investigating the prediction that firms will benefit from their foreign-born CEOs/female CEOs with unique and valuable managerial resources and the prediction that firm internationalization strategy interact with foreign-born CEOs' managerial resources and jointly influence firm performance.

The remainder of the thesis is structured as follows: Chapter two investigates the research on the relationship between foreign-born CEOs and female CEOs and organizational outcomes. Chapter three contains the variables measurement, sample construction, and summary statistics. Chapter four outlines the regression methods and specifies the regression models. Chapter five presents my regression results. Chapter six discusses my findings and I conclude in section seven.

2. Literature Review and Hypothesis Development

2.1 Foreign-born CEOs/female CEOs and LGBT-friendly HR policies

People tend to define in part who they are in terms of categorical distinctions or through their social groups (e.g. immigrant vs local citizens). Immigrants' "outsider" status is likely to block their promotion opportunities within existing companies (Hart & Acs, 2011). U.S.-born white men are reported to be more likely to get access to technically challenging tasks and more favorable performance evaluation because of their normative in-group status (DiTomaso et al., 2007). As mentioned in a column of *Boardroom Insiders* (2016), "Some (immigrant CEOs) have had to overcome prejudice, making them value and prioritize diversity". Immigration experience shapes foreign-born CEOs' mindsets, they are more likely to have unconventional viewpoints and broader perspective on world events, immigrant status CEOs could also be more comfortable with organizational change compared with their peers (Kitchell, 1997). Investing in progressive LGBT-friendly HR policies is also an important aspect of organizational changes. I assume that immigrant CEOs are more likely to undertake risks and promote changes, such as LGBT-friendly HR policies.

In general, women are more likely to accept homosexuality than men (Johnson, Brems & Alford-Keating, 1997). For example, a recent experiment on two samples of non-student participants in the U.S. suggests that women tend to hold more positive attitudes towards gays and lesbians in terms of their competence and hirability relative to men (Everly, Unzueta & Shih, 2016). There are also gender differences in terms of leadership and organizational priorities. For instance, female leaders tend to have a relational-oriented and participative leadership style and they are more likely to commit to workplace equity issues compared with males (Dezso & Ross, 2012). There are also some empirical evidences support female leaders' commitment to diversity policies and

practices related to sexual orientation and gender identity. By using a sample Fortune 1000 companies from 2003 to 2010, Everly & Schwarz (2015) finds that firms with higher percentage of women on the board are associated with higher corporate equality index score. Cook & Glass (2016) produced a similar finding that the presence of women on the organization leadership team among Fortune 500 corporations from 2001 to 2010 is positively related to the adoption of firm LGBT-friendly HR policies (Everly & Schwarz, 2015; Cook & Glass, 2016). Based on the arguments above, I predict the following hypotheses:

Hypothesis 1a: Firms headed by foreign-born CEOs will be more likely than other firms to promote LGBT-friendly HR policies.

Hypothesis 1b: Firms headed by female CEOs will be more likely than other firms to promote LGBT-friendly HR policies.

2.2 Foreign-born CEOs /female CEOs and firm performance

According to resourced-based view, firms with superior resources may lead to sustainable competitive advantage. Superior resources are characterized as valuable, rare, imperfectly imitable (Barney, 1991; Barney et al., 2001). In line with resource-based view, managers with superior human capital resources could contribute to value creation for companies (Castanias & Helfat, 2001; Holcomb, Holmes & Connelly, 2009). I argue foreign-born CEOs and female CEOs have superior managerial resources that could create competitive advantage for firms.

2.2.1 Rare

Resources cannot be rare if valuable resources possessed by large numbers of competitors or potential competing firms. Foreign-born CEOs remain numerically rare in the persistent homogeneity of upper echelons of American firms. Despite an increasing number of foreign-born CEOs in American corporates, it's difficult to find CEOs with foreign country specific skills in the executive labor market (Nielsen & Nielsen, 2010; Thams, 2013), suggesting that there is a lack of labor supply of highly qualified foreign-born CEOs. Similarly, both a lack of demand and supply contribute to the scarcity of female CEOs in large American corporations. On demand side, in the white-men dominated business world, employers may hold prejudice against women's productivity, women are therefore have limited access to the top ranks in organizational hierarchy. On supply side, female workers are more likely to have career interruption due to a shifting focus on family (e.g. children bearing), which can attribute to sex differences. Women are thus more likely to hold positions with less promotion probabilities.

2.2.2 Valuable

According to Barney (1991, p.106), resources can only be valuable "when they enable a firm to conceive of or implement strategies that improve its efficiency". If resources cannot be used to exploit opportunities or neutralize threats in a firm's environment, they cannot be valuable for firms. Foreign-born CEOs are valuable resources in a number of ways. According to Castanias & Helfat (1991, 2001), the basic proposition of the managerial rents model is that managers differ in the type and quality of their skills – generic, industry-specific, and firm specific managerial human capital. Thams (2013) extended the managerial rents model through positing that foreign-born CEOs' country specific skills could also generate rents for organizations. Country specific skills refers to "managers' abilities and knowledge that are applicable and specific to a particular national institutional context" (Thams, 2013, p.1). Being raised in their

countries of origin and living in the U.S., foreign-born CEOs have been exposed to at least two national institutional environments, they are more likely to bring novel global perspectives and are highly cultural adaptive. Familiarity with a particular country's institutional environment and culture plays an important role in choosing foreign-entry mode (Nielsen & Nielsen, 2011) and cross-border acquisitions (Masulis, Wang & Xie, 2012). As many America corporations are seeking for expansion globally, foreign-born CEOs country specific skills can help firms to leverage the growth opportunities. For example, in a column edited by Fortune in 2013, Indra Nooyi, CEO of PepsiCo, said "I grew up in an emerging market (India), and I cannot forget that". PepsiCo has major investment in emerging markets such as India, China, and Russia. The presence of foreign-born CEOs can also add diversity to the top management team. Diversity in top management team is said to increase the information-processing capacity (Sanders & Carpenter, 1998) and reduce individual bias and group think, which could increase the quality of decision especially in the context of firm internationalization (Nielsen, 2010). Nationality diversity on the leadership team is reported to positively related to firm's operating performance (Estelyi & Nisar, 2016; Nielsen & Nielsen, 2013).

Since the organizations are still dominated by white males, persisting discrimination or status quo bias are against women in terms of their competency and promotion opportunities. For example, clients tend to assume that female financial analysts on Wall street are less knowledgeable than their male peers (Roth, 2004). Additionally, the board may unconsciously prefer to promote white men for leadership roles (Johnson, Hekman, & Chan, 2016). Women must overcome various obstacles and must be more competent than their peers so as to attain leadership positions, suggesting that female CEOs could be fairly talented or especially good at dealing with managerial complexity issues (Hill et al., 2015). In addition, as argued by Smith and her colleagues (2006), women in top management positions could act as role models to motivate female workers at the lower rank, which may further contribute to firm productivity. In a recent study using longitudinal data on white-collar workers at over 4000 workplaces in Norway, Kunze and Miller (2017) find that high percentage of women at the second

highest level of organizational hierarchy are associated with higher promotion rates for female workers at lower ranks. Based on a sample of S&P 1500 corporations from 1992 to 2006, Dezso and Ross (2012) find that higher percentage of female leaders in top management could improve firm's Tobin's Q. Thus, the scarcity of female CEOs and their managerial resources (e.g. feminine management style) could also be valuable to companies.

2.2.3 Imperfectly imitable

Valuable and rare resources cannot create sustained competitive advantage if these resources are not imperfectly imitable. Causal ambiguity exists when the link between firm resources and firm's sustained competitive advantage is poorly understood (Barney, 1991). Casual ambiguity contributes to the inimitability of foreign-born CEOs and female CEOs and their managerial resources. The relationship between foreign-born CEOs and female CEOs and multinational companies are poorly understood. Firms cannot simply imitate by hiring a highly qualified foreign-born CEO or female CEO. As argued by Carpenter and his colleagues (2001), firms need to think about their truly needs when it comes to appointing CEOs. Social complexity further complicates the imitation behaviors from competitors. Firms hiring foreign-born CEOs and female CEOs could because of their unique path dependency. For example, since 1970s and 1980s, General Electric and P&G have already begun to develop future executives for their overseas operations. Coca-Cola and 3M have long roots of appointing foreign-born CEOs. These aforementioned practices could be tacit and firm-specific, thus "for firms without that particular path through history cannot obtain the resources necessary to implement the strategy" (Barney, 1991, p.108).

If foreign-born CEOs and female CEOs are indeed having rare, valuable, inimitable, managerial resources, they are supposed to help firms achieve above-average

performance. This relationship can be summarized in the following hypothesis:

Hypothesis 2a: All else being equal, foreign-born CEOs will be associated with better firm performance: (a) ROA and (b) Tobin's Q relative to U.S. born CEOs

Hypothesis 2b: All else being equal, female CEOs will be associated with better firm performance: (a) ROA and (b) Tobin's relative to male CEOs.

2.3 Interaction effect of foreign-born CEOs/female CEOs and adoption by similar others

Progressive adoption of LGBT-friendly HR policies remains controversial despite their diffusion across large American corporations. The controversial and stigmatized organizational practice may result in both normative uncertainty and technical uncertainty (Chuang, Church & Ophir, 2011). Normative uncertainty is associated with broad sociocultural norms and values. A survey conducted by Gallup in 2013 basing on telephone interviews with a random sample of 1535 American adults aged 18 and older found that 41% of respondents view homosexuality as morally wrong (Gallup Inc., 2013). Corporations that support LGBT workers could be subject to backlash among various stakeholders (Wang & Schwarz, 2010). Technical uncertainty refers to benefit-cost analysis associated with the adoption of progressive LGBT-friendly HR policies. When faced with such uncertainty, organizations may imitate other organizations' practice to seek for legitimacy (DiMaggio & Powell, 1983). When there is a "similar other" adopt more progressive LGBT-friendly HR policy, other firms in the same industry are more likely to imitate and adopt similar policies. Firms' performance on corporate equality index is publicly visible as the Human Rights Campaign is America's benchmark that evaluates whether the firms are the best place to work for LGBT equality. Companies also care about the rating as it stands for accessing to bigger talent pool and consumer market. The most iconic American corporations, such as Coca-Cola,

Disney, and Marriot regularly announce that they are the best workplace for LGBT people when they get a perfect score on corporate equality index on their official websites. As more and more firms have realized the benefits of promoting LGBT-friendly HR policies, they are most likely to imitate other firms in the same industry to gain competitive advantage. A real-life business case of “adoption by similar others” is when United Airline became the first U.S. airline to fully offer domestic partnerships benefits to same-gender spouses in 1999, since United Airlines’ announcement, “everybody else did it including Delta and TWA” (Forbes, 2016). Similarly, CEOs are also facing such uncertainty in terms of promoting progressive LGBT-friendly HR policies, especially when minority status leaders are more likely to be penalized with worse competence and performance ratings if they help other minorities (Hekman et al., 2017; Johnson & Hekman, 2016). However, previous LGBT-friendly HR policies adopters provided potential adopters with sample solutions and associated benefits and costs related LGBT-friendly HR policies. These solutions may reduce technical and normative uncertainties associated with LGBT-friendly HR policies promotion facing foreign-born CEOs and female CEOs. Thus, I posit they may reinforce each other to facilitate the adoption of more progressive LGBT-friendly HR policies. Put formally,

Hypothesis 3a: There will be a positive interaction effect between foreign-born CEOs and adoption by similar others on firm LGBT-friendly HR policies as measured by CEI.

Hypothesis 3b: There will be a positive interaction effect between foreign-born CEOs and adoption by similar others on firm LGBT-friendly HR policies as measured by CEI.

2.4 Interaction effect of foreign-born CEOs and firm internationalization

Although foreign-born CEOs could have unique and valuable managerial skills relative to U.S. born CEOs in their industry, foreign-born CEOs will benefit their companies

only if their unique managerial skills are fully utilized (Castanias & Helfat, 2001). Furthermore, valuable, rare, and inimitable resource will lead to competitive advantage only when it is bundled with complementary resources (Teece, Pisano & Shuen, 1997), such as firm's international strategy (Carpenter, Sanders & Gregersen, 2001; Carpenter, 2002; Nielsen & Nielsen, 2013). Firm internationalization reflects the degree to which a firm is focused on foreign sales. Globalization offers firms strategic opportunities to expand their businesses. For example, a growing number of U.S. companies are now focused on foreign market for growth as the stagnant sales at home (New York Times, 2007). Consistent with resource-based view (Barney, 1991; Barney, Wright & Ketchen, 2001), firms with a high emphasis on internationalization strategy are more likely to leverage foreign-born CEOs' knowledge of foreign market and international managerial mindset to create value. Similarly, foreign-born CEOs are more likely to achieve their full potential when firms already have deployed substantial resources on foreign market expansion. By using a sample of 245 U.S. multinational companies, Carpenter and his colleagues (2001) found that firm's global strategy posture bundled with CEO's international assignment experience has a positive effect on firm's ROA. Compared with CEOs' international assignment experience, which usually lasts for a short duration (e.g. 1 to 3 years), foreign-born CEOs could have better knowledge of doing business because "foreign-born executives possess valuable knowledge about economic and market factors and institutions as well as about culture, behavior and norms of foreign countries" (Nielsen, 2010, p.188). Foreign-born CEOs' knowledge of foreign markets and institutional environments other than the U.S. could improve firms' bottom lines if firms have a broad global strategic posture. In a recent study on a sample of 146 Swiss companies for the period between 2001 and 2008, Nielsen & Nielsen (2013) used hierarchical linear modeling (HLM) given that there is a nested hierarchical structure (top management team within firms over time, firms within industries and between industries) to examine the relationship between nationality diversity on organizational upper echelons and firms' ROA. Their analysis found that nationality diversity in the top management team interacted with firm internationalization strategy to contribute to firms' ROA. Thus, I expect firm internationalization will interplay with

foreign-born CEOs' managerial skills that jointly improve firms' ROA. Put formally,

Hypothesis 4: There will be a positive interaction effect between foreign-born CEOs and the degree of firm internationalization on firm's ROA.

3. Sample and Data

3.1 Measuring LGBT-friendly HR policies

Corporate equality index (CEI) is a proxy for how extensively firms manage sexual orientation and gender identity diversity in the workplace, which is published annually by the Human Rights Campaign (HRC) Foundation. Launched in 2002, CEI has become the “internationally recognized benchmarking report for businesses to gauge their level of LGBT workplace inclusion against competitors” (Human Rights Campaign, 2018).

CEI score is relied on both firm self-reporting survey developed by the HRC foundation and additional sources, such as “Internal Revenue Service 990 tax filings for business foundations’ gifts to anti-LGBT groups” and “Case laws and news accounts for allegations of discrimination on the basis of sexual orientation and/or gender identity or expression that have been brought against any of these businesses” (Human Rights Campaign, 2017). A perfect score is 100, the lowest score is -25. Despite the evolution of criteria for CEI, the CEI rating system can be summarized into four categories: 1) Non-discrimination policies in terms of both sexual orientation and gender identity across business entities; 2) whether a company offers equitable benefits for LGBT workers and their families; 3) whether a company has competent internal mechanism to promote LGBT inclusion atmosphere, such as diversity council; 4) whether a company publicly committed to LGBT equality rather than undermine equal rights for LGBT people. The CEI criteria and weights have experienced some changes within my sample period (2008-2011 and 2012-2017) but the four categories mentioned above don’t change. The primary difference between 2008-2011 and 2012-2017 lies on that CEI criteria 2012-2017 requiring that the target firms’ suppliers/vendors should also have nondiscrimination policies in terms of sexual orientation and gender identity. Detailed CEI rating criteria and the correspondent weight is provided in Appendix A

(please check Appendix A).

Wang & Schwarz (2010, p. 202) indicated that the CEI score as a proxy of LGBT-HR friendly policies is reliable given that the Cronbach's alpha is 0.9. According to Saunders, Lewis and Thornhill (2015), Cronbach's alpha is to measure the internal consistence of the questionnaire (e.g. CEI rating criteria). Value of 0.7 or above indicate that the four main categories are measuring the same thing, namely, CEI. A value of 0.9 indicate that the CEI score is a highly reliable way to measure LGBT-friendly HR policies.

The potential concern of my sample is that some companies might drop out of the survey because of an unfavorable score or some companies are disappeared due to bankruptcy or mergers and acquisitions, which may result in attrition bias. However, for those Fortune 500 corporations that are invited to participate the CEI survey but don't respond, the HRC foundation reports an unofficial CEI scores for those companies, which is relied on the information collected by the HRC itself. This means that firms with low CEI score will not be excluded from the CEI report. There are some companies in my sample are consistently being rated as low score, such as ExxonMobil, who has been rated as a negative score of 25 for consecutive 4 years (2012-2015). My sample only includes companies that have CEI score for at least two consecutive year, which could also address firms that don't answer the survey due to unfavorable outcomes or other reasons. Figure 1 shows the distribution of CEI score in my sample, there are 239 observations being rated as zero on CEI, accounting for 6% of my sample. Roughly 40% of observations scores below 60 in my sample. Approximately 33% of all observations in my sample get a perfect score of 100 on CEI.

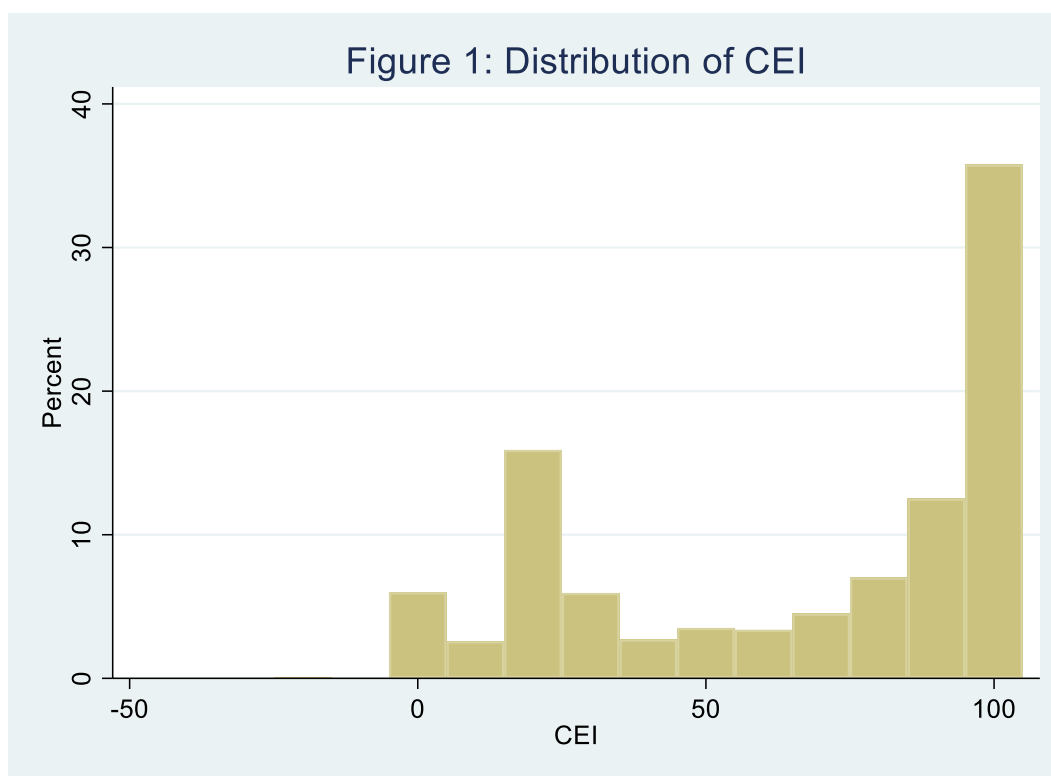


Figure 1 Distribution of Corporate Equality Index score

3.2 Sample Construction

I construct a CEO-firm matched panel data set by merging manually-collected data on CEO birthplace with existing databases including Corporate Equality Index and CompuStat. I have collected data on all corporations ever listed in the Fortune 500 and ever scored in the annual CEI reports during the period 2008 and 2017. The firms included in my sample are those with a published CEI score in at least two consecutive years during the observation period. During the observation period 2008 and 2017, there are some companies dropped out of the Fortune 500 list but with at least two consecutive years of CEI score will be kept in my sample. New entries in the Fortune 500 list with at least two consecutive years of CEI score will be added into my sample. Firms with missing data on total assets in the CompuStat are excluded from my sample.

Fortune magazine's 1000 largest public traded corporations and American Lawyer magazine's top 200 revenue-grossing laws firms will be invited to participate in the annual CEI survey. Additionally, any private-sector, for profit employers with at least

500 full time U.S. employees can ask to participate the survey voluntarily. Figure 2 displays a comparison of the total companies rated by the Human Rights Campaign for the period 2008-2017 and the companies selected in my sample during the same period. The total number of companies being rated on CEI is increasing. 519 companies were rated on CEI in 2008, the number jumps to 1043 in 2017. 228 companies were rated on CEI in my sample in 2008 and there is a total of 445 companies being rated in 2017.

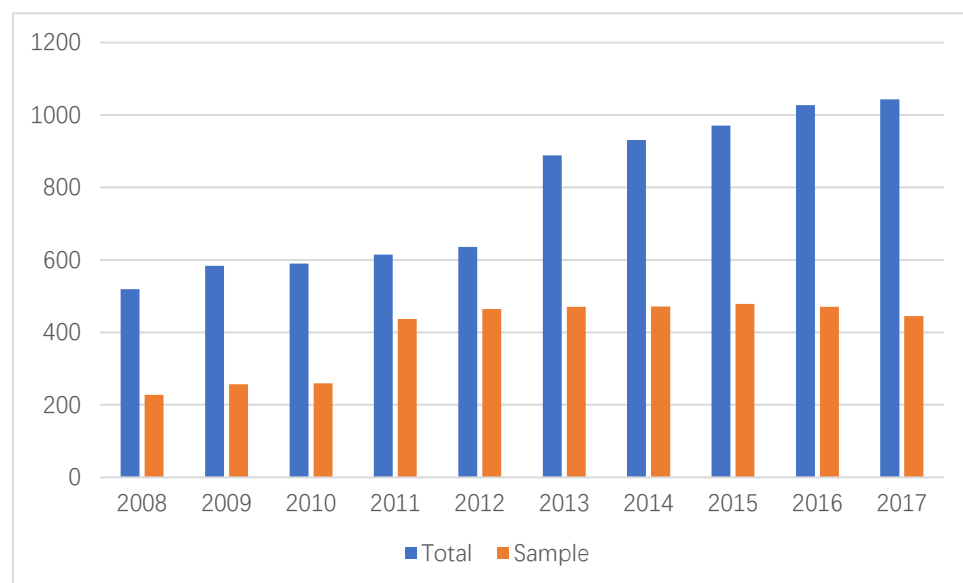


Figure 2 Comparison of total rated companies and rated companies in my sample

There are several reasons to choose U.S.-listed public companies as my sample. First, American CEOs are quite diverse in their backgrounds, and some have described them as more diverse than other advanced economies (Hambrick, 2007). Second, one of my key outcome variables is firms' CEI score, which has been published annually by the HRC since 2002. The CEI is targeted for major American businesses and is a nationally recognized benchmarking for businesses to evaluate their LGBT equality and inclusiveness policies. In addition, I am also interested in the effects of minority status CEOs on firm performance, the U.S. sample offers us comprehensive and reliable financial datasets, such as CompuStat North American. Finally, I have the opportunity to compare my findings with relevant literature that typically investigates American companies. My sample is limited to fortune 500 companies in that these companies are the largest (in terms of turnover) and most visible in U.S. (Cook & Glass, 2015).

Fortune 500 companies are hence more likely to face pressure to promote workplace diversity policies (Kalev, Kelly & Dobbin, 2006).

I collect CEO information from the ExecuComp database. I record each CEO's name, gender, age, board title, and the year of being appointed as the chief executive. For missing names of CEOs from 2008 to 2017, I supplement my data using corporates' annual reports and Bloomberg Business Week Executive Profile. To identify the gender of the CEO, I use titles such as Mr. or Ms. and pronouns such as she/her or he/his in the background section disclosed by Bloomberg Business Week Executive Profile.

Collecting the birthplace of CEOs is one of the main challenges in this study. Only 3% of Fortune 500 companies share full diversity data (Fortune, 2017), unlike the Switzerland, where companies are required to disclose their C-suite's nationality on annual report, USA companies do not disclose CEOs' nationalities and birthplace in their annual reports. To identify the birthplace information of CEOs, I use the following rules. First, I use a list of immigrant CEO's of the Fortune 500 as of April 1, 2017 compiled by the Board Room Insiders. To identify the CEO's birthplace in my data set period from 2008 to 2017, I then search the name of each CEO in the Notable Names Database (NNDB) and Prabook, both of which contains biography information for individuals who have made contribution in their professional field. I can therefore identify CEO's nationality through NNDB and Prabook in some cases. If these are not available, I pay extra attention to those who got their bachelor's degrees outside the U.S., by searching their names plus the country where they got their bachelor's degrees. I also get supplemental information through the New York Times, Wall Street Journal, and Washington Business Journal etc. by searching "foreign-born CEOs" or "immigrant CEOs". Though the supplemental information is much less complete, it acts as a way to confirm the CEO birthplace I collected before.

LGBT-friendly HR policies are measured by Corporate Equality Index (CEI). I collect CEI data from the archive of CEI reports from 2008 to 2017, which is disclosed in the

Human Rights Campaign Foundation (HRC) website. Accounting and market data for the U.S. are from CompuStat North America and CompuStat/CSRP merged database, which is accessed through Wharton Research Data Services (WRDS). Following prior research organizational leaders' characteristics and firm performance (Benmelech & Frydman, 2015; Carter et al., 2010; Masulis, Wang & Xie, 2012), I compute both ROA and Tobin's Q as my dependent variables to measure firm financial performance. All variable definitions and calculations are provided in Appendix B (please check Appendix B).

Following these procedures, I assemble an unbalanced panel data from fiscal year 2008 to 2017 inclusive. The final data set used for analysis consists of 3985 firm-year observations for 479 unique U.S. firms. The sample size used for regression analysis varies because of the missing data.

3.3 Variable description and measurement

In this section, I will describe the measurement of my dependent variables, independent variables and control variables. I will also explain the rationale behind the control variables I choose for analysis.

3.3.1 Dependent Variables

Corporate Equality Index (CEI) Score. Firms' LGBT-friendly HR policies are measured by the CEI score published annually by the Human Rights Campaign (HRC). CEI score has a range of -25 to 100.

Firm Performance. I use both market-based performance measure (Tobin's Q) and accounting-based performance measure (ROA) as my outcome variables for firm financial performance. Tobin's Q is the ratio of the market value of total assets to the book value of total assets. The market value of total assets equals to the book value of

total assets plus the market value of equity minus the sum of the book value of equity plus deferred taxes and investment tax credit. I use a log transformation of Tobin's Q in my regression analysis. ROA is the ratio of operating income after depreciation to the book value of total assets.

3.3.2 Independent Variables

Foreign-born CEO. According to the definition of Migration Policy Institute (MPI), the term "immigrant" or "foreign-born" refers to "people residing in the United States who were not U.S. citizens at birth". This is a binary variable that is equal to 1 if the CEO is foreign born, and 0 otherwise. Foreign-born CEOs in my sample consist of those whose birthplaces were not the United States and then migrated to the United States and those whose nationalities are not America.

Female CEO. This is a binary variable that is equal to 1 if the CEO is a woman, and 0 if the CEO is a man.

Internationalization. I use a single-item indicator to measure the degree of firm's focus on foreign sales. Internationalization is calculated as the ratio of foreign sales to total sales. This item has a theoretical range of 0 to 1.

Mimic. Adoption by similar others is proxied by the term "mimic" in this thesis. This item is the same one used by Everly & Schwarz (2015). Mimic is used to capture whether one firm mimics the benchmark in the same industry. For each firm in an industry, mimic is coded as 0 in any year if no firm in that industry has got a perfect score on the CEI. If there is any firm scored 100 on the CEI in a given year, then the mimic variable is coded as 1 since the year when a firm has earned a perfect score on the CEI and remains there.

3.3.3 Control Variables

To isolate the effect of the experience of foreign-born CEOs/female CEOs on LGBT-friendly HR policies, I include both individual and firm level variables that might covary with a CEO's inclination to adopt LGBT-friendly HR policies. On individual level, I control for CEO age, tenure, and duality. On firm level, I control for firm size, firm's leverage and financial health. The rationale for controlling CEO age is that younger people may be more open-minded towards sexual orientation and identity as the shift of social attitudes towards LGBT people (Ciszek & Gallicano, 2013). Given that lower turnover among executives could lead to organizational rigidity and resistant to new policies (Pfeffer, 1983), I control for CEO tenure. Duality is an important dimension of CEO power (Frinkelstein & D' Aveni, 1994). For instance, CEOs who are also the chairman of their board directors have the power to decide who is one their boards (Hambrick, 2007), therefore, CEOs who are also the chairman of the boards could have more managerial discretion to promote relatively controversial policies such as LGBT-friendly HR policies. Additionally, in the study of the impact of minority leaders (e.g. women leaders and racial/ethnic leaders) on organizational diversity policy, duality has been included as a control variable (Cook & Glass, 2015, 2016, 2018). On firm level, I control for firm size because larger firms may have more effective human resource departments and they are also more likely to be the targets of social activists (Briscoe, Chin & Hambrick, 2014), therefore larger firms may care more about their public image and cater for the society's expectations. Given that there are concerns that LGBT-friendly HR policies may consume company's resources and impede firm's bottom line, the reasons to control firm leverage and firm financial health is similar as firms with lower leverage and healthier financial state may have more slack resources to advance LGBT-friendly HR polices. Following prior literature similar to my topics, such as Cook & Glass (2015), I use ROA to measure firm's financial health.

When studying the impact of foreign-born CEOs/female CEOs on firm financial performance (ROA and Tobin's Q), I control for firm size, CEO tenure and CEO age.

Size of firm are commonly used as a control in an analysis of leadership and financial performance (e.g. Benmelech & Frydman, 2015; Carter et al., 2010). However, it's difficult to predict the direction of the impact of firm size on firm performance. For instance, Dezsó and Ross (2012) found a negative relationship between firm size and Tobin's Q. According to another study by Beck and his colleagues (2005), smaller firms' growth opportunities (measured as firm's sales growth over the past three years) are reported to be more likely to be constrained because smaller firms are more likely to face obstacles such as difficulty in obtaining finance. But firm size is important to control for in the analysis of financial performance. In addition to firm size, CEO age should also be one of my control variables as CEO age is reported to be associated with CEO's risk-taking behaviors and managerial style, for example, older generations of CEOs tend to be more conservative in their decision-making. (Betrand & Schoar, 2003). CEO tenure is controlled given that it is positively related with top managers' risk-taking propensity (Simsek, 2007), which could further impact organizational performance. Control variables in this study are measured as follows.

Firm size. I operationalize firm size by using the natural logarithmic form of total assets plus one when I study the relationship between foreign-born CEOs/female CEOs and corporate equality index. Firm size is proxied as total number of employees when I study the impact of foreign-born/female CEOs on firms' ROA and Tobin's Q.

Leverage. Leverage is calculated as the ratio of debt in current liabilities and long-term debt to total assets.

Financial health. I use ROA as a measure of firm's financial health, which is calculated as the ratio of operating income after depreciation to the book value of total assets. This is added only as the controls to test hypothesis 1a and hypothesis 1b.

CEO age. The difference between year t minus the calendar year when a CEO was born.

CEO tenure. This is measured by years in the data set. Those CEOs who were appointed in the end of year were viewed as being new CEOs in the following year in my sample.

Duality. I code 1 for those CEOs who also served as the chairman of the board, and 0 otherwise. I match the name of CEOs with their annual title (“chairman”, “chairman of the board”, “chairman of the executive committee”) in the ExecuComp database.

Industry. I use the North American Industry Classification System (NAICS) code of each firm. I then create dummies for each industry that are included in the regression. There are 19 industry dummies in my sample.

3.4 Descriptive statistics

Figure 3 displays the percent of foreign-born CEOs and female CEOs across time in my sample. I have observed a stable increase in the percentage of foreign-born CEOs since 2012, while the percentage of female CEOs has stagnated during the period 2008 to 2017. The frequency distribution of the minority status CEOs shows no sign of clustering in any particular year for the sample. Table 1 summarizes the birthplace distribution of foreign-born CEOs each year from 2008 to 2017. I observe a large cross section of foreign-born CEOs’ country of origin, with U.K. (13.67%), Canada (13.67%), India (11.51%), Australia (9.89%), and France (4.86%) having the most representations. Table 1 also indicates that CEOs of Fortune 500 companies are not just from Europe and Canada, but also from many other countries such as India, Cuba, Iran, Mexico. Table 2 presents the industry distribution of Fortune 500 companies in my sample. The listed industry in my sample covers the majority of the sectors classified by NAICS, with manufacturing (35.68%), finance and insurance (13.7%), retail trade (10.17%), information (7.83%), and utilities (6.95%) having the most representations.

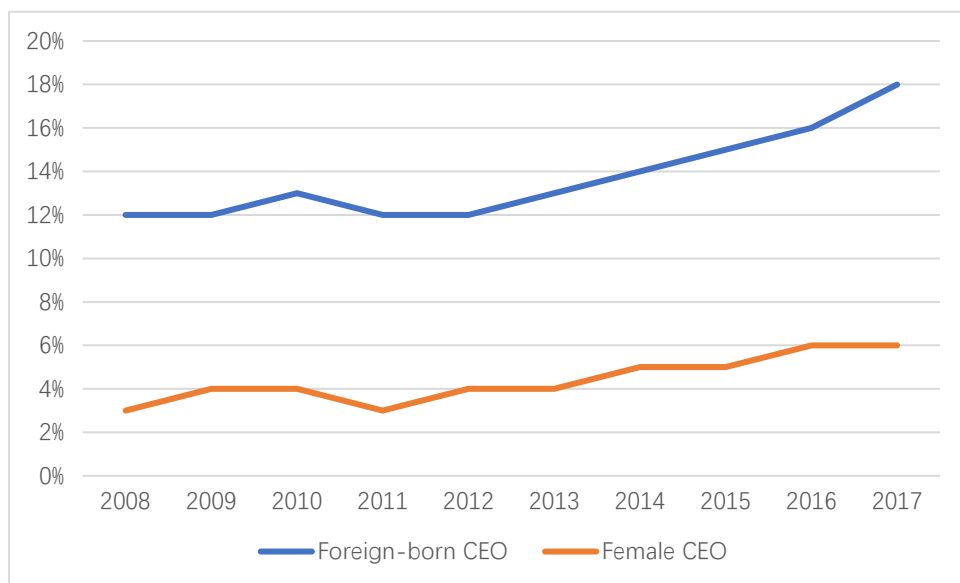


Figure 3 Percent of foreign-born CEOs and female CEOs, 2008-2017.

Table 1 Foreign-born CEOs of Fortune 500 companies by Birthplace: 2008-2017

| Country | Number of Observations | Percentage |
|----------------|-------------------------------|-------------------|
| Argentina | 6 | 1.08 |
| Australia | 55 | 9.89 |
| Bangladesh | 7 | 1.26 |
| Bolivia | 4 | 0.72 |
| Brazil | 12 | 2.16 |
| Canada | 76 | 13.67 |
| China | 7 | 1.26 |
| Colombia | 7 | 1.26 |
| Cost Rica | 8 | 1.44 |
| Cuba | 7 | 1.26 |
| Cyprus | 1 | 0.18 |
| Egypt | 2 | 0.36 |
| France | 27 | 4.86 |
| Germany | 24 | 4.32 |
| Greece | 5 | 0.90 |
| India | 64 | 11.51 |
| Iran | 12 | 2.16 |
| Ireland | 8 | 1.44 |
| Israel | 7 | 1.26 |
| Italy | 20 | 3.60 |
| Japan | 6 | 1.08 |
| Kenya | 5 | 0.90 |
| Malaysia | 7 | 1.26 |
| Mexico | 3 | 0.54 |
| Morocco | 2 | 0.36 |
| Netherlands | 12 | 2.16 |
| New Zealand | 8 | 1.44 |
| Panama | 7 | 1.26 |
| Poland | 1 | 0.18 |
| Portugal | 4 | 0.72 |
| South Africa | 23 | 4.14 |
| Spain | 8 | 1.44 |
| Sweden | 12 | 2.16 |
| Turkey | 16 | 2.88 |
| UK | 76 | 13.67 |
| Venezuela | 7 | 1.26 |

Table 2 Percent of Sample in Each Listed Industry

| Industry | Percent of Sample |
|--|--------------------------|
| Agriculture, Forestry, Fishing and Hunting | 0.33 |
| Mining | 2.96 |
| Utilities | 6.95 |
| Construction | 1.46 |
| Manufacturing | 35.68 |
| Wholesale Trade | 5.67 |
| Retail Trade | 10.17 |
| Transportation and Warehousing | 4.44 |
| Information | 7.83 |
| Finance and Insurance | 13.7 |
| Real Estate Rental and Leasing | 2.06 |
| Professional, Scientific, and Technical Services | 2.36 |
| Administrative and Support and Waste Management and Remediation Services | 1.18 |
| Educational Services | 0.15 |
| Health Care and Social Assistance | 1.43 |
| Arts, Entertainment, and Recreation | 0.2 |
| Accommodation and Food Services | 2.6 |
| Other Services (except Public Administration) | 0.05 |
| Others | 0.73 |

Table 3 contains the descriptive statistics of key variables in this study. The number of observations varies due to missing data. There are 14% of foreign-born CEOs and 5% of female CEOs respectively in the overall sample. The percentage of foreign-born CEOs is comparable to the entire Fortune 500, with 11.6% CEOs were born abroad (Boardroom Insiders, 2016). The average age of CEOs in my sample is around 57 years old, and their average tenure (the number of years since the CEO was appointed CEO) is approximately 6 years. Chairman/CEO duality is very common in my sample, 90% of CEOs occupies the chairman of the board at the same time. In terms of firm-level control variables, leverage has an average of 0.3, and firm size of 9.89.

The mean and standard deviation of CEI are 64.40 and 36.51 respectively, the lowest CEI score is -25, while the highest CEI score is 100, which indicate that there is a significant variation in the promotion of LGBT-friendly HR policy among sample firms in different industries. For instance, firms in the accommodation and food services

industry have an average of 87.31 for CEI score ($n = 106$), while firms in the mining sector only have an average CEI score of 26.59 ($n = 118$). There are also big variations in terms of CEI score within the same industry. The firms in the sample have an average of ROA and Tobin's Q of 0.08 and 1.65 respectively. ROA shows investors how effectively the company is in translating investment into firm's net income. In general, the higher ROA, the better. A negative ROA indicates that the firm doesn't generate profits. The average ROA of 0.08 in my sample means that for every 1 U.S. dollars a firm invest in assets during the accounting period can generate 0.08 U.S. dollars net income for the firm. An average Tobin's Q of 1.65, which is greater than 1, indicates that the market value is greater than the firm's recorded assets in my sample, while a Tobin's Q with a value less than 1 indicates that the firm could be undervalued in the market. Firms with larger value of Tobin's Q have more investment growth opportunities. However, the variation in the sample is significant with the minimum Tobin's Q 0.14 while the maximum 13.58. The mean Tobin's Q (1.65) is larger than the median (1.37), suggesting the value of Tobin's Q is right-skewed. To reduce skewness, I use a log transformation of Tobin's Q in my analysis. The obtained mean ROA and Tobin's Q is similar to numbers that have been reported in other studies, which also use a sample of U.S. corporations. For example, the mean ROA and Tobin's Q in a study using S&P 1500 firms is 0.095 and 1.039 respectively (Dezso & Ross, 2012)

Table 3 Descriptive statistics of key variables: Pooled Sample 2008-2017

Internationalization is measured as the ratio of foreign sales to total sales.

| Variables | N | Mean | Std. dev. | Min | 0.25 | Mdn | 0.75 | Max |
|----------------------|------|-------|-----------|--------|-------|-------|--------|--------|
| Foreign-born CEO | 3985 | 0.14 | 0.35 | 0.00 | 0.00 | 0.00 | 0.00 | 1.00 |
| Gender | 3985 | 0.05 | 0.21 | 0.00 | 0.00 | 0.00 | 0.00 | 1.00 |
| Age | 3985 | 56.93 | 6.31 | 31.00 | 53.00 | 57.00 | 61.00 | 87.00 |
| Tenure | 3985 | 6.14 | 6.37 | 0.00 | 2.00 | 4.00 | 8.00 | 54.00 |
| Duality | 3985 | 0.90 | 0.30 | 0.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| CEI | 3985 | 64.40 | 36.51 | -25.00 | 30.00 | 80.00 | 100.00 | 100.00 |
| ROA | 3969 | 0.08 | 0.09 | -2.76 | 0.04 | 0.08 | 0.12 | 0.53 |
| Tobin's Q | 3969 | 1.65 | 0.93 | 0.14 | 1.05 | 1.37 | 1.90 | 13.58 |
| Internationalization | 3615 | 0.03 | 0.08 | -1.67 | 0.00 | 0.01 | 0.05 | 0.79 |
| Mimic | 3985 | 0.94 | 0.25 | 0.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Firm size | 3985 | 9.89 | 1.53 | 0.00 | 8.93 | 9.77 | 10.71 | 15.02 |
| Leverage | 3969 | 0.30 | 0.21 | 0.00 | 0.15 | 0.27 | 0.40 | 1.85 |

Comparing the sample means for firms run by America-born CEOs and foreign-born CEOs, I find important differences in the characteristics of firm (see Table 4). Specifically, ROA is slightly higher for firms with foreign-born CEOs (0.09) than for native CEOs (0.08). I also observe that foreign-born CEOs are more likely to appear at firms that have more growth opportunities proxied by Tobin's Q (2.05) compared with America-born CEOs (1.58). The average CEI score in firms with foreign-born CEOs (n = 556) equals 72.10, which is significantly higher than the average CEI score in firms with America-born CEOs (63.15, n=3429). America-born CEOs tend to work in firms that are marginally smaller in terms of total assets compared with foreign-born CEOs (3.36 compared with 3.51). Foreign-born CEOs tend to appear in firms that are more conservative on financial decisions proxied by leverage ratio than native CEOs (0.28 compared with 0.30). In terms of firm's internationalization (measured by the ratio of foreign sales to total sales), I find foreign-born CEOs are more likely to appear at firms with a relatively high focuses on foreign market than America-born CEOs (0.06 compared with 0.03). In addition to firm level characteristics, foreign-born CEOs and native CEOs in the sample also differ along other observable dimensions on CEO level. Foreign-born CEOs are, on average, younger and have less tenure than native CEOs.

Table 4 summary statistics, by firm-year: pooled sample 2008-2017

| | Native CEOs | | Foreign-born CEOs | | | Difference in means t-Test | |
|--------------------------|-------------|-----------|-------------------|-------|-----------|-------------------------------|--------|
| | Mean | Std. dev. | N | Mean | Std. dev. | | N |
| Age | 57.20 | 6.19 | 3429 | 55.24 | 6.79 | 556 | 6.85 |
| Tenure | 6.33 | 6.50 | 3429 | 5.01 | 5.43 | 556 | 4.54 |
| Duality | 0.90 | 0.30 | 3429 | 0.92 | 0.27 | 556 | -1.41 |
| Firm size | 3.36 | 1.26 | 3429 | 3.51 | 1.08 | 556 | -2.72 |
| CEI | 63.15 | 36.40 | 3429 | 72.10 | 36.28 | 556 | -5.38 |
| ROA | 0.08 | 0.08 | 3413 | 0.09 | 0.15 | 556 | -3.09 |
| Tobin's Q | 1.58 | 0.83 | 3413 | 2.05 | 1.33 | 556 | -11.25 |
| Leverage | 0.30 | 0.21 | 3413 | 0.28 | 0.20 | 556 | 2.13 |
| International ization | 0.03 | 0.07 | 3094 | 0.06 | 0.11 | 521 | -8.13 |

Internationalization is measured as the ratio of foreign sales to total sales.

Similarly, I also observe some differences between firms run by male CEOs and female CEOs (see Table 5). Compared with male CEOs, female CEOs are working in firms with higher level of profitability and growth opportunities. ROA is higher for firms headed by females (0.09) than for males (0.08). Tobin's Q is also higher for firms with female CEOs (1.77) than for male CEOs (1.64). Compared with foreign-born and America-born CEOs, the differentials between female CEOs and male CEOs is larger given that the average CEI score in firms led by a female CEO ($n = 183$) is 81.00, while firms with male CEOs ($n = 3802$) only have an average CEI score of 63.60. Firms that are running by male executives tend to work in firms that are smaller (measured by total assets). Similar to foreign-born CEOs, female CEOs are also relatively conservative on financial decisions as the leverage ratios in firms with female CEOs (0.27) are slightly lower than firms with male CEOs (0.30). Female CEOs in my sample are, on average 1-year younger than male CEOs. Additionally, I observe that female CEOs are on average, have 3-year less tenure than male CEOs in the sample.

Table 5 summary statistics, by firm-year: pooled sample 2008-2017

| | Male CEOs | | Female CEOs | | | Difference in means | |
|-----------|-----------|-----------|-------------|-------|-----------|---------------------|--------|
| | Mean | Std. dev. | N | Mean | Std. dev. | N | t-Test |
| Age | 56.99 | 6.36 | 3802 | 55.74 | 5.05 | 183 | 2.61 |
| Tenure | 6.28 | 6.47 | 3802 | 3.27 | 2.78 | 183 | 6.28 |
| Duality | 0.90 | 0.30 | 3802 | 0.93 | 0.26 | 183 | -1.23 |
| Firm size | 3.37 | 1.24 | 3802 | 3.71 | 1.22 | 183 | -3.70 |
| CEI | 63.60 | 36.57 | 3802 | 81.00 | 30.82 | 183 | -6.33 |
| ROA | 0.08 | 0.09 | 3786 | 0.09 | 0.08 | 183 | -2.02 |
| Tobin's Q | 1.64 | 0.93 | 3786 | 1.77 | 0.99 | 183 | -1.79 |
| Leverage | 0.30 | 0.21 | 3786 | 0.27 | 0.17 | 183 | 1.54 |

4. Regression methods and model specification

I start the empirical analysis by regression analysis. The main explanatory variable is whether the CEO is foreign-born or female. The outcomes that I analyze are whether the firm has adopted a LGBT-friendly HR policy (measured by the CEI that is a score between -25 and 100) and ROA and Tobin's Q as alternative measures of profitability. I specify the main regression accordingly:

$$y_{i,t} = \alpha + \beta * \text{Minority}_{i,t} + \delta * X_{i,t} + \theta_i + \tau_t + \varepsilon_{i,t} \quad (1)$$

where $y_{i,t}$ is either corporate equality index or one of my measures of firm performance (ROA and Tobin's Q). $\text{Minority}_{i,t}$ is either foreign-born CEO or female CEO for firm i in year t , which is a dummy variable. β is thus my coefficient of interest, which relates CEO's minority status to a series of organizational outcomes (CEI score, ROA, and Tobin's Q). $X_{i,t}$ is a vector of firm-level controls and executive characteristics that includes, depending on the specification, firm size, leverage, CEO age, tenure, and Chairman-CEO duality. θ_i is industry fixed effects to control for differences across industries. The firms in my sample are divided into 19 different industry groups. The relationship between foreign-born CEOs/female CEOs and organizational outcomes could vary between industries. Specifically, within this dataset, female CEOs and foreign-born CEOs are more likely to appear in firms with larger ROA and Tobin's Q. Additionally, firms that operate in the Arts, Entertainment, and Recreation industry have very progressive LGBT-friendly workplaces. On the other hand, firms that operate within the Mining sector offer little support for LGBT employees. τ_t are time fixed effects for year 2008 to 2017.

I start to run pooled OLS regression using the model specified in equation (1), $\varepsilon_{i,t}$ in equation (1) is an error component. $\varepsilon_{i,t} = a_i + u_{i,t}$. If I want to get unbiased estimates from the pooled OLS, $E(\varepsilon | \text{Minority}, X) = 0$ should hold. Namely, all factors that could

affect my outcomes variables must be included in the model. However, in reality, this assumption is difficult to hold as there are some time-constant variations that are unobservable for me, namely a_i , such as organizational culture, difference in business practices across companies etc. The time-invariant unobserved heterogeneity in the error component $\varepsilon_{i,t}$ will be a source of omitted variable bias. Since I have a panel of observations, I'm able to address this issue by using random effects or fixed effects. Hausman test is conducted and fixed effects estimation is preferred. The equation (1) could be written as:

$$y_{i,t} = \alpha + \beta * \text{Minority}_{i,t} + \delta * X_{i,t} + \gamma_i + \tau_t + u_{i,t}. \quad (2)$$

where outcome Y (CEI, Tobin's Q, or ROA) and independent variable (foreign-born CEOs/female CEOs) are observed for each firm over multiple time periods between 2008 and 2017. In equation (2), a_i is swept out and the error term $u_{i,t}$ is left. γ_i is firm fixed effects, industry dummies are also swept out from the fixed effects OLS model. The advantage of fixed effects estimation is that it removes the time-invariant variables that could drive any associations between dependent and independent variables and provides me with a net effect of the prediction on my outcome variables.

There are 82 cases (2%) CEO change from U.S. born CEOs to foreign born or vice versa within my sample and there is a total of 35 cases (0.9%) of CEOs changes from male to female or vice versa during my observation window. The small percent of CEO changes indicates that firm fixed effects could capture the CEO characteristics. I cluster the standard errors at the firm level in all regressions. I use pooled OLS and fixed effects OLS model in this thesis. STATA's linear regression is used to test all the hypotheses.

5. Regression results

5.1 Pooled OLS and fixed effects OLS regression results

The results from the OLS and fixed effects OLS regressions display the conditional mean effects of foreign-born CEOs/female CEOs on organizational outcomes including corporate equality index (CEI), Tobin's Q, and ROA.

Table 6 and table 7 reports the regression results for my first outcome variable CEI. The goal is to test hypothesis 1a and 1b that proposes a positive relationship between foreign-born CEOs/female CEOs and CEI score. The key explanatory variable across column (1) to (4) in table 6 is a binary variable indicating whether a CEO is born outside the U.S. In column (1), only the indicator variable for whether the CEO is foreign-born, or U.S. born, year dummies and industry dummies are included. 2008 is the base year and Industry 1 "Agriculture, Forestry, Fishing and Hunting" is the base group, both of which is therefore omitted in the regression. The coefficient on foreign-born CEO in column (1) is positive and statistically significant ($p < 0.1$), the magnitude (6.419) is large given the average CEI score in the sample is 64.4. Compared with U.S. born CEOs within the same industry in a given year, firms with foreign-born CEOs are associated with a 6.419 increase in CEI score (e.g. from 64.40 to 70.819).

In addition to year dummies and industry dummies, which take industry variation on CEI score and shift of social values towards LGBT people across periods into account, firms' CEI score may be different due to firm size, workforce composition (e.g. women and men are distributed differently across industries, LGBT tend to be attracted and clustered in certain industries etc.) and other firm-specific characteristics that are time invariant, I sequentially add firm level controls, CEO level controls and firm fixed effects in column (2), (3), and (4).

I add firm level controls (firm size, firm financial health measured by ROA, and firm leverage) in column (2). The coefficient on foreign-born CEO in column (2) is still positive and statistically significant ($p < 0.05$), moreover, the magnitude of coefficient in column (2) is marginally larger than in column (2). All else being equal, firms headed by foreign-born CEOs is related to 6.89 increase in CEI score (e.g. from 64.40 to 71.29) relative to U.S. born CEOs. Column (3) presents the full model by adding CEO level characteristics (gender, age, tenure, Chairman/CEO duality). There is still a positive and statistically significant relationship between foreign-born CEOs and CEI score, though the coefficient is only marginally significant ($p < 0.1$). The magnitude of the coefficient on foreign-born CEO also decreases to 6.113. Some of the variation in firm CEI score could be explained by CEO-level characteristics. Foreign-born CEOs contribute to 6.113 increase in firms CEI score (e.g. from 64.40 to 70.513) compared with native CEOs, holding all else equal. However, in column (4), the relationship lost its significance when controlling for firm fixed effects. Although the coefficient on foreign-born CEO is still positive, the magnitude of the coefficient drops significantly from 6.113 to 1.244. The results in table 6 suggest that foreign-born CEOs have no direct effect on promoting more progressive LGBT-friendly HR policies. Since I find significantly positive coefficients in pooled OLS estimations, but insignificant panel estimates (fixed effects), this may reflect that the firms who have a higher CEI score and adopt more progressive LGBT-friendly HR policies are the firms with the most diverse and inclusive characteristics in general.

The key indicator variable in table 7 is also a binary variable indicating CEOs' gender. The procedures are similar to regression analysis in table 5.1, I gradually add year fixed effects and industry fixed effects, firm level controls, CEO level controls, and firm fixed effects across column (1) to (4). Column (3) of table 5.2 presents the full model for female CEOs. The coefficient on female CEO is positive (13.14) and statistically significant at 1% level. Compared with male peers, firms with female CEOs are on average associated with 13.14 increase in CEI score (e.g. from 64.40 to 77.54), holding all else equal. Column (4) includes firm fixed effects, although the sign on female CEO

is still positive but lost its significance, the magnitude on the coefficient on female CEOs drops considerably from 13.14 to 0.227. I conclude that female CEOs have no independent effect on firms' CEI score in this sample.

Table 6 OLS and fixed effects regression with foreign-born CEOs as independent variable

| | (1) | (2) | (3) | (4) |
|------------------------|---------------------------------|---------------------------------|---------------------------------|-------------------------------|
| | CEI | CEI | CEI | CEI |
| Foreign-born CEO | 6.419 ⁺ (3.600) | 6.891 [*] (3.198) | 6.113 ⁺ (3.153) | 1.244 (1.379) |
| Firm size | | 10.25 ^{***} (1.101) | 10.05 ^{***} (1.090) | 3.492 [*] (1.518) |
| Leverage | | -15.87 [*] (6.200) | -14.80 [*] (6.199) | 2.498 (4.207) |
| ROA | | 2.388 (11.221) | 2.758 (11.014) | -2.220 (3.086) |
| Gender | | | 13.24 ^{**} (4.501) | 0.283 (2.343) |
| CEO age | | | -0.227 (0.190) | 0.0294 (0.109) |
| Tenure | | | -0.308 (0.237) | 0.0168 (0.132) |
| Duality | | | 7.132 (4.461) | -0.843 (1.697) |
| Constant | 87.11 ^{***} (15.88) | -6.101 (14.26) | 3.594 (17.77) | 23.62 (16.05) |
| Year fixed effects | Yes | Yes | Yes | Yes |
| Industry fixed effects | Yes | Yes | Yes | No |
| Firm fixed effects | No | No | No | Yes |
| <i>N</i> | 3985 | 3969 | 3969 | 3969 |
| <i>R</i> ² | 0.185 | 0.289 | 0.305 | 0.148 |

2008 is the base year and therefore is omitted due to collinearity

Industry "Agriculture, Forestry, Fishing and Hunting" is omitted due to collinearity

Robust standard errors in parentheses are clustered by firm

⁺ $p < 0.1$, ^{*} $p < 0.05$, ^{**} $p < 0.01$, ^{***} $p < 0.001$

Table 7 OLS and fixed effects regression with female CEOs as independent variable

| | (1) | (2) | (3) | (4) |
|------------------------|---------------------|---------------------|---------------------|--------------------|
| | CEI | CEI | CEI | CEI |
| Female CEO | 15.81** (4.787) | 14.25** (4.578) | 13.14** (4.600) | 0.227 (2.343) |
| Firm size | | 10.15*** (1.104) | 10.01*** (1.098) | 3.525* (1.518) |
| Leverage | | -15.80* (6.163) | -15.20* (6.177) | 2.619 (4.208) |
| ROA | | 2.615 (11.28) | 3.420 (11.19) | -2.226 (3.071) |
| CEO age | | | -0.252 (0.190) | 0.0268 (0.109) |
| Tenure | | | -0.322 (0.238) | 0.00924 (0.131) |
| Duality | | | 7.114 (4.499) | -0.976 (1.688) |
| Constant | 91.67*** (17.58) | -0.302 (15.80) | 9.697 (18.76) | 23.72 (16.02) |
| Year fixed effects | Yes | Yes | Yes | Yes |
| Industry fixed effects | Yes | Yes | Yes | No |
| Firm fixed effects | No | No | No | Yes |
| <i>N</i> | 3985 | 3969 | 3969 | 3969 |
| <i>R</i> ² | 0.190 | 0.292 | 0.302 | 0.147 |

2008 is the base year and therefore is omitted due to collinearity

Industry “Agriculture, Forestry, Fishing and Hunting” is omitted due to collinearity

Robust standard errors in parentheses are clustered by firm

* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Table 8 presents the OLS and FE results of my hypothesis 2a. Hypothesis 2a predicts that foreign-born CEOs will be positively associated with the overall firm performance (Tobin’s Q and ROA) basing on their unique and valuable experiences. Column (1) and (4) of table 8 displays the simple estimates of the relationship between foreign-born CEOs and firm’s Tobin’s Q and ROA, which are comparable within the same industry and within the same year as I only add year dummies and industry dummies to account for macroeconomic factors in column (1) and (4). According to column (1), the relationship between foreign-born CEOs and Tobin’s Q is positive (0.146) and significant at the 1% level, indicating that firms led by foreign-born CEOs increase firm’s Tobin’s Q by 14.6 percentage point (from 1.65 to 1.796) compared with native

CEOs within the same industry in a given year. Larger Tobin's Q means larger investment growth opportunities. Column (2) adds all control variables (firm size as measured by total number of employees, CEO age and tenure) in addition to year dummies and industry dummies. Results in column (2) indicate that, *ceteris paribus*, Tobin's Q is approximately 14.8 percent higher (e.g. from 1.65 to 1.798) for firms with foreign-born CEOs than without. The coefficient on foreign-born CEO is still positive (0.148) and significant ($p < 0.01$), the magnitude of the coefficient on foreign-born CEO is also slightly larger than in column (1). The magnitude of coefficient on foreign-born CEOs in column (1) and (2) is also sizeable given that the mean Tobin's Q in this sample is 1.65. Column (3) of table 8 addresses the concern that omitted firm variables may be driving the positive significant coefficient on foreign-born CEOs in column (1) and (2) by using firm fixed effects. Firm fixed effects focuses on the variation within the same firm over time while the pooled OLS estimation in column (2) only consider the variation in the variables both across firms and time. The coefficient on foreign-born CEO in column (3) is positive (0.0293) but the sign on the coefficient lost its significance.

Column (4) to (6) in table 8 contains data on ROA. In general, the estimated coefficient on foreign-born CEO is positive across column (4) to (5) but no significant effects are found. Column (5) presents the full model, in which the coefficient on foreign-born CEO could be interpreted as, *ceteris paribus*, ROA is 0.00727 percentage point higher (e.g. from 0.08 to 0.08727) for firms with foreign-born CEOs than without. After controlling for firm fixed effects in column (6), the estimated coefficient turns negative (-0.00251) and is without statistical significance. Based on the regression results in table 8, my hypothesis 2a is therefore rejected, indicating foreign-born CEOs have no independent effect on firm performance.

Similarly, I investigate the relationship between female CEOs and firm performance following the same analysis procedures as shown in table 8. Table 9 displays the results of my hypothesis 2b. When I use Tobin's Q as the measure of financial performance, I

find there is a negative association between female CEOs and Tobin's Q, but the relationship doesn't statistically significant. The magnitude of the coefficient on female CEOs across column (1) to (3) is minimal given that the mean Tobin's Q in my sample is 1.65. The coefficient on female CEO in column (2), for example, could be interpreted as all else being equal, Tobin's Q is roughly 0.973% lower in firms headed by female CEOs compared with firms with male CEOs. When I use ROA as the alternative measure of financial performance, pooled OLS estimation in column (4) and (5) show there is a positive relationship between female CEO and ROA but the relationship doesn't statistically significant. Take column (2) for instance, holding all else equal, firms with female CEOs are associated with a 0.00649 percentage points increase (e.g. from 0.08 to 0.08649) in ROA compared with firms headed by male CEOs. However, the coefficient on female CEO in column (6) in table 6.2 turns negative (-0.00467) and remains statistically insignificant. Hypothesis 2b doesn't get support.

Table 8 OLS and fixed effects regression with foreign-born CEOs as independent variable

| | (1) | (2) | (3) | (4) | (5) | (6) |
|------------------------|---------------------|------------------------|-------------------------|----------------------|--------------------------|--------------------------|
| | Tobin's Q | Tobin's Q | Tobin's Q | ROA | ROA | ROA |
| Foreign-born CEO | 0.146** (0.0539) | 0.148** (0.0547) | 0.0293 (0.0303) | 0.00556 (0.00883) | 0.00727 (0.00888) | -0.00251 (0.00906) |
| Firm size | | 0.000217 (0.000144) | -0.000435 (0.000279) | | 0.0000278 (0.0000216) | -0.0000678 (0.000105) |
| CEO age | | -0.00344 (0.00273) | 0.000411 (0.00158) | | 0.000429 (0.000385) | 0.000398 (0.000388) |
| Tenure | | 0.00557 (0.00289) | 0.000210 (0.00205) | | 0.000685 (0.000426) | 0.000436 (0.000415) |
| Constant | 0.497* (0.252) | 0.639* (0.277) | 0.256** (0.0864) | 0.121*** (0.0330) | 0.0895* (0.0390) | 0.0626** (0.0211) |
| Year fixed effects | Yes | Yes | Yes | Yes | Yes | Yes |
| Industry fixed effects | Yes | Yes | No | Yes | Yes | No |
| Firm fixed effects | No | No | Yes | No | No | Yes |
| <i>N</i> | 3969 | 3969 | 3969 | 3969 | 3969 | 3969 |
| <i>R</i> ² | 0.234 | 0.241 | 0.133 | 0.216 | 0.222 | 0.012 |

The independent variable across column (1) to (3) is the logarithm of Tobin's Q.

The independent variable ROA from column (4) to (6) is defined as operating income after depreciation (OIADP) divided by the book value of total assets.

2008 is the base year and therefore is omitted due to collinearity

Industry "Agriculture, Forestry, Fishing and Hunting" is omitted due to collinearity

Firm size is measured by firm's total number of employees

Robust standard errors in parentheses are clustered by firm

* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Table 9 OLS and fixed effects regression with female CEOs as independent variable

| | (1) | (2) | (3) | (4) | (5) | (6) |
|------------------------|---------------------|------------------------|-------------------------|----------------------|--------------------------|--------------------------|
| | Tobin's Q | Tobin's Q | Tobin's Q | ROA | ROA | ROA |
| Female CEO | -0.0130 (0.0746) | -0.00973 (0.0748) | -0.0879 (0.0670) | 0.00505 (0.0114) | 0.00649 (0.0113) | -0.00467 (0.00601) |
| Firm size | | 0.000217 (0.000149) | -0.000431 (0.000276) | | 0.0000273 (0.0000215) | 0.0000552 (0.0000304) |
| CEO age | | -0.00409 (0.00271) | 0.000336 (0.00160) | | 0.000396 (0.000378) | 0.000329 (0.000326) |
| Tenure | | 0.00525 (0.00288) | -0.000333 (0.00208) | | 0.000690 (0.000429) | 0.000422 (0.000380) |
| Constant | 0.595* (0.291) | 0.777* (0.306) | 0.267** (0.0875) | 0.125*** (0.0340) | 0.0963* (0.0391) | 0.0566** (0.0181) |
| Year fixed effects | Yes | Yes | Yes | Yes | Yes | Yes |
| Industry fixed effects | Yes | Yes | No | Yes | Yes | No |
| Firm fixe effects | No | No | Yes | No | No | Yes |
| <i>N</i> | 3969 | 3969 | 3969 | 3969 | 3969 | 3969 |
| <i>R</i> ² | 0.223 | 0.230 | 0.136 | 0.216 | 0.221 | 0.012 |

The independent variable across column (1) to (3) is the logarithm of Tobin's Q

The independent variable ROA from column (4) to (6) is defined as operating income after depreciation (OIADP) divided by the book value of total assets.

2008 is the base year and therefore is omitted due to collinearity

Industry "Agriculture, Forestry, Fishing and Hunting" is omitted due to collinearity

Firm size is measured by firm's total number of employees

Robust standard errors in parentheses are clustered by firm

* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Hypothesis 3a and 3b predict that there is a positive interactive effect between foreign-born CEOs and female CEOs and adoption by similar others proxied by "mimic" on firm CEI score. Table 10 displays the results. Column (1) and column (2) presents the results of hypothesis 3a without and with firm fixed effects respectively. In column (1) and (2), the coefficient on foreign-born CEO*mimic interaction is negative (-0.508/-0.949) and statistically nonsignificant. Hypothesis 3a doesn't get support in my sample. Regression results of hypothesis 3a is displayed in column (3) and (4). In column (3), I observe that the coefficient for "Female CEO*mimic" is positive (32.49) and significant at 0.1% level, the coefficient on the female CEO is negative (-18.96) and significant ($p < 0.001$). However, the sum of the main effect and interaction coefficients (-18.96 + 32.49 = 13.53) are positive and statistically significant at 0.1% level,

indicating that firms with female CEOs increases firms' CEI score when there are already other companies in the same industry in the given year getting a perfect score on corporate equality index ($mimic = 1$). The magnitude of the coefficient on "Female CEO*mimic" is almost halved but still significant at 0.1% level when firm fixed effects are introduced in column (4). The sum of the main effect and interaction coefficients in column (4) reduced to 0.76 ($-18.95+19.71$). The results in column (3) and (4) indicate that the effects of female CEOs on more progressive LGBT-friendly HR policies will depend on adoption by similar others within the same industry. Hypothesis 3b holds under different fixed effects. I sequentially add year and industry fixed effects in column (3) and firm fixed effects in column (4) to control for unobservable firm characteristics that are time-invariant such as organizational culture.

Table 10 Interactive effect of foreign-born CEOs/female CEOs and adoption by similar others on CEI

| | (1) | (2) | (3) | (4) |
|------------------------|---------------------|-------------------|----------------------|----------------------|
| | CEI | CEI | CEI | CEI |
| Foreign CEO * mimic | -0.508 (9.037) | -0.949 (4.243) | | |
| Female CEO * mimic | | | 32.49*** (5.779) | 19.71*** (2.720) |
| Foreign-born CEO | 6.603 (8.449) | 2.177 (4.061) | | |
| Female CEO | | | -18.96*** (3.798) | -18.95*** (1.474) |
| Mimic | 13.65* (5.774) | 7.047 (4.714) | 13.55* (5.832) | 6.918 (4.659) |
| Firm size | 10.07*** (1.094) | 3.532* (1.513) | 10.03*** (1.099) | 3.491* (1.512) |
| Leverage | -14.64* (6.208) | 2.752 (4.188) | -15.06* (6.184) | 2.964 (4.183) |
| ROA | 2.910 (11.10) | -2.035 (3.068) | 3.545 (11.19) | -2.113 (3.057) |
| Gender | 13.27** (4.501) | 0.329 (2.340) | | |
| CEO age | -0.229 (0.190) | 0.0282 (0.109) | -0.254 (0.190) | 0.0184 (0.109) |
| Tenure | -0.309 (0.238) | 0.0138 (0.132) | -0.324 (0.238) | 0.0128 (0.131) |
| Duality | 7.270 (4.473) | -0.706 (1.680) | 7.262 (4.510) | -0.827 (1.672) |
| Constant | -6.903 (17.76) | 16.64 (16.50) | -0.713 (18.57) | 17.92 (16.43) |
| Year fixed effects | Yes | Yes | Yes | Yes |
| Firm fixed effects | No | Yes | No | Yes |
| Industry fixed effects | Yes | No | Yes | No |
| <i>N</i> | 3969 | 3969 | 3969 | 3969 |
| <i>R</i> ² | 0.305 | 0.149 | 0.303 | 0.149 |

2008 is the base year and therefore is omitted due to collinearity

Industry "Agriculture, Forestry, Fishing and Hunting" is omitted due to collinearity

Robust standard errors in parentheses are clustered by firm

* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Hypothesis 4 predicts that foreign-born CEOs and firm internationalization can reinforce each other to improve firm's ROA. Table 11 shows the results of the interactions between foreign-born CEOs and firm's internationalization. In column (1),

I only controlled for industry effects and year effects to absorb variables that do not vary across firms within a given industry and year (e.g. business cycles). The coefficient for the “Foreign-born CEO” main effect is negative (-0.0387) and significant ($p < 0.1$), indicating that firms with a low degree of internationalization actually experience a decrease in ROA if they are headed by foreign-born CEOs. However, the coefficient on interaction term “Foreign-born CEO*Internationalization” (0.618) is positive and significant ($p < 0.1$), suggesting that foreign-born CEOs increases firms’ ROA for firms with a high degree of internationalization. In column (2), I present the full model by adding control variables including firm size, CEO age and tenure. Similar to the results in column (1), the coefficient on interaction term “Foreign-born CEO*Internationalization” is positive (0.622) and significant at 10% level, the coefficient on the main effect “Foreign-born CEO” is still negative (-0.0367) and significant ($p < 0.1$), which indicate that foreign-born CEOs increases firms’ ROA by 62.2 percentage point relative to U.S. born CEOs for firms that emphasis foreign markets, holding all else equal. It appears that foreign-born CEOs are more effective leaders when their firms have an aggressive global expansion strategy. U.S. born CEOs may be more effective decision-makers when firms put a high value on domestic markets. I include firm fixed effects in column (3) to control for time-invariant firm-specific factors. My findings hold under firm fixed effect model, both the magnitude and statistical significance level on the interaction term increase in column (3) relative to column (1) and (2). Hypothesis 4 is thus being supported in my sample.

Table 11 Interactive effect of foreign-born CEOs and firm internationalization on firm ROA

| | (1) | (2) | (3) |
|--|----------------------------------|----------------------------------|----------------------------------|
| | ROA | ROA | ROA |
| Foreign-born CEO*Internationalization | 0.618 ⁺ (0.340) | 0.622 ⁺ (0.339) | 0.765 ^{**} (0.296) |
| Foreign-born CEO | -0.0387 ⁺ (0.0216) | -0.0367 ⁺ (0.0216) | -0.0486 [*] (0.0200) |
| Internationalization | 0.383 ^{***} (0.0796) | 0.380 ^{***} (0.0793) | 0.502 ^{***} (0.118) |
| Firm size | | 0.00000970 (0.0000146) | 0.0000397 (0.0000835) |
| CEO age | | 0.000581 (0.000402) | 0.000264 (0.000394) |
| Tenure | | 0.000558 (0.000402) | 0.000647 (0.000512) |
| Constant | 0.115 ^{***} (0.0253) | 0.0769 [*] (0.0340) | 0.0587 [*] (0.0228) |
| Year fixed effects | Yes | Yes | Yes |
| Industry fixed effects | Yes | Yes | No |
| Firm fixed effects | No | No | Yes |
| <i>N</i> | 3615 | 3615 | 3615 |
| <i>R</i> ² | 0.448 | 0.452 | 0.494 |

The independent variable ROA is defined as operating income after depreciation (OIADP) divided by the book value of total assets.

2008 is the base year and therefore is omitted due to collinearity

Industry "Agriculture, Forestry, Fishing and Hunting" is omitted due to collinearity

Robust standard errors in parentheses are clustered by firm

⁺ $p < 0.1$, ^{*} $p < 0.05$, ^{**} $p < 0.01$, ^{***} $p < 0.001$

5.2 Robustness Checks

I split my sample into two subsamples as the criteria of corporate equality index have experienced some changes within my sample period (see Appendix A). The criteria and weights of corporate equality index for 2008-2011 and 2012-2017 are different. As the criteria evolution could potentially influence firms' performance on CEI score, I rerun the models to test hypothesis 1a, 1b, 3a and 3b using a subsample for period 2012-2017. Results are displayed in table 12 and table 13 respectively. Consistent with aforementioned results, I find that there is a positive and statistically significant relationship between foreign-born CEOs/female CEOs and CEI score in the pooled OLS estimation, the coefficient on foreign-born CEO and female CEO in column (1) and column (3) in table 12 is 5.328 ($p < 0.01$) and 13.76 ($p < 0.001$) respectively. However, neither foreign-born CEOs nor female CEOs has a direct effect on firm's CEI score when controlling for firm fixed effects. This variation could be explained by the unobserved time-constant firm characteristics such as organizational culture and atmosphere. Table 13 displays the robustness check of interaction between foreign-born/female CEOs and adoption by similar others on LGBT-friendly HR policies promotion by using the subsample. The results in table 13 confirm the results reported in table 10 that the effects of female CEOs on more progressive LGBT-friendly HR policies will depend on adoption by similar others within the same industry. To check the robustness of my hypothesis 4, I use industry-adjusted ROA as the alternative outcome variables, the results are displayed in table 14. The findings are also consistent with the ones reported in the table 11.

Table 12 Robustness check on Hypothesis 1a and 1b

| | (1) | (2) | (3) | (4) |
|------------------------|----------------------|-------------------|----------------------|-------------------|
| | CEI | CEI | CEI | CEI |
| Foreign-born CEO | 5.328** (1.870) | 1.986 (1.666) | | |
| | | | 13.76*** (2.650) | -1.040 (3.122) |
| Female CEO | | | | |
| Firm size | 11.64*** (0.516) | 3.401 (2.172) | 11.61*** (0.518) | 3.399 (2.173) |
| Leverage | -17.43*** (3.249) | 3.761 (4.958) | -17.85*** (3.246) | 4.124 (4.912) |
| ROA | 11.13 (8.523) | 0.901 (2.603) | 11.18 (9.014) | 0.885 (2.623) |
| Gender | 14.06*** (2.621) | -0.986 (3.111) | | |
| CEO age | -0.216 (0.119) | 0.0558 (0.121) | -0.243* (0.119) | 0.0500 (0.119) |
| Tenure | -0.343** (0.127) | 0.0467 (0.161) | -0.350** (0.127) | 0.0360 (0.160) |
| Duality | 8.699*** (2.415) | 1.074 (1.892) | 8.815*** (2.430) | 0.899 (1.884) |
| Constant | -25.24** (9.633) | 12.22 (22.66) | -18.85 (9.767) | 12.96 (22.60) |
| Year fixed effects | Yes | Yes | Yes | Yes |
| Industry fixed effects | Yes | No | Yes | No |
| Firm fixed effects | No | Yes | No | Yes |
| <i>N</i> | 2792 | 2792 | 2792 | 2792 |
| <i>R</i> ² | 0.299 | 0.201 | 0.297 | 0.200 |

2012 is the base year and therefore is omitted due to collinearity

Industry “Agriculture, Forestry, Fishing and Hunting” is omitted due to collinearity

Robust standard errors in parentheses

* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Table 13 Robustness check on Hypothesis 3a and 3b

| | (1) | (2) | (3) | (4) |
|------------------------|----------------------|-------------------|----------------------|----------------------|
| | CEI | CEI | CEI | CEI |
| Foreign-born CEO*Mimic | 3.890 (6.197) | 3.420 (5.801) | | |
| Female CEO*Mimic | | | 35.80*** (3.840) | 18.79*** (3.330) |
| Foreign-born CEO | 1.594 (5.925) | -1.113 (5.592) | | |
| Female CEO | | | -21.49*** (2.893) | -18.87*** (1.559) |
| Mimic | 12.42 (8.612) | 7.293 (5.833) | 12.13 (8.540) | 7.229 (5.836) |
| Firm size | 11.64*** (0.518) | 3.390 (2.171) | 11.62*** (0.518) | 3.330 (2.171) |
| Leverage | -17.28*** (3.257) | 3.996 (4.896) | -17.79*** (3.247) | 4.457 (4.888) |
| ROA | 10.76 (8.617) | 0.907 (2.675) | 11.31 (8.987) | 0.986 (2.636) |
| Gender | 14.09*** (2.622) | -0.952 (3.107) | | |
| CEO age | -0.219 (0.119) | 0.0507 (0.121) | -0.245* (0.119) | 0.0362 (0.119) |
| Tenure | -0.342** (0.127) | 0.0471 (0.162) | -0.350** (0.127) | 0.0445 (0.160) |
| Duality | 8.810*** (2.419) | 1.391 (1.836) | 8.916*** (2.434) | 1.159 (1.841) |
| Constant | -37.67** (13.09) | 5.520 (23.02) | -31.08* (13.13) | 7.339 (22.92) |
| Year fixed effects | Yes | Yes | Yes | Yes |
| Industry fixed effects | Yes | No | Yes | No |
| Firm fixed effects | No | Yes | No | Yes |
| <i>N</i> | 2792 | 2792 | 2792 | 2792 |
| <i>R</i> ² | 0.299 | 0.202 | 0.298 | 0.203 |

2012 is the base year and therefore is omitted due to collinearity

Industry "Agriculture, Forestry, Fishing and Hunting" is omitted due to collinearity

Robust standard errors in parentheses

+ $p < 0.1$, * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Table 14 Robustness check on Hypothesis 4

| | (1) | (2) |
|------------------------|--------------------------|--------------------------|
| | Industry adjusted ROA | Industry adjusted ROA |
| Foreign-born CEO * | 0.630 ⁺ | 0.765 [*] |
| Internationalization | (0.342) | (0.296) |
| Foreign-born CEO | -0.0393 ⁺ | -0.0486 [*] |
| | (0.0216) | (0.0200) |
| Internationalization | 0.346 ^{***} | 0.502 ^{***} |
| | (0.0741) | (0.118) |
| Firm size | 0.0000123 | 0.0000397 |
| | (0.0000131) | (0.0000835) |
| CEO age | 0.000539 | 0.000264 |
| | (0.000385) | (0.000394) |
| Tenure | 0.000634 | 0.000647 |
| | (0.000413) | (0.000512) |
| Constant | -0.0433 [*] | -0.0214 |
| | (0.0219) | (0.0228) |
| Year fixed effects | Yes | Yes |
| Industry fixed effects | Yes | No |
| Firm fixed effects | No | Yes |
| <i>N</i> | 3615 | 3615 |
| <i>R</i> ² | 0.302 | 0.494 |

Year 2008 is omitted due to collinearity

Industry "Agriculture, Forestry, Fishing and Hunting" is omitted due to collinearity

Standard errors in parentheses

⁺ $p < 0.1$, ^{*} $p < 0.05$, ^{**} $p < 0.01$, ^{***} $p < 0.001$

6. Discussion

Using a sample of the Fortune 500 companies over the period 2008-2017, I analyze empirically the effects of foreign-born CEOs and female CEOs on advancing LGBT-friendly HR policies and firm financial performance. The proposed “firms headed by foreign-born CEOs/female CEOs will be more likely than other firms to promote LGBT-friendly HR policies” hypothesis doesn’t get support in my sample. Despite a positive and statistically significant relationship between foreign-born CEOs/female CEOs and firm CEI score in the simple OLS regression model, I don’t find there exists a direct effect of foreign-born CEOs and female CEOs on firm CEI score once controlling for firm fixed effects, which sweep out time invariant factors. The results are consistent with the findings of Cook & Glass (2015, 2016), the power of individual minority status CEOs doesn’t impose direct effect on workplace diversity policies. Specifically, Cook & Glass (2015) find female CEOs is only positively related to two LGBT initiatives (domestic-partner benefits and gender identity inclusive policies) but not significantly related to higher CEI score. Although female CEOs don’t impose a direct effect on advancing LGBT-HR friendly policies, my analysis indicates that adoption by similar others in the same industry could mitigate the conformity pressures on female CEOs, taken together, female CEOs and adoptions of “similar others” can reinforce each other to jointly advance progressive LGBT-friendly HR policies. Therefore, it is hard to conclude based solely on direct effects, some other contextual factors that mitigate the pressures on minority status leaders to advance workplace diversity policies need to be further explored.

Focusing on chief executives’ country of origin, this study is related to the burgeoning literature on executives’ national origin and firm performance. In their conceptual paper, Hambrick and his colleagues (1998) highlighted the importance of nationality in explaining individuals’ traits and behaviors. Extant research is primarily focused on the group level, such as nationality diversity on the board of directors and top management

team. For example, Estelyi & Nisar (2016) find that nationality diversity on the boards is positively related to operating performance in the context of British companies. Nielsen & Nielsen (2013) demonstrated that national diversity on top management team is positively related to firm performance. This study demonstrate that the CEO's country of origin tends to have a significantly positive effect on firm performance (e.g. Tobin's Q) after controlling for observed factors that are found to affect firm performance (e.g. firm size, CEO age, tenure) in pooled OLS regression. However, when controlling for unobserved time-constant firm effects, the effect turns insignificant. Despite the truth that foreign-born CEOs are increasingly represented in large America corporations, until now foreign-born CEOs remains numerically rare. There is also a small variation in terms of CEO changes from U.S. native to foreign-born or vice versa in the sample. Thus, the panel estimates in the fixed effects regression tend to be insignificant because of a large statistical uncertainty. Moreover, it could be that firms with foreign-born CEOs are also doing well on numerous other unmeasured characteristics like good management practices, cohesive organizational culture etc. These results also imply the relationship between foreign-born CEOs and firm performance is complex as there may be some critical organizational contextual factors interplay with foreign-born CEOs that jointly influence firm performance. Resource-based arguments suggest that intangible resources that embedded in human capital, like foreign-born CEOs' country specific skills and their familiarity with multi-institutional environments in this research, are most likely to create values when they are bundled with other complementary resources (Carpenter et al., 2001). In line with resource-based review, my findings suggest that the interaction between foreign-born CEOs and firm internationalization strategy has important consequences for firm performance (ROA). my analysis indicates that firms with higher international orientation are more likely to utilize foreign-born CEOs' unique and valuable managerial resources to create values.

When it comes to CEO's gender, I don't observe a significantly positive or negative correlation between female CEOs and firm performance. The results are consistent with

the mixed findings in the relationship between female leaders and financial performance. For example, Dezsó and Ross (2012) find a significant positive relationship between female representation in top management team and firm's Tobin's Q, the positive relationship is stronger when a firm's strategy is focused on innovation strategy. Carter and colleagues (2010), however, don't find a significant relationship between female directors of major U.S. companies and firm financial performance. The measurement of female leadership representation is different, extant research mainly use the fraction of female executives on top management team or the percentage of women directors on board, while my sample only include female CEOs, I don't take other female C-suites into account, resulting in a few female leaders' representation in my sample, for example, there is only 5% of female CEOs in my highly selective sample, which could affect the estimates. Alternative explanation of the "no results" on female CEOs and firm financial performance is that female leaders tend to put high value on long-term strategies and privilege non-financial performance outcomes including equity practices, labor policies etc. (Glass & Cook, 2018; Matsa & Miller, 2013).

7. Conclusion

This study tests whether foreign-born CEOs and female CEOs advance LGBT-friendly HR policies and enhance firm performance. I use a 10-year data on all public U.S. corporations that ever listed in Fortune 500 and have scored on corporate equality index list for consecutive two years to test my hypotheses. Although there is no direct impact of foreign-born CEOs and female CEOs on more progressive LGBT-friendly HR policies adoption, I provide suggestive evidence that organizational leaders are likely to interact with external factors on diversity policies and practices, more specifically, I find that female CEOs can significantly advance LGBT-friendly HR policies when there are “similar others” in the same industry getting a perfect score (100) on CEI, suggesting that there could be other contextual factors interplay with organizational leadership to advance LGBT-friendly HR policies. In another set of my research questions, I don’t observe a significant positive relationship between foreign-born CEOs/female CEOs and firm financial performance. However, the interaction between foreign-born CEOs and complementary resources such as firm internationalization strategy in this thesis could contribute to above-average ROA. My findings are particularly significant in light of the steady increase in American corporations with foreign-born CEOs in recent 10 years, especially when large American companies are seeking for new growth opportunities globally to sustain their competitive advantages.

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Appendix A: CEI Rating Criteria and Weights

CEI Rating Criteria and Weights: 2008-2011

1. Nondiscrimination policy, diversity training – sexual orientation
 - a. Equal Employment Opportunity policy includes sexual orientation (15 points)
 - b. Diversity training covers sexual orientation (5 points)
2. Nondiscrimination policy, diversity training, and benefits - gender identity or expression
 - a. Equal Employment Opportunity policy includes gender identity (15 points)
 - b. Gender identity diversity training OR supportive gender transition guidelines in place (5 points)
 - c. Offers transgender-inclusive insurance coverage for at least one type of benefits (5 points)
3. Partner benefits
 - a. Domestic partner health insurance (15 points)
 - b. Domestic partner COBRA, dental, vision, and legal dependent coverage (5 points)
 - c. Other domestic partner benefits (5 points)
4. LGBT employee resource group/diversity council
 - a. Company has an LGBT employee resource group or diversity council (15 points)
 - b. Company would support an LGBT employee resource group or diversity council with employer resources if employees expressed interest (half credit)
5. Engages in appropriate and respectful advertising and marketing or sponsors LGBT community events or organizations (15 points)
6. Employer exhibits responsible behavior toward LGBT community; does not engage in action that would undermine LGBT equality (-15 points if employer engages in such behavior).

CEI Rating Criteria and Weights: 2012-2017

1. Equal Employment Opportunity policy includes:
 - a. Sexual orientation for all operations (15 points)
 - b. Gender identity for all operations (15 points)
 - c. Contractor/vendor standards include sexual orientation and gender identity (5 points)
2. Employee benefits:
 - a. Equivalent spousal and partner benefits (10 points)
 - b. Other “soft” benefits – includes parity between employer-sponsored benefits for different-sex spouses and same-sex partners or spouses (10 points)
 - c. Transgender-inclusive health insurance coverage (10 points)
3. Organizational LGBT competency
 - a. Competency training, resources or accountability measures (10 points)
 - b. Employee group -or- Diversity council (10 points)
4. Public commitment: LGBT-specific efforts, including at least three of the aspects, such as recruiting, supplier diversity, marketing or advertising, and philanthropy or public support for LGBT equality under the law, and have internal guidelines that prohibit philanthropic giving to non-religious organizations with an explicit policy of discrimination against LGBT people. (15 points)
5. Employers will have 25 points deducted from their score for a large-scale official or public anti-LGBT blemish on their recent records. No employer received this deduction in the 2017 CEI.

Appendix B: Variable Definitions

| Variable | Definitions |
|----------------------------|---|
| ROA (return on assets) | The ratio of operating income after depreciation (“OIADP”) to the book value of total assets (“AT”) |
| Tobin’s Q | The ratio of the market value of total assets to the book value of total assets, in which the market value equals to the book value of total assets plus the market value of equity “CSHO” × “PRCC_F” minus the sum of book value of equity “CEQ” plus deferred taxes and investment tax credit “TXDITC”. |
| Leverage | The ratio of debt in current liabilities (“DCL”) and long-term debt (“DLTT”) to total assets |
| Firm size | Natural logarithmic of total assets plus one (Hypothesis 1a and 1b, hypothesis 3); Total number of employees (Hypothesis 2a and 2b, hypothesis 4). |
| Internationalization | The ratio of foreign sales to total sales. Foreign sales “PIFO” is accessed through CompuStat/CSRP merged database, |
| Industry adjusted ROA | ROA – mean ROA in industry |
| Foreign-born/immigrant CEO | 1 if the CEO was not U.S. citizens at birth, and 0 otherwise |
| CEO/Chairman duality | 1 if CEO is also the Chairman of the board, and 0 otherwise |
| Mimic | 1 if a firm in that industry has scored a 100 on CEI and in any year and remains there since that year, and 0 otherwise |