

# Sexual Orientation Discrimination in the Workplace\*

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## Abstract

This paper presents the first quasi-experimental research examining the effect of both local and state anti-discrimination laws on sexual orientation on the labor supply and wages of lesbian, gay, and bisexual (LGB) workers. To do so, I use the American Community Survey data on household composition to infer sexual orientation and combine this with a unique panel dataset on local anti-discrimination laws. Using variation in law implementation across localities over time, I find that anti-discrimination laws significantly reduce gaps in labor force participation rate, employment, and the wage gap for gay men relative to straight men. These laws also significantly reduce the labor force participation rate, employment, and wage premium for lesbian women relative to straight women. One explanation for the reduced labor supply and wage premium is that lesbian couples begin to have more children in response to the laws, shifting to a more traditional household with one woman working fewer hours. Finally, I present evidence that state anti-discrimination laws significantly and persistently increased support for same-sex marriage. This research shows that anti-discrimination laws can be an effective policy tool for reducing labor market inequalities across sexual orientation and improving sentiment toward LGB Americans.

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# 1 Introduction

In 2019, it is legal in 28 states for private businesses to fire an employee for being lesbian, gay, or bisexual (LGB)<sup>1</sup>. Unlike race, sex, age, and religion, federal law does not include sexual orientation as a protected class for federal anti-discrimination laws. As a result, laws extending protected class status on the basis of sexual orientation vary between states and localities. The first state to pass an anti-discrimination law on the basis of sexual orientation was Wisconsin in 1982, and the most recent state to pass such a law was Utah in 2015. There has been a renewed push to enact sexual orientation protections at the federal level as Democrats in the House of Representatives introduced “The Equality Act” in early 2019, which would add sexual orientation and gender identity as federally protected characteristics.

I exploit the differential roll out of state and local laws from 2005-2016 in a difference-in-differences framework to analyze how these anti-discrimination laws differentially impact wages and labor supply of LGB workers. The economics literature on LGB workers consistently finds that gay/bisexual men have a pay and labor supply penalty and lesbian/bisexual women have a pay and labor supply premium over their heterosexual counterparts<sup>2</sup>. The differences in pay are attributed to a host of factors including discrimination and intra-household labor allocation and specialization. I test the role of discrimination by examining how the passage of anti-discrimination laws affects the labor supply and wage differences between LGB and heterosexual workers.

There have been previous studies examining how these state and local laws affect the pay gap, but these studies have been limited in their ability to identify causal effects (Klawitter and Flatt (1998); Gates (2009)). Klawitter and Flatt (1998) compared people in same-sex partnerships to those in different-sex partnerships in the 1990 Census and find that same-sex couples have no significant difference in wages in places with anti-discrimination

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<sup>1</sup>Or for being heterosexual. However, this typically does not happen and is not the focus of this research.

<sup>2</sup>(Badgett (1995); Klawitter and Flatt (1998); Allegretto and Arthur (2001); Black et al. (2003); Carpenter (2005); Black, Sanders and Taylor (2007); Antecol, Jong and Steinberger (2008); Klawitter (2015); Jepsen and Jepsen (2017); Carpenter and Eppink (2017))

laws. Gates (2009) uses the 2000 Census and conducts a similar analysis. He finds that gay/bisexual men in places with anti-discrimination laws have a 3% wage premium over gay/bisexual men in places without these laws, and lesbian/bisexual women have a 2% wage premium over lesbian/bisexual women in places without these laws<sup>3</sup> These past studies on anti-discrimination laws, while informative, fail to fully account for changes over time.

Some previous studies have exploited state-wide sexual orientation anti-discrimination laws in a difference-in-differences framework.<sup>4</sup> Martell (2013) examines state-wide anti-discrimination laws and shows these laws reduced wage differentials for gay men by 20%. A more recent study by Burn (2018) also looks at state-wide anti-discrimination laws in a difference-in-differences framework, but both studies fail to adequately account for local anti-discrimination laws. I will show empirically that failing to account for local sexual orientation anti-discrimination laws will lead to an estimate biased toward zero since one will mis-assign treatment status without understanding the local context.

This paper is the first to examine both local and state-level sexual orientation anti-discrimination laws in a quasi-experimental design. This paper is also the first to analyze the effects of any local anti-discrimination laws pertaining to sex, race, or sexual orientation in a difference-in-difference framework<sup>5</sup>.

I use the 2005-2016 American Community Survey (ACS) and household composition to infer sexual orientation and create a unique and novel panel dataset on the passage of local and state anti-discrimination laws. I collected information on local laws from a host of sources including media reports, FOIA requests, and an advocacy group. First, I replicate the findings of past research that finds gay/bisexual men have a lower labor force participation

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<sup>3</sup>Tilcsik (2011) found that resumes signalling LGB status received significantly fewer callbacks in localities without sexual orientation anti-discrimination laws.

<sup>4</sup>The Williams Institute found that sexual orientation discrimination occurs at a similar rate to sex-based discrimination using a state-level complaint data following state anti-discrimination laws (Ramos, Badgett and Sears, 2008).

<sup>5</sup>Using state variation in anti-discrimination laws has also been analyzed to understand racial- and sex-based discrimination (Neumark and Stock (2006); (Donohue III and Heckman, 1991); (Margo, 1995); Goldin and Margo (1992)). However, these studies on sex and race anti-discrimination laws also omit local laws, potentially skewing their estimates.

and employment rates and make 8-11% less than their employed straight counterparts using hourly wages and annual earnings. I also replicate findings that lesbian/bisexual women have a higher labor force participation and employment rate and earn 5-15% more than their employed straight counterparts.

I find a significant reduction in differences between LGB workers and heterosexual workers across labor supply and wage measures, due to anti-discrimination laws. Anti-discrimination laws significantly reduce the gap in labor force participation and employment of gay men by 1.3 p.p. (18%) and 1.4 p.p. (17%), respectively. The laws also significantly reduce hourly wage gaps between straight and gay men by 2.8 p.p. (11%). The results differ for women, with the laws significantly reducing their labor force participation, employment, and annual wage earnings premium over straight women by 1.3 p.p. (18%), 1 p.p. (14%), and 13 p.p. (16%), respectively. I show using an event study plot that the trends in outcomes are parallel before the implementation of the anti-discrimination suggesting the workers in treatment and control regions are reasonable comparisons.

I explore theories for the differing effects of anti-discrimination laws on gay men and lesbian women in the Discussion section, using the Becker (1981) model of household specialization. In the traditional Becker (1981) model of household specialization, men typically specialize in market production, and women typically specialize in household production, in part due to differences in biology where women birth and care for children, resulting in a one-earner household. These differences in household specialization are less pronounced in same-sex partnerships, but they may become more similar for women in same-sex partnerships following the passage of an anti-discrimination law if it gives greater protection to the higher wage earner. I show empirically that the difference in hours worked between partners within a lesbian household goes up relative to gay households following anti-discrimination laws, suggesting the lesbian households could become more specialized following anti-discrimination laws with one woman working more hours and the other woman working fewer to focus on household production. I also show that lesbian households have significantly more children

than gay households after the passage of an anti-discrimination law. More children could induce lesbian households to further specialize the intrahousehold division of labor, adopting a more traditional household model to help care for additional children.

Finally, my last contribution is the use of polling data on the support for same-sex marriage to examine the relationship between anti-discrimination laws and state sentiment toward LGB workers. One may expect that sentiment toward LGB workers would increase right before the passage of the laws, creating a selection issue. Alternatively, the anti-discrimination laws may normalize being a sexual minority, and improve sentiments toward LGB workers. I collected every poll on same-sex marriage for each state and year from Pew Research Center. I include the polling information to control and proxy for unobservable sentiment toward LGB workers. More importantly, I show that passage of state-wide sexual orientation anti-discrimination laws persistently increases favorability toward LGB people through increased support for same-sex marriage. The states that passed anti-discrimination laws had parallel pre-trends in support for same-sex marriage before the passage of the laws, and afterwards those states had a significant and persistent increase in their support for same-sex marriage. This increase in support following the law passage instead of preceding it, suggests that policy changes may push public opinion instead of vice-versa in contrast to some models of public sentiment like the thermostatic model of Wlezien (1995). Increased favorability toward LGB people may act in conjunction with greater job security to improve labor market outcomes for LGB Americans.

## 2 Data

A common issue in analyzing the pay gap/premium between homosexual and heterosexual workers is a lack of high-quality data asking about sexual orientation, wages, and employment. I follow the literature (Klawitter and Flatt (1998); Gates (2009); Jepsen and Jepsen (2017)) in inferring sexual orientation by looking at household composition. Specifically,

I infer a person’s sexual orientation to be homosexual/bisexual if they have an unmarried partner or a spouse that is the same sex as themselves<sup>6</sup>. The ACS references a close personal relationship for unmarried partners as well as giving an option for “partner/roommate,” which reduces the likelihood that straight roommates would misclassify as unmarried partners.

The comparisons that I make are between people in same-sex relationships, defined as being in an unmarried partnership or married with someone of the same sex, and those in different-sex relationships. This comparison based on household composition, though standard in the literature, is not equivalent to comparing LGB and heterosexual workers. It is comparing those that are in a same-sex relationship to those that are in a different-sex relationship. Notably, this comparison excludes all workers who are not in a cohabitating relationship and classifies bisexual people in different-sex relationships as members of the control group. For example, if a person is misclassified as straight instead of bisexual, and bisexual workers have a lower pay than their straight counterparts, then the misclassification would bias our pay gap/premium results toward zero.

I use the 2005-2016 yearly ACS from IPUMS USA (Ruggles, et al 2019). I use wages, defined as salaried wages from an employer. The ACS reports wage earnings in annual terms. I use the annual figures and convert them to hourly wage figures using variables on average weekly hours worked and weeks worked<sup>7</sup>. Finally, I limit my sample to prime-age working adults and only examine those who are ages 25-65. I use 25 as the lower age cutoff to allow workers to complete college and have more fully developed human capital, which is typically thought of as an important factor for the differences in wages between LGB and straight workers (Black, Sanders and Taylor, 2007).

I obtained data on the passage of state anti-discrimination laws from LGBTMap.org, an LGBT advocacy group. The website gives information on which states passed anti-

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<sup>6</sup>People with imputed sex value are dropped from the sample.

<sup>7</sup>“Weeks worked” in the ACS is a categorical variable giving a range of weeks worked. I take the median value given in the range to compute weeks worked.

discrimination laws and when. I focus solely on sexual orientation anti-discrimination laws that give protection in employment. LGBTMap.org also provided incomplete data detailing the passage of local city and county laws with many cities missing years for the start of their anti-discrimination laws. I completed the dataset for the relevant years using old media reports, correspondence with local officials, and FOIA requests. This dataset is the first complete city level dataset on sexual orientation anti-discrimination laws in the U.S. I focus on cities reported in the ACS and matched those city laws with their corresponding counties to merge in with the ACS. The ACS only reports county of residence for those in metro areas, so any rural counties are lumped together. I make the assumption in my analysis that the impact of these laws is the same across states and localities, estimating an average effect.

I report the state, city, and county laws and the year they were enacted in Table 1. In Figures 1 and 2, I show which counties had sexual orientation anti-discrimination laws in 2005 and 2016, respectively.

Enactment of anti-discrimination legislation is not random. The states that have these protections are generally considered friendlier to LGB workers than those without these laws and have a larger share of same-sex partnerships than those states without these laws. Also, many of the counties that have anti-discrimination laws have large cities that have a larger concentration of LGB workers than rural counties. However, this is not universal. For instance, Utah extended protection to LGB workers despite being a relatively conservative state, and certain liberal cities like Houston<sup>8</sup> are noticeably absent from extending protection to LGB workers. One potential concern in this analysis is the endogenous adoption of laws. The areas that are friendly and less hostile to LGB workers may be the areas that are most likely to adopt sexual orientation anti-discrimination laws. The levels of sentiments and friendliness to LGB workers is not the concern, as a county-fixed effect will compare a given county to itself. The concern is that the timing of anti-discrimination laws is correlated with

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<sup>8</sup>Houston passed a sexual orientation and gender identity anti-discrimination ordinance, but it was only in effect for 3 months before being challenged. The law was put up to a public vote and lost, repealing the law.

another factor causing an omitted variable bias. It could be that positive sentiment toward LGB workers cause both the law change and any change in labor market outcomes. I attempt to control for sentiment toward LGB workers in a given state at a given year by including polling information on support for same-sex marriages. Unfortunately, I cannot observe polling at a local level, as such the polling measure is an incomplete proxy for sentiment toward LGB workers.

I collected every poll that Pew Research Center has published from 2005-2016 to pull each poll regarding support for same-sex marriage. The 28 polls asking about same-sex marriage were aggregated to get the percentage of people that supported same-sex marriage by state by year. The polling information contains data on every state for every year, except for Alaska and Hawaii, which are missing polling information for 2005-2008.

In Figure 3, I present the distribution of same-sex partnerships by state from 2005 to 2016, and in Table 2, I present the 10 counties with the largest share of same-sex partnerships.

Unsurprisingly, the distribution of same-sex partnerships by state and by county are skewed toward more progressive states and counties with large cities in them that are known for having a large LGB population like San Francisco, the District of Columbia, New York City, and Boston. The LGB population varies from the straight population in many dimensions including geography. I present descriptive statistics showing the differences in the LGB population compared to the straight population broken down by education level and sex in Table 3. Descriptively, there is a clear difference in labor market outcomes and characteristics between men and women in same-sex partnerships and those in different-sex partnerships when controlling for education.

### **3 Identification Strategy & Estimation**

The differential rollout of anti-discrimination laws by state and locality over time lends itself to a difference-in-differences framework with the main outcomes of interest as the change



in labor supply and pay between two groups, LGB workers and heterosexual workers. This strategy uses the variation presented in Figures 1 and 2, which shows how the laws changed over time by state and county.

Formally, I estimate this equation on labor supply:

$$LS_{ict} = \alpha_0 Law_{ct} + \alpha_1 SSP_i + \alpha_2 Law_{ct} * SSP_i + \alpha_3 X_i + \alpha_4 \gamma_{st} + \mu_c + \delta_t + \epsilon_{itcs} \quad (1)$$

Where  $LS_{ict}$  is the labor force participation or employment status for person  $i$  in county  $c$  in year  $t$ .  $Law_{ct}$  is an indicator for if county  $c$  has an employment anti-discrimination law on sexual orientation or is covered by a state-wide anti-discrimination law in year  $t$ , and  $SSP_{it}$  is an indicator for if person  $i$  is in a same-sex partnership.  $X_i$  is a vector of person-specific covariates including education, age, race, children, etc.  $\gamma_{st}$  is a vector for state  $s$  covariates on the legality of same-sex marriage in year  $t$  as well as polling for the support of same-sex marriage. It includes the percentage of people that “strongly support,” “support,” “oppose,” and “strongly oppose” same-sex marriage in a given state in a given year. Finally,  $\mu_c$  gives county fixed effects,  $\delta_t$  gives year fixed effects, and  $\epsilon_{itcs}$  is the error term<sup>9</sup>. My sample is limited to people aged 25 to 65, and I estimate this model separately by sex using the ACS person weights. I cluster the standard errors at the county level, as that is the level of the treatment in this specification. The coefficients of interest are  $\alpha_2$ , which will give the effect of the law on the labor supply gap/premium, and  $\alpha_1$ , which gives the labor supply gap/premium in the absence of an anti-discrimination law. My specification makes the assumption that the effect of the laws is the same across states and localities, and I will be estimating an average effect.

I estimate a similar equation for wages:

$$\ln(Y_{ict} + 1) = \beta_0 Law_{ct} + \beta_1 SSP_i + \beta_2 Law_{ct} * SSP_i + \beta_3 X_i + \beta_4 \gamma_{st} + \mu_c + \delta_t + \epsilon_{itcs} \quad (2)$$

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<sup>9</sup>Since the ACS only identifies metro counties, the county fixed effect is close to a pseudo-county fixed effect. The rural counties are all compared together with a true county fixed effect for metro area counties.

Where  $Y_{ict}$  is the real value, in 1999 dollars, of person  $i$ 's wages in county  $c$  year  $t$ . The rest of the notation is the same as above. The coefficients of interest are  $\beta_2$ , which will give the effect of the law on the pay gap/premium, and  $\beta_1$ , which gives the pay gap/premium.

One concern is that the distribution of LGB workers is not random, and states/counties that pass anti-discrimination laws have a higher concentration of LGB workers. However, the use of county fixed effects will make comparisons within a given county, so San Francisco will be compared to San Francisco. A potential concern would be if there is sorting of LGB workers to areas that have anti-discrimination laws protecting them, changing the composition of the area. I show that there is little evidence to support this in the robustness check section.

My identifying assumption in this difference-in-differences framework is that the labor supply and wage gap/premium in counties that have anti-discrimination laws would have continued parallel with the counties that did not have anti-discrimination laws in the absence of the laws. While the parallel trends assumption of difference-in-differences methodology is inherently untestable, it is common to see how parallel the pre-trends are before each state or county receives the treatment to places that are untreated. I examine the outcomes relative to the timing of the laws by estimating an event study model:

$$\begin{aligned}
 LS_{ict} = & \sum_{j=-5, j \neq -1}^{j=5} \rho_j \mathbb{1}(YearsWithLaw_{ct} = j) + \\
 & \sum_{j=-5, j \neq -1}^{j=5} \tau_j \mathbb{1}(YearsWithLaw_{ct} = j) * SSP_i + \\
 & \theta_1 SSP_i + \theta_2 X_i + \theta_3 \gamma_{st} + \mu_c + \delta_t + \epsilon_{itcs}
 \end{aligned} \tag{3}$$

I estimate this equation for labor supply measures and wage measures where  $\mathbb{1}(YearsWithLaw_{ct} = j)$  is an indicator for if county  $c$  has had the law for  $j$  years in time  $t$ . I plot the  $\tau_j$ s, which give the effect of the law on the labor supply and pay gap/premium in each year relative to the start date. The effect of the law in the year before the law is enacted is normalized to zero.

## 4 Results

### 4.1 Main Results

In Table 4, I present the regression on the extensive margin of labor supply with Panel A giving the effect of anti-discrimination laws on gay men’s labor supply and Panel B giving the effect for lesbian women. I present the full specification in columns (1) and (2) and include a specification without accounting for local anti-discrimination laws in columns (3) and (4) to show how failing to account for local laws would lead to the incorrect inference.

Consistent with the previous literature, I find that lesbian women have a labor supply premium of and gay men have a labor supply penalty on the extensive margin. Lesbian women are 7.3% more likely to be employed and gay men are 7.9% less likely to be employed than their straight peers. Anti-discrimination laws have a significant effect in reducing the labor force participation and employment gap for gay men. The labor force participation rate gap is reduced by 1.3 p.p. (18%), and the employment gap is reduced by 1.4 p.p. (18%). Conversely, the labor force participation and employment premium that lesbian women have over their straight counterparts is reduced by 1.3 p.p. (16%) and 1 p.p. (14%), respectively. As seen in columns (3) and (4) of Panel A, estimating the effect of anti-discrimination laws only using state laws will lead one to erroneously conclude that these laws have no significant effect on the gay labor force and employment gap. However, the effect on the extensive margin of labor supply for lesbian women looks similar when estimating the effect just state anti-discrimination laws.

In Table 5, I present the regression results on the intensive margin of labor supply as measured by weekly hours worked and weeks worked. Similar to Table 4, I include the results when only estimating the effects of the state laws in columns (3) and (4) to show the contribution of including local laws in estimating the effect of anti-discrimination laws.

I replicate past findings where gay men supply significantly less labor and lesbian women supply significantly more labor on the intensive margin. As with Table 4, I find contrasting

effects of anti-discrimination laws on male and female outcomes. I find that the intensive labor supply gap for gay men as measured by weekly hour and weeks worked is significantly reduced, and the intensive labor supply premium for lesbian women is significantly reduced as well. The effect of anti-discrimination laws on weekly hours worked becomes insignificant for gay men and lesbian women when only estimating off of state-wide anti-discrimination laws.

In Table 6, I present the regression results on the wage gap as measured by hourly wages and annual wage earnings. These variables received a  $\log(x+1)$  transformation, to handle zero values and so the changes can be interpreted in percentage terms. I run the regressions separately by sex and present the regressions showing how the sexual orientation anti-discrimination laws impact both employed and unemployed people in columns (1) and (2) and limit the regressions to only those who are employed in columns (3) and (4). My preferred specification is to look at both employed and unemployed people in the sample as employment is endogenous. Conditioning on employed workers would create an endogeneity problem since labor force participation and employment are significantly impacted by anti-discrimination laws. Given Table 4, the sample of employed workers could be changing as a result of the law changes, which would lead to a change in the sample composition. I present the regressions limited to employed workers to replicate past work on the wage gap/premium where it is common to only examine employed workers. I include results with only using state anti-discrimination laws, excluding local laws. I present those results in columns (5) - (8).

Gay men see a significant decline in the hourly wage gap by 2.8 p.p. (11%) at the 0.1 significance level and see an insignificant decline in the annual earnings gap by 5.8 p.p. On the other hand, lesbian women see a significant change in their annual earnings premium by 13 p.p. (16%) and an insignificant reduction in their hourly wage premium. Columns (3) and (4) replicate the past literature where employed gay men make about 8% to 11% less than their straight counterparts and employed lesbian women make about 5% to 15% more

than their straight counterparts.

The pay gap/premium is reduced quite significantly once the sample is limited to employed workers, which is unsurprising. As shown in the Table 4 and Table 5, there are significant differences in labor supply for LGB and straight workers. Gay men and straight women are far more likely to be unemployed, out of the labor force, and work fewer hours and weeks, so including their zero wages in the regression will increase the gap/premium.

There's a significant decrease in the hourly wage gap now and an insignificant decrease in the annual wage gap. There's also a significant decrease in the annual earnings premium for lesbian women but no change in their hourly wage premium. This result is entirely consistent with the labor supply results in Table 4 and 5 where their intensive and extensive margin of labor supply premium are declining, so the annual earnings declines, but hourly wage does not.

I present the event study regressions for male and female extensive labor supply outcomes in Figure 4 with the male results in the top row and the female results in the bottom row. There is an initial uptick in the relative employment and labor force participation rate for gay men that diminishes after a few years but reappears at the end. These graphs suggest an initial positive effect that is tempered in the medium-term but could persist in the long-term. The point estimates are smaller and insignificant but remain positive after implementation, which could be caused by the reduced sample size that occurs from slicing the data into yearly bins. The pre-trends before the treatment look fairly parallel though for the point estimates. Pre-trends being parallel doesn't validate the identifying assumption of parallel trends in the post-period, but it makes the assumption more palatable. These figures suggest that there is a temporary boost to gay labor force participation/employment relative to straight employment/labor force participation. In the second row, there appears to be continuous downward trend in the point estimates for the labor force participation gap irrespective of the enactment of these anti-discrimination laws, although employment looks relatively stable in the pre-trends. The confidence intervals for the pre-trends encapsulate zero though.

I present the event study regressions for male and female pay penalty/premium outcomes in Figure 5, with the male results in the top row and the female results in the bottom row. The pre-trends look parallel before the treatment on the gay hourly wage and annual earnings gap. It appears that it takes time though for the gay workers to see gains in their relative wages to straight workers, but there appears to be a temporary spike in relative gay wages in time period 1 after law passage, that goes away after a short time. The spike could occur in time period 1 after law passage due to implementation lags. The event study plots for lesbian women looks less parallel in the pre-period and appear to be downward trending for the point estimates. However, the confidence intervals encapsulate zero for all of the pre-periods. There is a significant drop in relative lesbian wages in time period 2 after the law passage.

## 4.2 Occupation Fixed Effects

LGB workers tend to sort to different occupations and industries based on sex and sexual orientation (Black, Sanders and Taylor, 2007). They show that gay men tend to sort to more female dominated fields and lesbian women sort to more male dominated fields relative to their heterosexual counterparts. It is typical to not take those factors into consideration because discrimination affects occupation and industry choice, which would make occupation and industry choice endogenous.

While controlling for occupation will bias the wage gap, it can still be instructive for seeing the effect of anti-discrimination laws of the wage and labor supply gap. I run these regressions with occupation fixed effects using four-digit occupation codes in the ACS to see how the pay gap/premium changes after anti-discrimination laws are passed. Using occupation fixed effects will examine the effect of anti-discrimination laws within an occupation. One potential mechanism for anti-discrimination laws is that gay workers sort into more in-demand occupations, lowering their relative labor supply and wage gap, while lesbian workers do the opposite. However, I show that even when controlling for occupation that there is a

significant change in relative labor supply for men and women in same-sex partnerships and a significant change in relative pay for women in same-sex partnerships, indicating there is a significant effect of these laws even within occupation. I present the extensive labor supply and pay regressions with occupation fixed effects in Table 7 and 8.

In these tables, there is a smaller pay gap for gay men and a smaller pay premium for lesbian women when controlling for occupation or industry. However, qualitatively the results seem to be similar to the main results in Table 4 and Table 6 . Gay men see a significant reduction in the labor supply gap, and lesbian women see a significant reduction in their labor supply and annual wage premium. There is no longer a significant effect on the wage gap for gay men. These findings suggest that anti-discrimination laws have a significant effect even within occupations. The effect doesn't come from workers shifting into occupations with less discrimination, but even when conditional on occupation choice, there's a significant reduction in differences of labor supply across sexual orientations for men and women.

## 5 Robustness Checks

### 5.1 Endogenous Adoption of Anti-Discrimination Laws

One concern in this analysis is the endogenous adoption of anti-discrimination laws. Clearly, anti-discrimination laws are not randomly distributed. Locally, anti-discrimination laws are concentrated in larger cities, and state laws are to be concentrated in more liberal states that presumably are more accepting of and more favorable to LGB workers. The main concern is that there is an unobservable factor like general sentiment toward LGB workers that affects both the passage of laws as well as the labor market outcomes for LGB workers.

In my main regressions, I control for this concern by using state-level polling information on support for same-sex marriage as a proxy for general sentiment toward LGB workers. It's possible that controlling for state-level polling isn't the best way to capture sentiment toward

LGB workers since it's possible to discriminate against people based on sexual orientation and still support their right to marry. However, it seems plausible that the changes in state-level support for same-sex marriage are highly correlated with changes in sentiment toward LGB workers such that it will suffice for a suitable proxy. An important limitation to this analysis is that I am unable to see local-level polling information on support for same-sex marriage. Local-level sentiment toward LGB workers is unobservable. My regressions include state-level polling so any effect identified from law changes is conditional on the state-level information, but it is not conditional on local-level sentiment.

To better get at the question of endogenous adoption of laws, I create an event-study plot showing how state-laws change support for same-sex marriages. Specifically, I estimate this equation:

$$Support_{st} = \sum_{j=-5, j \neq -1}^{j=5} \psi_j \mathbb{1}(YearsWithLaw_{st} = j) + \phi_s + \delta_t + \epsilon_{ts} \quad (4)$$

$Support_{st}$  gives the support for same-sex marriage in state  $s$  in year  $t$ , and  $\mathbb{1}(YearsWithLaw_{st} = j)$  is an indicator for if state  $s$  has had a sexual orientation anti-discrimination law for  $j$  years in time  $t$ . I plot the  $\psi_j$ s, which give the effect of anti-discrimination laws on the support for same-sex marriage. This estimation strategy is an event study plot in a typical difference-in-differences set up. The identifying assumption is that support for same-sex marriage in states that passed anti-discrimination laws would have continued in parallel with states that did not pass anti-discrimination laws. I present the event study in Figure 6.

The event study supports the idea that anti-discrimination laws at the state-level significantly increase the support for same-sex marriage at the state-level. The pre-trends are relatively parallel with a significant and persistent increase in the percentage of people supporting same-sex marriage, suggesting that states with and without anti-discrimination laws had the same trends in support for same-sex marriage before laws and differed once the laws passed. It could be that the laws passed due to the change in support for same-sex marriage at the moment of the law passage, but endogenous adoption of the laws would likely show that there is a continuous increase in the support for same-sex marriage before



the adoption of the law with the law having no effect on the support for same-sex marriage. However, the persistent and significant jump right in conjunction with the passage of anti-discrimination laws gives more credence to the hypothesis that the law changes increases support for same-sex marriage and likely overall sentiment to LGB workers rather than vice-versa.

My results condition on the state-level change in polling in the support for same-sex marriage and condition on this jump in sentiment that occurs following a state law change. However, they do not condition on local level changes in support for same-sex marriage. I showed previously in the paper that the local laws matter significantly for the correct inference of passing anti-discrimination laws. The jump seen in state-level sentiment toward LGB workers following state anti-discrimination law passages could suggest that there is a corresponding jump in sentiment at the local level that is unobservable and potentially acting as a mechanism, affecting the labor supply and pay for LGB workers.

## **5.2 Sorting and Increased Reporting**

One finding from Klawitter and Flatt (1998) suggests that LGB workers sort to areas with anti-discrimination laws. If LGB workers were sorting to areas that recently passed anti-discrimination laws, then it could violate the identifying assumption. It would be concerning if high-wage LGB workers migrated from unprotected areas to areas that recently passed anti-discrimination laws since it would lower the average wage in untreated counties and increase the average wage in treated counties.

Another potential concern would be increased reporting for same-sex partnerships. Same-sex partnerships, while less stigmatized in 2005-2016 than in previous years, were still heavily stigmatized. Anti-discrimination laws could signal to LGB people that their community was more accepting, and people may be more likely to declare that they are in a same-sex partnership. This change in reporting could affect the composition of my sample, which in turn could violate the identifying assumption.

To address this concern, I run the regression below to see if there is an increase in same-sex partnerships in a given county after an anti-discrimination law is passed:

$$SSP_{ict} = \beta_0 Law_{ct} + \beta_3 X_i + \beta_4 \gamma_{st} + \mu_c + \delta_t + \epsilon_i tcs \quad (5)$$

In this regression,  $\beta_0$  is the coefficient of interest, and it will give the effect of anti-discrimination laws passing on the number of same-sex partnerships in a given county whether that is from in-migration or increased reporting of same-sex partnerships. I present these results in Table 9.

I find no significant effect of anti-discrimination laws on the number of same-sex partnerships at the county level, suggesting there is minimal sorting or change in reporting following the passage of anti-discrimination laws.

## 6 Discussion

### 6.1 Differences in Response by Sex

The results paint an interesting picture of the effect of anti-discrimination laws on the workforce, in that they have differing effects on lesbian and gay workers. In summation, lesbian workers see a reduction in the labor supply and pay premium while gay workers see a reduction in their labor supply and pay gap. The anti-discrimination laws appear to push the labor market outcome to a greater level of equality across sexual orientation, where lesbian women move toward the labor market outcomes of straight women and gay men move toward the labor market outcomes of straight men.

One potential explanation for this convergence of labor market outcomes is that employers stop differentiating between workers based on sexual orientation after anti-discrimination laws are passed and that results in greater equality. However, much of the labor market differences arise from differences in human capital accumulation and decisions that come before many of the anti-discrimination laws such as occupation/industry choice and desired number of children (Black, Sanders and Taylor, 2007).

Another explanation for different responses to anti-discrimination laws for same-sex couples lies in the canonical Becker (1981) theory of the family and division of labor, which is typically used to explain differences in LGB labor market outcomes from their straight counterparts (Black, Sanders and Taylor, 2007). In a male-female household with a “traditional” division of labor, the man specializes in market production, selling his labor for money to buy market goods, and the woman specializes in household production, using her labor to rear children, cook, and take care of the home, etc. However, LGB people are less likely to end up in a traditional Beckerian household. This expectation of future household composition will induce gay men to be less specialized in market production and lesbian women to be more specialized in market production than their straight counterparts. This theory of household specialization is typically used to explain why gay men make less than straight men and lesbian women make more than straight women (Black, Sanders and Taylor, 2007).

This household model can also be used to think about responses to anti-discrimination laws. One potential explanation for lesbian women becoming differentially more likely to leave the workforce and earn less is that a lesbian household may be more likely to shift to a more traditional Beckerian household where one parent specializes in household production and the other shifts to a more market orientation. If anti-discrimination laws decreased the risk of the primary earner getting fired for their sexual orientation, it could induce the secondary earner to switch to more part-time work or exit the workforce to specialize in household production or focus on child rearing. Each woman would specialize in her intrahousehold comparative advantage. Alternatively, both women in a female same-sex partnership could switch to reducing hours to spend more time in household production as a result of increased job security.

Households consisting of lesbian women typically have more children than households consisting of gay men, and much of the gains from task specialization come from children. Given lesbian women have more children than gay men, it would be unsurprising to see lesbian households switch more to a specialization of their household labor than gay men

would, which would help explain why anti-discrimination laws have different effects on lesbian women and gay men.

To test the different responses by men and women in same-sex partnerships to anti-discrimination laws and the implications of Becker’s household model, I implement an alternative difference-in-difference model. Instead of comparing those in same-sex partnerships to those in different-sex partnerships, I compare men and women in same-sex partnerships to examine their differential responses at the household level. Do women in same-sex partnerships change their household division of labor relative to men in same-sex partnerships following anti-discrimination laws? To answer this question, I collapse the data to the household level and examine households instead of individuals.

Specifically, I estimate this model:

$$y_{jct} = \alpha_0 Law_{ct} + \alpha_1 FemSSP_j + \alpha_2 Law_{ct} * FemSSP_j + \alpha_3 X_j + \mu_c + \delta_t + \epsilon_{jct}$$

The notation is the same as before with two main differences. My interaction term uses an indicator for if household  $j$  is a female same-sex partnership, denoted by  $FemSSP_j$ .  $y_{jct}$  is a variable for outcomes at the household level.  $\alpha_2$  is my coefficient of interest and will show how lesbian households differ in their response to anti-discrimination laws compared to gay households. The first outcome examined is an indicator for if the household is a one-earner family. I also examine the difference in absolute value between the two partners in terms of weekly hours worked. These labor supply measures inform how intrahousehold labor is divided up between partners along the extensive and intensive margin of labor supply. Finally, I examine how the anti-discrimination laws may affect child rearing by examining if the households have any children and the number of children they have.

I present the results in Table 10. Anti-discrimination laws do not differentially affect the likelihood of women in same-sex partnerships to become a one-earner household, but

there is an effect on the intensive margin. There is a significant differential effect of anti-discrimination laws in the intrahousehold difference in hours worked for lesbian households. An increase in the difference of hours worked within the household could suggest a greater specialization in market production for one woman and a greater specialization in household production and working fewer hours for the other woman in the partnership. One potential reason for this increased specialization would be having more children and having a greater need for lesbian partnerships to specialize in household production. Lesbian households do see a significant increase in the likelihood of having any child and the number of children they have relative to gay households.

This evidence tied with Becker's theoretical work suggest that men and women in same-sex partnerships are differentially responding to these anti-discrimination laws. Lesbian households begin to have more children than gay households and change their labor supply and intrahousehold division of labor to accommodate their new children. It may appear in the main results that anti-discrimination laws hurt lesbian women because their labor supply and pay premium over straight women shrinks. However, their response in the labor market could be driven by a greater desire for children and subsequent changes in household labor allocation due to an increase in job security. The corresponding changes in the labor market could represent an increase in welfare for lesbian households if they value their new children and increased welfare from specializing greater than their lost hours worked and subsequent lost wages. Consistent with the theory and empirical findings, lesbian households could become more secure with one woman being the primary earner following anti-discrimination laws and the other woman working fewer hours to instead focus on household production and rearing children, which are more prevalent in lesbian households following the passage of anti-discrimination laws.

## 6.2 Mechanism

The results of this research indicate that sexual orientation anti-discrimination laws could significantly impact the labor market gaps for gay/bisexual men as well as the labor market premiums for lesbian/bisexual women. It's possible that these laws are binding and eliminate significant discrimination in the labor market. However, it's relatively easy for an employer to create a reason to fire an employee rather than firing someone specifically for being gay. It's also difficult to accurately determine someone's sexual orientation by looking at them unlike race and sex. Although it may be easier to determine someone's sexual orientation conditional on them being in a same-sex relationship. Sexual orientation anti-discrimination laws may not be binding in a meaningful way that eliminates discrimination.

One mechanism that the laws could be affecting labor market outcomes is through increased positive sentiment toward LGB workers. I show in Figure 6 that following state anti-discrimination laws there is a significant and persistent increase in the percentage of people in that state that support same-sex marriage. However, my regression results already condition on the change in the state-level support for same-sex marriage. They do not condition on the change in local-level sentiment toward LGB workers as that is unobservable. Given that there is a change in the sentiment at the state-level following a state law, it is likely that there may be some change in sentiment at the local level. I show the local laws matter significantly for the correct inference, so it seems plausible that local law changes could significantly change local sentiment and impact the labor supply and pay of LGB workers. Changing public sentiment in conjunction with greater protection for LGB workers seems more plausible as the mechanism than simply greater protection in the workplace.

## 6.3 Threats to External Validity

One limitation of this research is that I am unable to view all LGB workers. The analysis is specifically conducted on individuals in same-sex partnerships and different-sex partnerships. The data does not allow for the identification of single LGB workers, whose outcomes

may be significantly different than LGB workers in partnerships. Another pitfall to using partnerships to infer sexual orientation is that one could incorrectly infer someone's sexual orientation from a partnership. Bisexual people are a larger group than lesbian or gay people, and this specification could erroneously assign bisexual people to be straight through being in a different-sex partnership (Gates, 2011). If bisexual workers appear more similar to their lesbian and gay counterparts then the results of quantifying the labor supply and pay gap/premium would likely be biased toward zero and the change in those labor market gaps/premiums would also be biased toward zero.

Another potential concern in using partnerships to infer sexual orientation is that people in a same-sex partnership may be the group that is most at risk of discrimination. It seems likely that single LGB workers can more plausibly stay in the closet to their co-workers compared to their counterparts in a same-sex partnership. This analysis may be capturing the effect of anti-discrimination laws on the group that is most likely to be affected. These results may have a larger effect size than what one would find in examining the generalized LGB population.

These biases are with respect to the broader LGB population and external validity. Notably, these potential biases do not affect internal validity. Translating the effect of anti-discrimination laws for people in same-sex partnership to all other LGB workers is not immediately obvious. It's dependent on many factors that are unknowable in this analysis such as the wages and labor supply for single LGB workers and bisexual workers in different-sex partnerships and how discrimination affects LGB people differentially for those in same-sex partnerships.

## 7 Conclusion

This analysis is the first quasi-experimental research examining how both local and state anti-discrimination laws on sexual orientation affect the labor supply and pay gap/premium be-

tween LGB and straight workers. I construct a novel panel dataset on local anti-discrimination laws to properly capture the granular nature of anti-discrimination laws as well as incorporating Pew polling data on support for same-sex marriage for each state in each year to proxy and control for the unobservable sentiment to LGB workers, and I show that accounting for local laws is necessary for proper inference. I find that anti-discrimination laws appear to decrease sexual orientation inequality in the labor market. Specifically, I find that anti-discrimination laws significantly reduce the gay labor force participation gap by 1.3 p.p. (18%), the employment gap by 1.4 p.p. (17%), and the wage gap by 2.8 p.p. (11%) and reduce the lesbian labor force participation premium by 1.3 p.p. (18%), the employment premium by 1 p.p. (14%) and the annual earnings premium by 12 p.p. (14%). I also show that one potential mechanism that anti-discrimination laws work through is by increasing positive sentiments toward LGB Americans as measured by the support of same-sex marriage. Finally, I explain the differential response to these laws between gay and lesbian households through Becker's household specialization model and support the explanation with empirical evidence.

In a majority of states, it is currently legal to fire someone solely based on their sexual orientation, and states have been less inclined to pass anti-discrimination laws recently. Arkansas and Tennessee even passed anti-anti-discrimination laws preventing cities from enacting anti-discrimination laws. Since 2009, more states have barred cities from protecting their residents than the number of states extending protection. My research gives a comprehensive look at a policy that Congress is considering in "The Equality Act" to extend federal protection to sexual orientation and gender identity. My research gives the most comprehensive look at policy and can meaningfully inform the policy discussion around anti-discrimination laws. Overall, this research suggests that states and the federal government should be trying to give greater protection to their LGB workers, and sexual orientation anti-discrimination laws can be effective at addressing sexual orientation inequalities in the labor market.



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# Tables

Table 1: Timing of Sexual Orientation Anti-discrimination Laws

Year	State	City or County
2005 and Before	CA, CT, DC, HI, ME, MD, MA, MN, NV, NH, NJ, NM, NY, RI, VT, WI	Boulder, CO; Denver, CO; Fort Collins, CO; Gainesville, FL; Hialeah, FL; Hollywood, FL; Key West, FL; Miami, FL; Orlando, FL; Pembroke, FL; Saint Petersburg, FL; Tampa, FL; West Palm, FL; Atlanta, GA; Ames, IA; Cedar Rapids, IA; Davenport, IA; Des Moines, IA; Iowa City, IA; Campaigne, IL; Chicago, IL; Peoria, IL; Urbana, IL; Bloomington, IN; Fort Wayne, IN; Michigan City, IN; Terre Haute, IN; Lawrence, KS; Covington, KY; Lexington, KY; Louisville, KY; New Orleans, LA; Ann Arbor, MI; Detroit, MI; Grand Rapids, MI; Ypsilanti, MI; Columbia, MO; Kansas City, MO; Saint Louis, MO; Cleveland, OH; Columbus, OH; Toledo, OH; Eugene, OR; Portland, OR; Benton County, OR; Salem, OR; Allentown, PA; Erie, PA; Harrisburg, PA; Lancaster, PA; Philadelphia, PA; Pittsburgh; Scranton, PA; Austin, TX; Dallas, TX; Fort Worth, TX; Alexandria, VA; Arlington, VA; Seattle, WA; Spokane, WA; Tacoma, WA
2006	IL, WA	Dubuque, IA; Indianapolis, IN; Ferndale, MI; Lansing, MI; Cincinnati, OH; Easton, PA; West Chester, PA; Charleston, SC
2007	CO, IA, OR	Waterloo, IA; Coshocton, OH; Dayton, OH; Newark, OH; Charleston, WV
2008		Columbia, SC
2009	DE	Alleghany, PA; Reading, PA; Salt Lake City, UT
2010		Tallahassee, FL; Traverse City, MI; Missoula, MT; Lower Merion, PA; Grand County, UT; Summit County, UT
2011		Volusia County, FL; Evansville, IN; University City, MO; East Cleveland, OH, Bethlehem, PA; Conshohocken, PA; Haverford, PA; Ogden, UT
2012		St. Augustine, FL; Boise, ID; New Albany, IN; South Bend, IN; Flint, MI; Muskegon, MI; Maplewood, MO; Helena, MT; Omaha, NE; Canton, OH; Abington, PA; Cheltenham, PA; Morgantown, WV
2013		Phoenix, AZ; Pocatello, ID; Frankfort, KY; Shreveport, LA; Battle Creek, MI; Bristol, PA; Pittston, PA; San Antonio, TX; Charlottesville, VA; Huntington, WV
2014		Tempe, AZ; Adrian, MI; Macomb County, MI; Butte, MT
2015	UT	Anchorage, AK; Osceola County, FL; Anderson, IN; Clinton, IN; Hammond, IN; Muncie, IN
2016		Kokomo, IN; Manahattan, KS; St. Charles, MO; Jackson, MS; Lakewood, OH; Carlisle, PA; Dickson City, PA; Wilkes-Barre, PA; Martinsburg, WV; Wheeling, WV

List of states, cities, and counties with sexual orientation anti-discrimination laws pulled from LGBTMap.org, an advocacy group, as well as through media reports and local FOIA requests. I only list city or county laws if there is no state law. Illinois passed their law in 2005, and enacted it in 2006.

Table 2: Counties with Largest LGB Populations

County	State	Percent of SSPs
San Francisco County	CA	7.61
District of Columbia	DC	6.64
New York County	NY	5.50
Suffolk County	MA	4.38
Alexandria city	VA	3.95
St. Louis city	MO	3.90
Multnomah County	OR	3.82
DeKalb County	GA	3.37
Santa Fe County	NM	3.30
Baltimore city	MD	3.19

Using ACS and person weights to recover the percentage of partnerships that are same-sex partnerships by county over 2005-2016.

Table 3: Summary Statistics

Panel A: Men						
Variable	High School Grad or Lower			Some College or Higher		
	SSP n = 17,780	DSP n = 2,294,524		SSP n = 61,408	DSP n = 3,935,008	
	Mean	Mean	Difference	Mean	Mean	Difference
In Labor Force	0.729	0.828	-0.099***	0.859	0.897	-0.037***
Employed	0.674	0.778	-0.104***	0.825	0.868	-0.043***
Annual Earnings	18280	23617	-5337***	46026	50923	-4897***
Hourly Wage	10.874	12.108	-1.234***	23.075	24.176	-1.102***
Age	46.206	47.219	-1.013***	45.683	46.768	-1.085***
Number of Children	0.545	1.190	-0.645***	0.266	1.122	-0.857***
Asian	0.028	0.028	0.000	0.042	0.060	-0.017***
Black	0.080	0.081	-0.001	0.041	0.058	-0.017***
Hispanic	0.111	0.114	-0.004*	0.063	0.047	0.016***
White	0.791	0.799	-0.008***	0.871	0.845	0.026***

Panel B: Women						
Variable	High School Grad or Lower			Some College or Higher		
	SSP n = 17,790	DSP n = 2,199,923		SSP n = 60,691	DSP n = 4,313,173	
	Mean	Mean	difference	Mean	Mean	difference
In Labor Force	0.718	0.598	0.120***	0.861	0.746	0.115***
Employed	0.663	0.557	0.106	0.829***	0.718	0.111***
Annual Earnings	16273	10728	5545***	36757	24987	11771***
Hourly Wage	9.369	6.818	2.551***	18.975	14.573	4.401***
Age	45.736	47.972	-2.236***	45.016	45.261	-0.245***
Number of Children	0.744	1.086	-0.342***	0.514	1.106	-0.593***
Asian	0.024	0.043	-0.019	0.027***	0.064	-0.037***
Black	0.109	0.066	0.043	0.055***	0.057	-0.002***
Hispanic	0.093	0.116	-0.022***	0.053	0.051	0.002**
White	0.781	0.802	-0.021***	0.867	0.839	0.029***

Data comes from the 2005-2016 yearly ACS comparing people in same-sex partnerships to people in different-sex partnerships. Summary statistics are presented by education level. T-tests were conducted to determine significant differences between those in same-sex partnerships and different-sex partnerships. \*\*\*  $p < 0.01$ , \*\*  $p < 0.05$ , \*  $p < 0.1$

Table 4: Effect of Anti-Discrimination Laws: Extensive Margin of Labor Supply

Panel A: Men				
VARIABLES	(1) Labor Force	(2) Employed	(3) Labor Force	(4) Employed
Laws*SSP	0.013*** (0.005)	0.014** (0.005)	0.007 (0.005)	0.005 (0.006)
SSP	-0.074*** (0.003)	-0.079*** (0.004)	-0.068*** (0.003)	-0.073*** (0.004)
State Laws Only			X	X
Observations	6,287,441	6,287,441	6,287,441	6,287,441
R-squared	0.135	0.114	0.135	0.114
Panel B: Women				
VARIABLES	(1) Labor Force	(2) Employed	(3) Labor Force	(4) Employed
Laws*SSP	-0.013** (0.006)	-0.010* (0.006)	-0.016*** (0.006)	-0.013** (0.006)
SSP	0.081*** (0.004)	0.073*** (0.005)	0.080*** (0.004)	0.072*** (0.004)
State Laws Only			X	X
Observations	6,569,373	6,569,373	6,569,373	6,569,373
R-squared	0.091	0.088	0.091	0.088

Data comes from the 2005-2016 yearly ACS comparing people in same-sex partnerships to people in different-sex partnerships with the regressions run separately by sex. All of the outcome variables are binary taking a value of 0 or 1. The first row of coefficients show the effect of anti-discrimination on the labor supply gap or premium, and the second row of coefficients give the labor supply gap or premium. Columns (3) and (4) present results when estimating only using state-wide anti-discrimination laws for comparison. Standard errors are clustered at the county level. \*\*\*  $p < 0.01$ , \*\*  $p < 0.05$ , \*  $p < 0.1$

Table 5: Effect of Anti-Discrimination Laws: Intensive Margin of Labor Supply

Panel A: Men				
VARIABLES	(1) Weekly Hours	(2) Weeks Worked	(3) Weekly Hours	(4) Weeks Worked
Laws*SSP	0.273* (0.160)	0.089 (0.080)	0.180 (0.164)	-0.0744 (0.0820)
SSP	-2.196*** (0.114)	-0.575*** (0.056)	-2.106*** (0.0923)	-0.477*** (0.0480)
State Laws Only			X	X
Observations	5,244,258	5,244,258	5,244,258	5,244,258
R-squared	0.034	0.011	0.034	0.011
Panel B: Women				
VARIABLES	(1) Weekly Hours	(2) Weeks Worked	(3) Weekly Hours	(4) Weeks Worked
Laws*SSP	-0.305** (0.136)	-0.184** (0.084)	-0.213 (0.134)	-0.171** (0.0790)
SSP	2.792*** (0.105)	0.604*** (0.066)	2.706*** (0.0924)	0.574*** (0.0577)
State Laws Only			X	X
Observations	4,366,603	4,366,603	4,366,603	4,366,603
R-squared	0.038	0.015	0.038	0.015

Data comes from the 2005-2016 yearly ACS comparing people in same-sex partnerships to people in different-sex partnerships with the regressions run separately by sex. Weeks worked in the ACS is a categorical variable giving a range of weeks worked. I take the median value given in the range to compute weeks worked. The first row of coefficients show the effect of anti-discrimination on the labor supply gap or premium, and the second row of coefficients give the labor supply gap or premium. Columns (3) and (4) present results when estimating only using state-wide anti-discrimination laws for comparison. Standard errors are clustered at the county level. \*\*\*  $p < 0.01$ , \*\*  $p < 0.05$ , \*  $p < 0.1$

Table 6: Effect of Anti-Discrimination Laws: Wages and Earnings

Panel A: Men								
VARIABLES	(1) Hourly Wage	(2) Annual Earnings	(3) Hourly Wage	(4) Annual Earnings	(5) Hourly Wage	(6) Annual Earnings	(7) Hourly Wage	(8) Annual Earnings
Laws*SSP	0.028* (0.017)	0.059 (0.050)	0.011 (0.015)	-0.041 (0.035)	0.0139 (0.0184)	-0.00404 (0.0525)	0.00639 (0.0168)	-0.0581 (0.0373)
SSP	-0.244*** (0.012)	-0.757*** (0.038)	-0.082*** (0.009)	-0.114*** (0.023)	-0.233*** (0.0108)	-0.716*** (0.0354)	-0.0780*** (0.00745)	-0.112*** (0.0184)
Employed Only State Laws Only			X	X	X	X	X	X
Observations	6,287,441	6,287,441	5,244,258	5,244,258	5,244,258	6,287,441	5,244,258	6,287,441
R-squared	0.157	0.121	0.127	0.041	0.127	0.157	0.041	0.121
Panel B: Women								
VARIABLES	(1) Hourly Wage	(2) Annual Earnings	(3) Hourly Wage	(4) Annual Earnings	(5) Hourly Wage	(6) Annual Earnings	(7) Hourly Wage	(8) Annual Earnings
Laws*SSP	-0.019 (0.020)	-0.129** (0.066)	-0.024** (0.011)	-0.062** (0.029)	-0.0203 (0.0202)	-0.153** (0.0668)	-0.0144 (0.0112)	-0.0453 (0.0297)
SSP	0.220*** (0.014)	0.815*** (0.049)	0.053*** (0.007)	0.149*** (0.021)	0.218*** (0.0116)	0.809*** (0.0409)	0.0448*** (0.00635)	0.132*** (0.0180)
Employed Only State Laws Only			X	X	X	X	X	X
Observations	6,569,373	6,569,373	4,366,603	4,366,603	6,569,373	6,569,373	4,366,603	4,366,603
R-squared	0.136	0.106	0.123	0.036	0.136	0.106	0.123	0.036

Data comes from the 2005-2016 yearly ACS comparing people in same-sex partnerships to people in different-sex partnerships with the regressions run separately by sex. Columns (3) and (4) are limited to those who are employed. All of the variables are in terms of 1999 dollars and received the  $\log(x+1)$  transformation to have the interpretation of the coefficient be in terms of percent. The first row of coefficients show the effect of anti-discrimination laws on the pay gap or premium, and the second row of coefficients give the pay gap or premium. Columns (5) - (8) present results when estimating only using state-wide anti-discrimination laws for comparison. Standard errors are clustered at the county level. \*\*\*  $p < 0.01$ , \*\*  $p < 0.05$ , \*  $p < 0.1$



Table 7: Anti-Discrimination Laws on Labor Supply with Occupation FEs

VARIABLES	Men		Women	
	(1) Labor Force	(2) Employed	(1) Labor Force	(2) Employed
Laws*SSP	0.009*** (0.003)	0.009** (0.004)	-0.009*** (0.003)	-0.009*** (0.004)
SSP	-0.037*** (0.002)	-0.045*** (0.003)	0.039*** (0.002)	0.036*** (0.003)
Observations	6,287,441	6,287,441	6,569,373	6,569,373
R-squared	0.372	0.461	0.517	0.461

Data comes from the 2005-2016 yearly ACS comparing people in same-sex partnerships to people in different-sex partnerships with the regressions run separately by sex and include four-digit occupation fixed effects. All of the outcome variables are binary taking a value of 0 or 1. The first row of coefficients show the effect of anti-discrimination on the labor supply gap or premium, and the second row of coefficients give the labor supply gap or premium. Standard errors are clustered at the county level. \*\*\*  $p < 0.01$ , \*\*  $p < 0.05$ , \*  $p < 0.1$

Table 8: Anti-Discrimination Laws on Pay with Occupation FEs

Panel A: Men				
VARIABLES	(1) Hourly Wage	(2) Annual Earnings	(3) Hourly Wage	(4) Annual Earnings
Laws*SSP	0.013 (0.013)	0.018 (0.035)	0.011 (0.013)	-0.028 (0.033)
SSP	-0.113*** (0.008)	-0.351*** (0.025)	-0.043*** (0.008)	-0.051** (0.022)
Employed only			X	X
Observations	6,287,441	6,287,441	5,244,258	5,244,258
R-squared	0.372	0.372	0.248	0.169
Panel B: Women				
VARIABLES	(1) Hourly Wage	(2) Annual Earnings	(3) Hourly Wage	(4) Annual Earnings
Laws*SSP	-0.015 (0.011)	-0.104*** (0.034)	-0.024*** (0.009)	-0.063** (0.025)
SSP	0.117*** (0.008)	0.437*** (0.028)	0.056*** (0.007)	0.172*** (0.018)
Employed only			X	X
Observations	6,569,373	6,569,373	4,366,603	4,366,603
R-squared	0.513	0.527	0.303	0.233

Data comes from the 2005-2016 yearly ACS comparing people in same-sex partnerships to people in different-sex partnerships with the regressions run separately by sex and include four-digit occupation fixed effects. All of the variables are in terms of 1999 dollars and received the  $\log(x+1)$  transformation to have the interpretation of the coefficient be in terms of percent. The first row of coefficients show the effect of anti-discrimination on the pay gap or premium, and the second row of coefficients give the pay gap or premium. Standard errors are clustered at the county level. \*\*\*  $p < 0.01$ , \*\*  $p < 0.05$ , \*  $p < 0.1$

Table 9: Sorting and Reporting

VARIABLES	(1)	(2)	(3)
	All SSP	Male SSP	Female SSP
Laws	0.000170 (0.000489)	0.000633 (0.000572)	-0.000304 (0.000573)
Observations	12,872,572	6,295,028	6,577,544
R-squared	0.068	0.072	0.065

Data comes from the 2005-2016 yearly ACS seeing how the number of same-sex partnerships change in a county after the passage of an anti-discrimination law. The first column looks at both men and women with the next two columns separating the sexes. Standard errors are clustered at the county level. \*\*\*  $p < 0.01$ , \*\*  $p < 0.05$ , \*  $p < 0.1$

Table 10: Differential Responses between Male and Female Same-Sex Partnerships

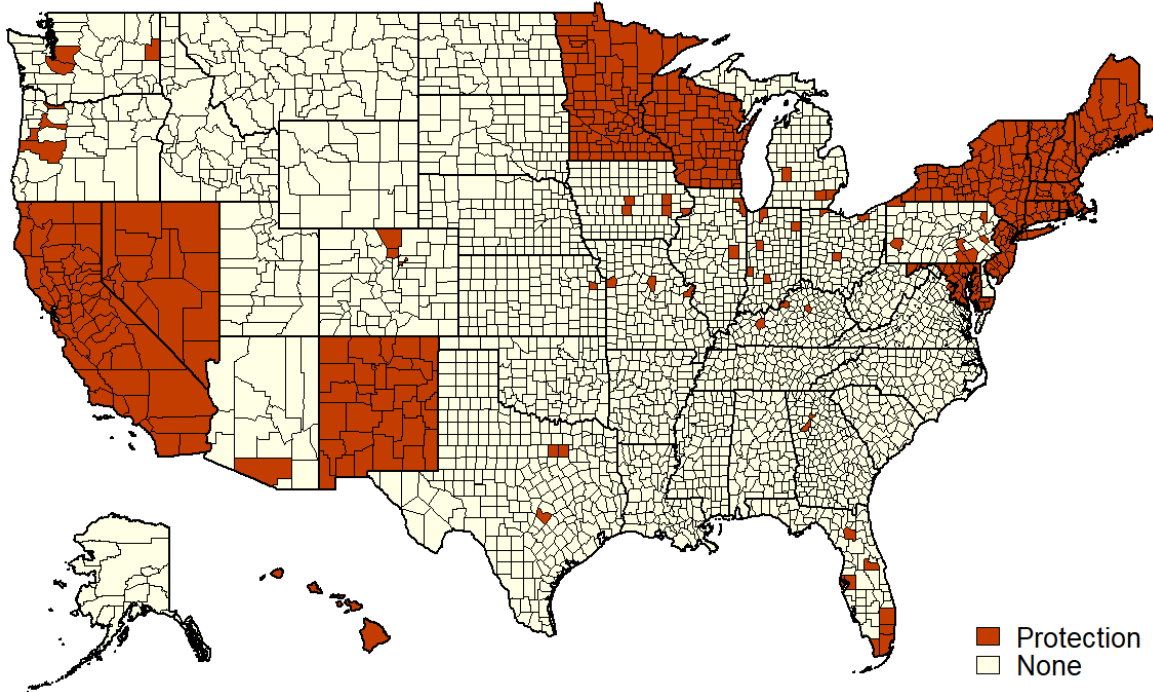
VARIABLES	(1)	(2)	(3)	(4)
	One Earner HH	Diff in Hours Worked	Any Children	Number of Children
Laws*FemSSP	-0.00308 (0.00868)	0.947*** (0.364)	0.0344*** (0.00846)	0.0544*** (0.0195)
FemSSP	0.00445 (0.00717)	-0.729** (0.317)	0.123*** (0.00743)	0.193*** (0.0176)
Observations	73,181	73,181	73,181	73,181
R-squared	0.046	0.043	0.122	0.111

Data comes from the 2005-2016 yearly ACS comparing women in same-sex partnerships to men in same-sex partnerships. The first column examines if the household has only one-earner. The second column tests the difference in absolute terms of hours worked between the two partners. The third and fourth columns examines how households differ with having children. The first row of coefficients show the differential effect of anti-discrimination between lesbian and gay households. Standard errors are clustered at the county level. \*\*\*  $p < 0.01$ , \*\*  $p < 0.05$ , \*  $p < 0.1$

# Figures

Figure 1

## Sexual Orientation Anti-Discrimination Laws: 2005

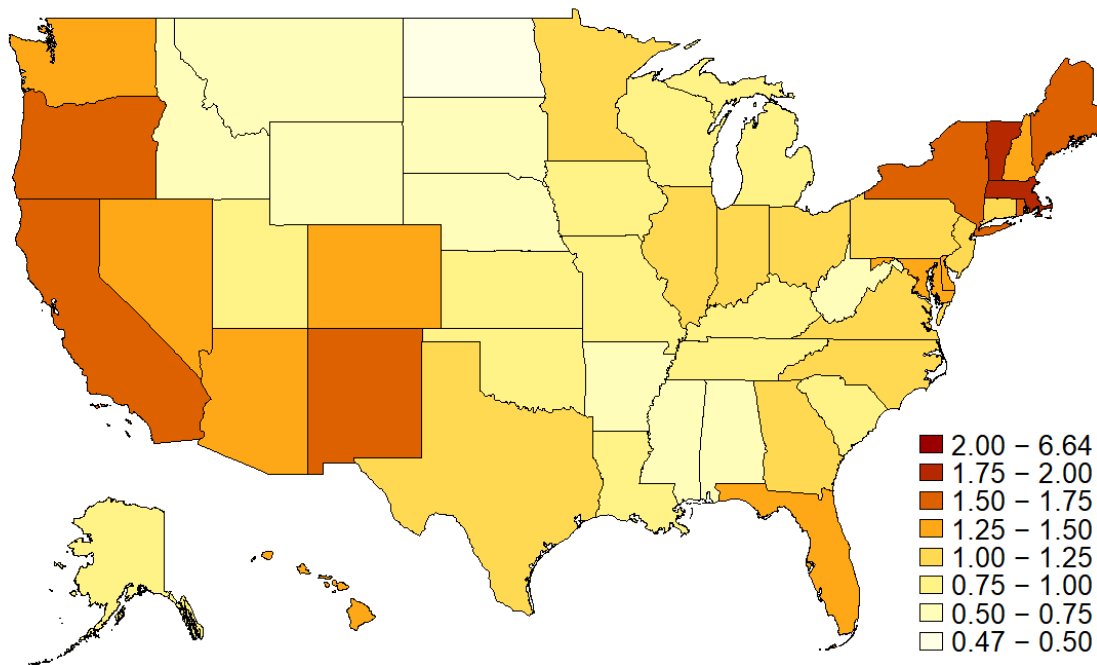


**Note:** State and local sexual orientation employment anti-discrimination laws in 2005. Data on laws obtained from LGBTMap.org and author's own investigation using media reports and FOIA requests.



Figure 3

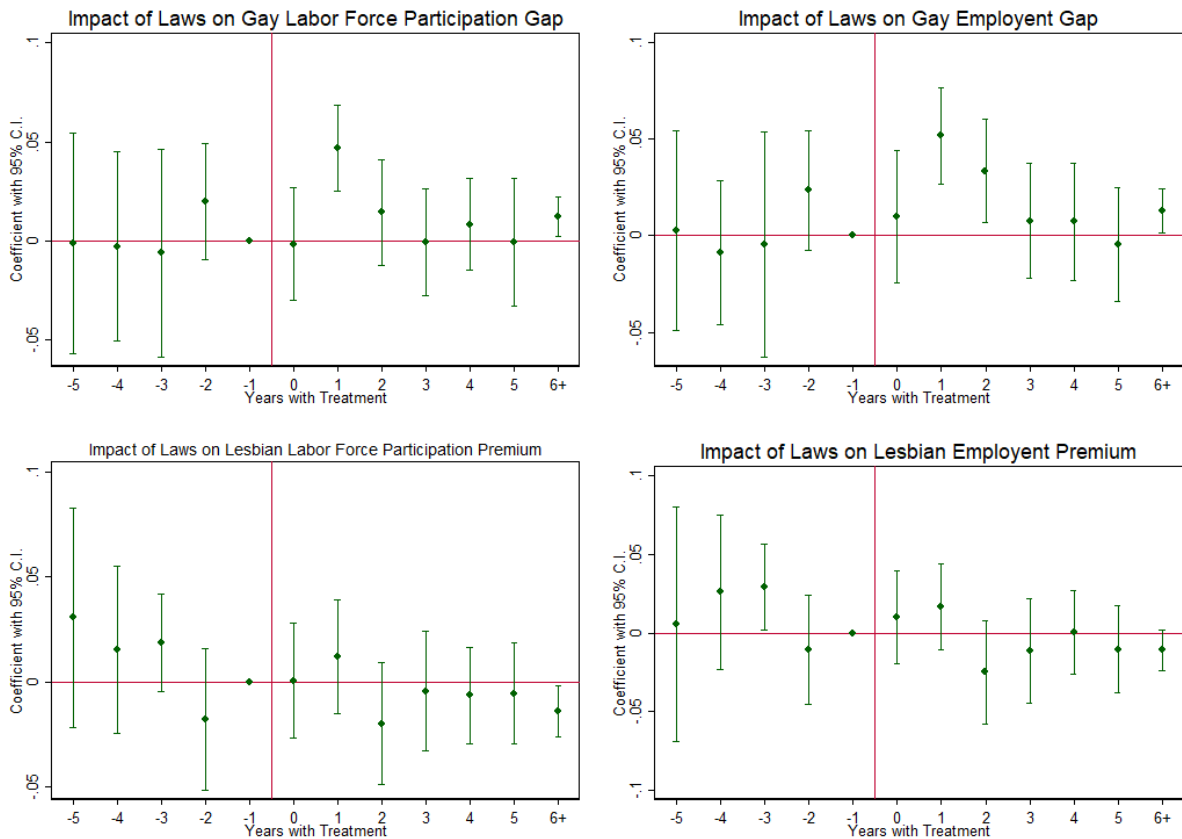
Percentage of Same-Sex Partnerships: 2005-2016



Source: American Community Survey

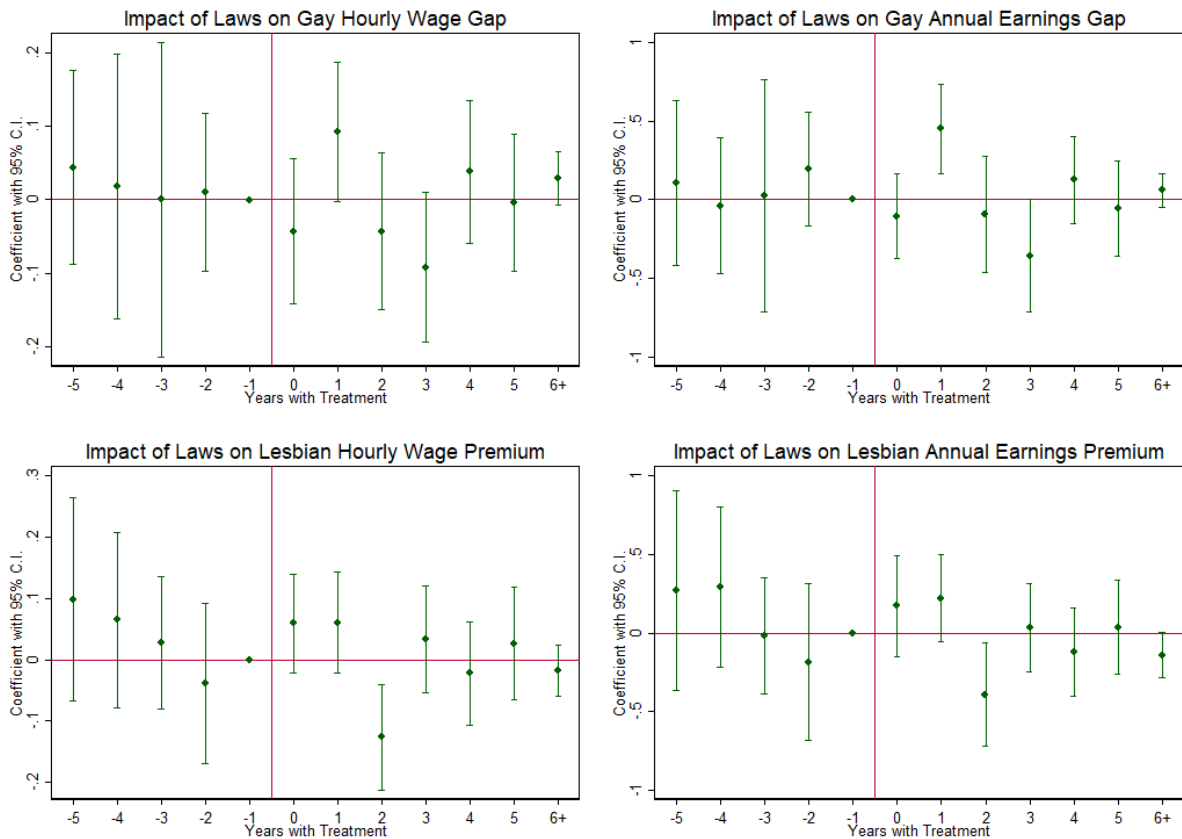
**Note:** Percentage of partnerships that are same-sex for each state and DC over 2005-2016 using the American Community Survey. Author's calculations

Figure 4



**Note:** Event study plot on the difference in labor supply between people in same-sex partnerships and different-sex partnerships broken down by sex following the county-level and state-level anti-discrimination laws. Standard errors are clustered at the county level.

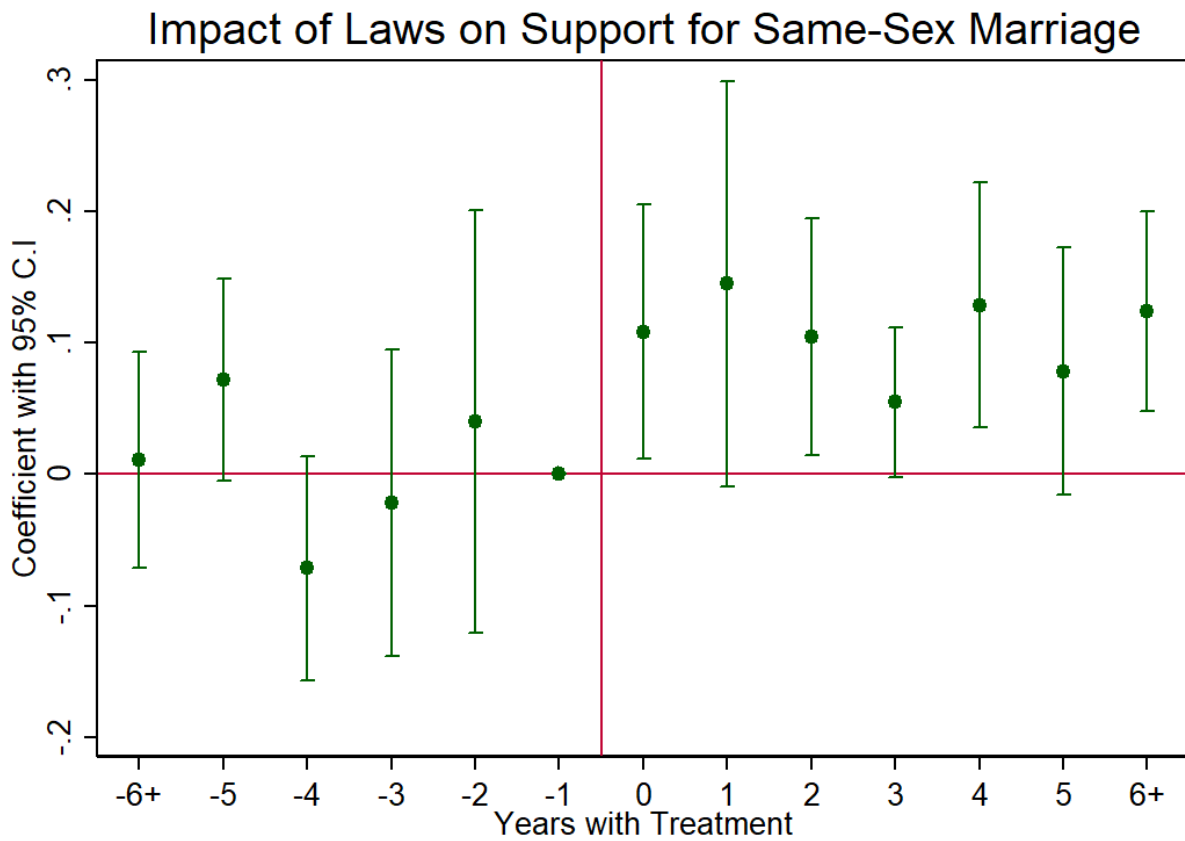
Figure 5



**Note:** Event study plot on the difference in pay between people in same-sex partnerships and different-sex partnerships broken down by sex following the county-level and state-level anti-discrimination laws. Standard errors are clustered at the county level.



Figure 6



**Note:** Event study plot showing how support for same-sex marriage changes following state-level anti-discrimination laws. Polling data comes from Pew Polling and encompasses 2005-2016 for every state excepting Hawaii and Alaska, which are missing for 2005-2008. Standard errors are clustered at state level.