

**Marriage Equality, Labor (In)Equality: The Impact of
Same-Sex Marriage Legalization on the Labor
Outcomes of Lesbian Women**

Ola Aboukhsaiwan

The Wharton School, University of Pennsylvania

May 2015

Acknowledgments

I would like to thank Professor Dylan Small, Professor of Statistics, for his mentorship and guidance through the research process. I am also indebted to Tanya Paul, my good friend and fellow research companion for her insightful comments and suggestions. I would also like to extend my gratitude to the participants of the Wharton Research Scholars symposium for their constructive feedback. Finally, I would like to thank Dr. Utsav Schurmans and Bethany Schell for their continuous support.

Abstract

This paper investigates the impact of same-sex legalization and same-sex relationship recognition on labor outcomes such as wages and specialization for lesbian women. Using 1990 U.S. Census data and 2013 American Community Survey (ACS), I exploit the temporal and spatial variation of legalizing same-sex marriage using a triple difference-in-differences-in-differences estimator, and employing an Oaxaca-Blinder wage and specialization decomposition. Results demonstrate that unmarried lesbians who are primary partners experience a wage premium of 15.2% and unmarried lesbians who are secondary partners experience a more modest wage premium of 3.7%. Married lesbians who are secondary partners experience a wage penalty of 10.7%. For primary partners, wage premiums are 19.3% under domestic partnerships, and 15.9% under civil unions. No such effects are detected under same-sex marriage for the general lesbian population, suggesting that the primary partner marriage premium is being offset by the secondary partner wage penalty. Marriage, more than any other legal institution, signals greater commitment and in turn facilitates specialization. There is little evidence of marriage market selection and employer discrimination related mechanisms.

Keywords: Gender, labor economics, same-sex marriage, marriage premium, specialization

Contents

1	Introduction	8
2	Theoretical Motivation	12
2.1	Institutional Background on Same-Sex Marriage Legalization .	12
2.2	Marriage & The Wage Premium	14
3	Empirical Motivation	18
3.1	Identification Strategy	18
3.2	Estimation Strategy	20
3.3	Data Sources	22
4	Empirical Results	23
4.1	Discussion	23
4.2	Heterogeneity of Impacts	28
5	Conclusions & Implications	30

List of Figures

1	Mean Wages by Group and Year	39
2	Mean Wage Growth By Group and Legal State, 1990 to 2013 .	40
3	Wage Distributions of Lesbian Women by Year	41
4	Wage Distributions of Married Heterosexual Women by Year .	41
5	Wage Distributions of Unmarried Heterosexual Women by Year	42
6	Wage Distributions of Lesbians by Partnership Status & Year	42

List of Tables

1	List of Variables	43
2	History of Same-Sex Relationship Recognition	44
3	Descriptive Statistics by Year	45
4	Oaxaca-Blinder Decomposition Estimates	45
5	Static Same-Sex Marriage Wage-Legalization Specifications	46
6	Dynamic Same-Sex Marriage Wage-Legalization Specifications	47
7	Dynamic Same-Sex Relationship Wage-Recognition Specifications	48
8	Same-Sex Marriage Wage-Legalization Specifications by State-Level Take-Up Rates	49
9	Same-Sex Relationship Wage-Recognition Decomposition Specifications	50
10	Dynamic Same-Sex Marriage Specialization-Legalization Specifications	51
11	Dynamic Same-Sex Marriage Specialization-Legalization Specifications (2)	52
12	Dynamic Same-Sex Marriage Wage-Specialization Specifications	53
13	Dynamic Same-Sex Marriage Wage-Legalization Specifications - Marriage Market Selection Hypothesis	54

14	Dynamic Same-Sex Marriage Wage-Legalization Specifications - Employment Non-Discrimination Act (ENDA)	55
15	Static Same-Sex Marriage Wage-Legalization Specifications Strat- ified by Partnership Status	56
16	Dynamic Same-Sex Relationship Wage-Recognition Specifica- tions Stratified by Partnership Status	57
17	Same-Sex Relationship Wage-Recognition Decomposition Spec- ifications Stratified by Partnership Status	58
18	Dynamic Same-Sex Marriage Wage-Legalization Specifications Stratified by Partnership Status	59

1 Introduction

The birth of the gay rights movement can be traced back to the Stonewall riots in 1969, when the patrons of a gay bar in New York's Greenwich Village fought back against a police raid. Ten years later, 75,000 people participated in the National March on Washington for Lesbian and Gay Rights in Washington, DC. This marks the first attempt by the LGBT community at forming a political gathering. The public debate surrounding the gay rights movement has increasingly received greater attention, particularly since the "Don't Ask, Don't Tell" policy under the Clinton administration. The LGBT movement has many moving parts, but the heart of the public conversation about gay rights has largely been propelled by the recognition of same-sex relationships and the legalization of same-sex marriage. The first legal gay marriage in the United States was performed between a lesbian couple in Cambridge, MA on May 2004, between Tanya McCloskey and Marcia Kadish.

The subject of gay marriage is often framed within the language of human and civil rights, as supporters of gay marriage argue that it is discriminatory to extend the right to marry to some groups and not others. While this is a stand-alone argument for gay marriage, what is often forgotten is that marriage also confers economic benefits to those who subscribe to it. There has been little thorough investigation of the extent to which marriage economic benefits are translated to the same-sex context, if at all. This question is worth studying because it would enhance our understanding of marriage as

a gendered stratification and family formation process, and the effects that legal institutions such as marriage or other forms of relationship recognition have on the wage benefits that women of all sexual orientations are able to extract from the market.

Marriage – for both heterosexual and homosexual couples – has both legal and economic implications. The labor economics literature has hardly given the issue of same-sex marriage as much attention as they have granted to heterosexual marriage. Recent studies show that over time, married individuals experience net worth increases of 77% in comparison to single individuals (Zagorsky, 2005). This renders the illegality of same-sex marriage in some states as not solely a point of legal and religious discrimination, but also one of economic discrimination. Economists have followed gay marriage’s impact on local economies since Massachusetts became the first state to legalize same-sex marriage in 2004. Researchers at the Williams Institute have found that from May 2004 to September 2008, Massachusetts’ economy has seen an an inflow of \$111 million attributable to gay marriage legalization (Williams Institute, 2012). Furthermore, the Congressional Budget Office have posited that the legalization of gay marriage has economic benefits that could lead to an extra \$1 billion each year for the next ten years (CBO, 2004). This is largely driven by the stimulus that the marriage industry has on local economies, particularly through weddings as they affect the restaurant, hotel, catering, and travel industries. There is also an estimated fiscal impact of \$20-\$40 million if same-sex marriages are legalized (Stevenson, 2012),

primarily derived from sales and hotel occupancy tax revenues, and personal income and estate taxes.

Beyond the question of immediate economic and fiscal impacts, the question of labor outcomes also presents impending importance. The labor economics literature has been preoccupied with understanding the patterns of wages, employment, and income. Much of scholarly work has studied wage gaps. Sufficiently investigated is the gender wage gap between men and women. There are generally three proposed mechanisms for the existence of the wage premium for married men. The first mechanism focuses on there being a causal effect on productivity, focusing on household specialization as a primary indicator of productivity (Becker, 1981; Greenhalgh, 1980). This would mean that marriage causes men to become more productive in the labor market and earn higher wages. This may arise from increased specialization of market and non-market time with one's spouse. The second mechanism invokes the notion of marriage market selection. This is a non-random mechanism, as it suggests that men who are earning higher wages may simply be more likely to be married. This is often attributable to unobserved productivity, other unobservables correlated with productivity, or wages themselves (Becker, 1973; Lafortune, 2013; Nakosteen, Westerlund and Zimmer, 2004). Finally, the third mechanism offers an explanation for the wage gap as induced by employer discrimination. This differential treatment may arise from perceived differences in productivity or disparities in turnover (Ahituv and Lerman, 2011; Becker, 1981).

With that said, insufficiently investigated is the sexual orientation wage gap between homosexuals and heterosexuals. The existing empirical literature documents the presence of a gap where gay men typically earn less than heterosexual men (Badgett 1995; Klawitter and Flatt 1998; Clain and Leppel 2001; Alegretto and Arthur 2001; Berg and Lien 2002; Black et al. 2003; Blandford 2003; Carpenter 2007). On the other hand, lesbian women have been found to earn more than heterosexual women (Klawitter and Flatt 1998; Clain and Leppel 2001; Berg and Lien 2002; Black et al. 2003; Blandford 2003). This is true even after controlling for differences in present labor market supply, education, years of experience, area of residence, and occupation (Schneebaum, 2013). In fact, the wages of never-married lesbians are significantly higher than those of previously married lesbians and other groups of women (Daneshvary, Waddoups, & Wimmer, 2009). For heterosexual women, wages are typically negatively correlated with motherhood – but are interestingly positively correlated to the wages of lesbians.

In this paper, I investigate the impact of legalizing same-sex marriage on the labor outcomes of lesbian women. This paper gets at the heart of what it is that legal status confers that cannot be achieved through private contracts or cohabitation. I do so by exploiting the unique opportunity created by this policy change to reexamine the determinants of the marriage premium, utilizing the spatial and temporal variation in legalization to gain new insight on the relationship between marriage and wages. I employ a triple difference-in-differences-in-differences estimation and Oaxaca-Blinder

decomposition. If the marriage penalty operates similarly for lesbian women as it does for heterosexual women, I would the triple difference-in-differences estimate to be negative. While this study is in the tradition of the literature on the so-called marriage premium, it fills a lacuna in the research on the earnings potential of lesbian women. The contributions of this study are threefold: it considers lesbians, a group that has been relatively understudied, uses most recent data from the U.S. Census and American Community Survey (ACS), and econometrically distinguishes between the three suggested potential mechanisms for the marriage premium or penalty.

The paper is structured as follows. Section 2 presents the theoretical motivation. Section 3 offers the empirical motivation, describing the identification strategy, estimation strategy, and data sources. Section 4 presents the main results. Section 5 concludes and provides future research direction.

2 Theoretical Motivation

2.1 Institutional Background on Same-Sex Marriage Legalization

The history of same-sex marriage in the US has been long and arduous. The first confrontation between the people and legal system emerged in 1972 when the US Supreme Court dismissed the Baker vs. Nelson case. More same-sex marriage appeals continued to be denied and dismissed until 1993,

when the Hawaii Supreme Court ruled that state laws which deny same-sex couples the right to marry violated state constitutions. The path to same-sex marriage legalization has been neither linear nor easy. With some progress came some regress. In 1996, President Clinton signed the Defense of Marriage Act (DOMA). Despite that, in 1999, California became the first state to recognize same-sex relationships, by introducing domestic partnerships. In 2000, Vermont was the first state to create civil unions. Finally in 2004, Massachusetts was the first state to legalize same-sex marriage. As of March 2015, same-sex couples are able to marry in 37 states, including Alabama, Alaska, Arizona, California, Colorado, Connecticut, Delaware, Florida, Hawaii, Idaho, Illinois, Iowa, Indiana, Kansas, Maine, Maryland, Massachusetts, Minnesota, Montana, Nevada, New Hampshire, New Jersey, New Mexico, New York, North Carolina, Oklahoma, Oregon, Pennsylvania, Rhode Island, South Carolina, Vermont, Virginia, Utah, Washington, West Virginia, Wisconsin and Wyoming, as well as the District of Columbia.

While marriage, civil unions, and domestic partnerships appear to be similar at the surface level, each of the three institutions has important legal distinctions. Domestic partnerships are the lowest level of relationship recognition, providing a limited set of protections and responsibilities. Civil unions provide slightly more protections and benefits than does a domestic partnership, but they do not match up with the rights and responsibilities immediately conferred by civil marriage. For example, civil unions do not assure gay couples the right to collect benefits under a partner's health in-

surance program and to make medical decisions on behalf of a partner who is unable to do so. The rights that come with marriage include family leave benefits, state public assistance, property rights, emergency and non-emergency medical rights, protection from spousal abuse, workers' compensation, and marital privileges in court proceedings (Burn, Jackson, 2014). Marriage certainly has certain legal functions that are not easily mimicked.

2.2 Marriage & The Wage Premium

Classical economic theory views wage differentials as being reflective of workers' human capital or productivity (Shi, 2006). The theory has generally had a hard time reconciling itself with the realities of wage differentials in the US data. Juhn et al. (1993) establishes that observable characteristics of workers' productivity, such as age, education, and experience explain only one third of the differential between the ninetieth and tenth percentile of the wage distribution between 1963 and 1989. Standard economic theory attributes this to discrimination on seemingly irrelevant factors such as race, gender, and height. In response to the insufficiency of this proposition, the literature has established three potential mechanisms through which wage gap could emerge. This would apply to the sexual orientation wage gap too.

The first mechanism focuses on there being a causal effect on productivity, focusing on household specialization as a primary indicator of productivity. Becker's canonical theory on marriage was first proposed in *A Theory of Marriage* (1973). It presents the idea that household production requires both the

use of non-market time and market goods. The theory is gender symmetric, as it states that marriage makes spouses more productive in the sense that men specialize in market work while women specialize in household production. This is intimately related to the first mechanism through which a wage gap could emerge. In the case of lesbians, one partner would have to be more productive in the labor market and earn higher wages. This may arise from increased specialization of market and non-market time with one's spouse. The second mechanism proposes marriage market selection. This is a non-random mechanism, as it suggests that lesbians who are earning higher wages may simply be more likely to be married. Put simply, this means that married individuals tend to make more money because the traits that make an individual earn a higher wage are also the traits that make a good marriage partner. This is often attributed to unobserved productivity, other unobservables correlated with productivity, or wages themselves (Becker, 1973; Lafortune, 2013; Nakosteen, Westerlund and Zimmer, 2004). This theory has primarily been tested on heterosexual men, showing that even after marriage fails, wages remain high, thereby explaining why divorced men make more than men who have never married (Chiodo & Owyang, 2002). Finally, the third mechanism offers an explanation for the wage gap as induced by employer discrimination. Burn and Jackson (2014) establish that employer discrimination is the primary cause of the premium for gay men in their estimation sample. This differential treatment may arise from perceived differences in productivity or disparities in turnover (Ahituv and Lerman, 2011;

Becker, 1981).

The literature has been largely mixed about which of these three mechanisms has the greatest explanatory power for the wage gap. Many studies have established that heterosexual men benefit from a wage premium from marriage that is often attributable to within-household specialization. Different studies report wage differentials between 10%-40% (Antonovics and Town, 2004; Hill, 1979; Ginther and Zavodny, 2001; Nakosteen and Zimmer, 1987; Neumark, 1988; Schoeni, 1995). This phenomenon is explained by men devoting more effort to being the bread winners, while their female partners assume responsibility for household labor. Killewald and Gough (2013) hypothesize that if specialization causes the male marriage premium, then married women should subsequently experience wage losses. Their results do not support the specialization hypothesis, as they find that both childless men and women receive a marriage premium; a result that is also corroborated by Anderson, Binder, and Krause (2003). The returns to marriage in a Beckerian sense rest on the returns to specialization; a phenomenon that same-sex couples do not seem too quick to buy into (Jepsen & Jepsen, 2002). Perhaps specialization is more common in opposite-sex couples because only one of the partners, the woman, can bear children.

Scholarly work on the consequences of entry into a legally sanctioned same-sex marriage or union on the so-called partnership premium is limited. There are few studies that examine the actual or potential labor market impacts of same-sex marriage or other forms of same-sex recognition. Aldén,

Edlund, Hammarstedt and Mueller-Smith (2013), find that opting into a registered partnership in Sweden, leads to a decline in the joint earnings of gay male couples as well as a convergence in their earnings, suggesting the lack of a partnership premium. They find that registered partnerships are important to both gay men and lesbian women but for different reasons. For gay men, resource pooling appears to be the main function of registered partnership, while for lesbians, it is seen as a vehicle for family formation. Interestingly, they also find that there is no evidence of specialization among lesbians, while specialization is most pronounced among heterosexual couples. This begs even more questions, particularly in the context of studies that point to long-term commitment not necessarily translating to the same-sex context (Andersson, Noack, Seierstad, & Weedon-Fekjr, 2006). These results paint a picture of same-sex unions playing a different role for same-sex couples than marriage does for heterosexual couples.

Studies have found a significant earning advantage for lesbians, relative to heterosexual women in the US (Antecol, Jong & Steinberger 2008; Berg & Lien 2002; Baumle 2009; Black, Makar, Klawitter 2003; Blandford 2003). Daneshvary, Waddoups, and Wimmer (2008) find that a lesbian premium is approximately 10% for women without a bachelor's degree, but this gap closes in the case of women with higher levels of education. Schneebaum (2013) finds that motherhood is typically negatively correlated with wages for straight women, and interestingly, positively correlated with wages for lesbians as a whole. With that said, a closer decomposition shows that this

signal is only positive for primary lesbian partners, and negative for secondary partners.

Research that investigates the impact of sexual preferences on labor outcomes is not limited to the US. Conclusions are mixed. Studies show that in the Netherlands, “young and highly educated gay male workers earn about 3% less than heterosexual men,” while “similarly qualified lesbian workers earn about 3% more than their heterosexual female co-workers” (Plug, Berkhout, 2004). On the other hand, research suggests that there is a negative effect (6.1%) of lesbian sexual orientation on wages in the Greek labor market. The impact of sexual orientation anti-discrimination policies on the wages of lesbians and gay men has been found to be positive for both men and women in same-sex couples. Both men and women experience a wage premium of 0.3% for each year the policy has been in effect (Gates, 2009).

3 Empirical Motivation

3.1 Identification Strategy

The identification strategy is based on exploiting temporal and spatial variation in the legalization of same-sex marriage in the US. The fact that different states enact different forms of same-sex relationship recognition, ranging from domestic partnerships, civil unions, to marriages, at different times, makes for an appropriate natural experiment. I identify lesbian women from the sample using information on the gender of the household head, gender, and

the relationships of others in the household to the head. I consider women to be lesbians if the relationship to their spouse is that of an “unmarried partner” who is also female. One drawback of this strategy is that I am only able to identify partnered lesbian women (married and unmarried), as I am unable to identify single lesbians from the dataset. For the aforementioned reason, I drop all single women from the estimation sample as their sexual orientation cannot be identified. Furthermore, the estimation strategy relies on the availability of same-sex marriage rather than on the unobserved actual marital status of lesbians in the data.

From both the 1990 Census and 2013 ACS, I collect data on annual salary earnings, usual hours worked per week, weeks worked per year, in addition to analogous data on the respondent’s spouse. Wage data is adjusted for inflation using the Current Consumer Price Index for All Urban Consumers (CPI-U) series from the Bureau of Labor Statistics. I also collect data on cohabitation, occupation, and demographics that include schooling, experience, age, ethnicity, English proficiency, number of children. I also include region and state variables, state-level female labor force participation rates by sexual orientation, and state-level female population shares of lesbian women. In addition to these variables, I also obtain data on same-sex recognition, specifically on marriage, civil unions, and domestic partnerships from the National Conference of State Legislatures (2013). I use data on the type of relationship recognition and the year it was enacted, in addition to whether the state possesses an Employment Non-Discrimination Act using

data from the Human Rights Campaign (2013).

3.2 Estimation Strategy

I estimate two primary difference-in-differences-in-difference specifications:

$$\begin{aligned} \ln Wage_i = & \beta_0 + \beta_1 Gay + \beta_2 Post + \beta_3 SSM + \beta_4 Gay \cdot Post + \beta_5 Gay \cdot SSM + \\ & \beta_6 SSM \cdot Post + \beta_7 Gay \cdot Post \cdot SSM + \beta_8 X + \varepsilon_i \end{aligned}$$

where $\ln Wage$ is the logged wage of women i , $Specialization$ is the absolute difference between the number of hours worked between primary and secondary partners, Gay is a binary indicator for being homosexual, $Post$ is a binary indicator for year 2013, SSM is a binary indicator for whether SSM is legal in a state, and X is a vector of control variables that include demographic, occupation, and region controls.

$$\begin{aligned} Specialization_i = & \beta_0 + \beta_1 Gay + \beta_2 Post + \beta_3 SSM + \beta_4 Gay \cdot Post + \beta_5 Gay \cdot SSM + \\ & \beta_6 SSM \cdot Post + \beta_7 Gay \cdot Post \cdot SSM + \beta_8 X + \varepsilon_i \end{aligned}$$

where $Specialization$ is the absolute difference between the number of hours worked between primary and secondary partners women i , Gay is a binary indicator for being homosexual, $Post$ is a binary indicator for year 2013, SSM is a binary indicator for whether SSM is legal in a state, and X is a vector of control variables that include demographic, occupation, and region controls.

The coefficient of interest is β_7 , which captures the extent to which a location-based mean wage differential between same-sex marriage states and non-same-sex marriage states change over the time window considered, from

1990 to 2013, differentially for lesbian women and heterosexual women. This effect is also known as the intent-to-treat (ITT) effect in the econometrics literature (Angrist, Imbens, and Rubin, 1996). The triple difference coefficient offers a more refined estimate than double difference coefficient would theoretically would have. Further, the coefficient can be interpreted as the conditional mean for the U.S. population as the equations are estimated using weighted least squares (WLS) rather than ordinary least squares (OLS) (Solon, Haider, and Woolridge, 2013).

In addition to the regression results, I also obtain an estimate of the 1990 and 2013 premium by performing an Oaxaca-Blinder decomposition (Blinder and Oaxaca, 1973). This decomposition gives the log wage differences between lesbians and heterosexual women. Formally, the group-specific equations for log wages and specialization are given below, where L and H indicate lesbian women and heterosexual women, respectively:

$$LnWage_{iL} = X_{iL}^i \beta_L + \varepsilon_{iL}$$

$$LnWage_{iH} = X_{iH}^i \beta_H + \varepsilon_{iH}$$

where $LnWage$ is the logged wage as defined previously, X is the vector of covariates but now with a group-specific intercept term. The mean difference in log wages between lesbian women and heterosexual women is decomposed as follows:

$$\overline{LnWage}_L - \overline{LnWage}_H = (\overline{X}_L - \overline{X}_H)' \beta_H + \overline{X}'_L (\beta_L - \beta_H)$$

I also perform the decomposition for the specialization differences between lesbians and heterosexual women. The related equations are as follows:

$$Spec_{iL} = X_{iL}^i \beta_L + \varepsilon_{iL}$$

$$Spec_{iH} = X_{iH}^i \beta_H + \varepsilon_{iH}$$

where $Spec$ is specialization as defined previously, X is the vector of covariates but now with a group-specific intercept term. The mean difference in log wages between lesbian women and heterosexual women is decomposed as follows:

$$\overline{Spec}_L - \overline{Spec}_H = (\overline{X}_L - \overline{X}_H)' \beta_H + \overline{X}'_L (\beta_L - \beta_H)$$

Both sets of equations for logged wage and specialization are estimated using weighted least squares (WLS) with standard errors clustered at the state-level.

3.3 Data Sources

I use the 1990 Decennial U.S. Census data as that marks the last census that predates legal recognition of same-sex relationships. I also use the 2013 American Community Service (ACS) data as it is the most recent data set. This is the first paper in the literature to cover that large a stretch of time, in addition to offering the largest samples of states with recognition and widest range of ages for the institutions. The sheer size of the data is also favorable as the lesbian population is extremely small.

With that said, there are some drawbacks worthy of mentioning. One drawback to using Census and ACS data is that it does not include any data about sexual behavior. In addition, measurement error with regards to the lesbian population is possible. In 1990, the Census Bureau recoded the sex of the respondent's partners assuming that all married couples of the same gender were heterosexual couples. Any respondents who had mentioned that their partner was of the same sex were recoded to match that of a heterosexual couple (Allegretto and Arthur, 2001). The Census Bureau only stopped recoding from 2000 onwards. The result was that as many as 20-40% of same-sex couples were actually being undetected in the data (Gates and Steinberger, 2009). There may be some reason for concern in using the 1990 data Census, but the estimation strategy employed takes care of any bias that may arise.

4 Empirical Results

4.1 Discussion

I begin by examining average wages in the data set by group and year. Figure 1 presents mean wages by group and year, showing that lesbians experienced the largest increase. This is further corroborated by Figure 2, which illustrates that unmarried heterosexuals underwent negative mean wage growth between 1990 and 2013, while lesbians experienced the greatest growth. Figure 3, 4, 5, and 6 present log wage kernel density distributions across different

groups of women and years. The distributions appear to be largely normal, although not some groups, like married heterosexual and unmarried heterosexual women present unsmoothed log wage distributions. Figure 3 shows that the increase in average wages for lesbian women was primarily driven by an increase of wages in the middle part of the wage distribution.

Table 1 presents all the variables considered in the analysis and their definitions. Table 2 presents the history of same-sex relationship recognition, demonstrating the institutions to which different states have subscribed to. Table 3 present descriptive statistics for the year 1990 and 2013 respectively. The average wages of lesbian and married heterosexual women increase over the 23 year time period, while the average wage for unmarried heterosexual women decreases. Schooling and number of years of experience increase across the three groups.

Table 4 presents the Oaxaca-Blinder decomposition of wage and specialization differentials across 1990 and 2013. The decomposition reports the mean prediction by groups and their differences. “Endowments” reflect the mean increase in lesbians’ wages if they had the same characteristics of heterosexual women. “Coefficients” quantifies the changes in lesbians’ wages when applying the coefficients of heterosexual women to lesbian women’s characteristics. “Interaction” measures the simultaneous effect of differences in endowments and coefficients. In 1990, the mean of log wages is 2.447 for heterosexual women and 2.588 for lesbians, yielding a wage gap of -0.141. At this point in time, lesbian women would actually be at a disadvantage

if they were more similar to heterosexual women. This gross difference reverses, but insignificantly, in 2013. I also assess the specialization gap, and find that lesbian women are specializing less in comparison to heterosexual women across both years. In both years, this is largely attributable to the different endowments that both groups have. With that said, lesbian women experience a greater growth of specialization from 1990 to 2013 when compared to heterosexual women. This speaks to a broader story that emerges from the data, about the effects of the newfound ability to partner - either through domestic partnerships, civil unions, or marriages - on commital and the division of labor in a same-sex household.

Table 5 presents the static specifications, establishing a statistically insignificant 4.7% penalty for married lesbians, and a similarly statistically insignificant 6.2% premium for unmarried lesbians and 2.3% premium for all the women in the data set using weighted least squares regression. These results represent baseline estimates of the relationship between same-sex marriage legalization and the wages of lesbian women. I investigate these effects further, as the static results may mask significant underlying dynamics in the legalization-wage relationship. Table 6 presents the dynamic specifications, establishing statistically insignificant relationships between wage and the legalization of same-sex marriage across various time windows of consideration. This reinforces the outcomes of Table 4.

I turn to the analysis of the impact of same-sex relationship recognition on wages. Table 7 presents the legalization-wage estimates separated by

the number of years since same-sex relationship recognition, including institutions such as civil unions and domestic partnerships. I provide baseline estimates, as well as those split across 4 years, 6 years, 8 years, 10 years, and 13 years. The estimates are consistently positive across all stratifications considered, but only achieve significance after the time since recognition has been at least 13 years. The wage premium observed after at least 13 years of recognition is 7.9%. At the base-line level, the wage premium is 7%.

In Table 8, I explore this effect across different stratifications of state “take-up,” that is, the percentage of same-sex couples in the same-sex marriage state who indicate on census forms that they classify their relationship as that of a “married couple.” While the estimates appear to be positive and statistically significant, the relationship between take-up and the premium is certainly not linear. It decreases as take-up levels increases. The highest wage premium estimated is at 21.2% in states with at least 30% take-up, and lowest in states with at least 60% take-up. This nonlinear pattern may be related to the underlying mechanisms driving the marriage premium.

I delve into a deeper composition of same-sex relationship recognition, by stratifying the data across civil unions and domestic partnerships in Table 9. The results point to a statistically significant 12.9% marriage premium associated with the availability of domestic partnerships, and an insignificant 6.4% penalty associated with the availability of civil unions - an institution that is arguably the most similar to marriage with regards to the legal protections it confers. There appears to be a link between the legal status of

recognition and the wage premium or penalty observed. The least legally protective institution - domestic partnership - confers the highest premium, while the most legally protective institution - marriage - imposes the largest penalty. These results point to a mechanism that is not immediately and obviously accounted for in the mechanisms considered in this study.

I extend my investigation by going beyond the use of wages as the dependent variable, by also considering specialization, as defined by the absolute difference in the number of hours worked between the primary and secondary partner. This would address the causal productivity hypothesis considered. Table 10 offers estimates the impact of the availability of same-sex marriage on the specialization of lesbian women separated across different time windows since same-sex marriage legalization. The estimates point to a highly significant, positive, nonlinear relationship, with baseline estimates suggesting a 150% increase in specialization attributable to the newfound opportunity to marry. The results presented in Table 11 control for non-cohabitation as a robustness check for the results observed in Table 10. My intuition is confirmed, and the effects appear to be even stronger when solely looking at cohabiting couples.

In Table 12, I test the impact of specialization on wages, and find that estimates indicate a marriage premium, but it fails to achieve statistical significance. This mitigates concerns about endogenous legalization; meaning that changes in the productivity of lesbians are not causally linked to states legalizing same-sex marriage. The other takeaway from this table is that

although lesbian women are specializing more, they are failing to realize the economic benefits of marriage that heterosexual men are typically able to extract, as induced by causal productivity. This could be interpreted as lesbian women specializing more - meaning that the wages of primary partners are rising, while the wages of secondary partners are falling - leading to an effect that is generally offset by the two counteracting mechanisms for the group of lesbian women as a whole. I test this hypothesis by stratifying across partnership status, differentiating between primary and secondary partners. I define a primary partner as the woman that works more hours per week in comparison to her other partner. I explore this effect in greater depth in Section 5.2.

Finally, I eliminate the potential that the legalization-wage relationship is driven by the marriage market selection and employer non-discrimination act hypotheses. These results are presented in Table 13 and 14, illustrating that none of the estimates are significant under the time intervals considered. Eliminating marriage market selection as a non-random mechanism gives some confidence that the triple difference coefficient is not correlated with the error term, ε .

4.2 Heterogeneity of Impacts

Table 15 offers a decomposition of the static specification across primary and secondary partners, demonstrating that primary and secondary unmarried lesbian partners extract a positive and statistically significant wage premium.

Primary partners realize a 15.2% premium, while secondary partners realize a 3.7% premium. Interestingly, this effect reverses for married lesbians who are secondary partners. They experience a 10.7% penalty, attributable to the newfound availability of same-sex marriage. Married lesbians who are primary partners experience a slight premium but it is statistically insignificant. This reveals interesting insights that disentangle being a secondary partner in a relationship from being a secondary partner in a marriage. The results suggest that marriage affects secondary partners more adversely, as they are the partners who specialize in non-market work. My intuition is corroborated in the next few tables which explore and decompose the impacts of same-sex marriage legalization and relationship recognition.

Table 16 presents dynamic same-sex relationship recognition specifications across primary and secondary partners over various time windows. The results demonstrate that primary partners have a 15.9% wage premium at baseline, while secondary partners do not extract any premiums of significance. Table 17 presents the results of recognition decomposed into the specific effects of civil unions and domestic partnerships across primary and secondary partners. Primary partners benefit from both civil unions and domestic partnerships, at extracting 15.9% and 19.3% wage premiums respectively. Interestingly, secondary partners also come out with a wage premium of 10.5% under domestic partnerships but this quickly dissipates under civil unions. These results are in line with Table 9, as the results point to the overarching benefit of domestic partnerships, but the differential impact that

the enactment of civil unions has depending on the partnership status of the woman in the relationship.

Table 18 presents the impact of same-sex marriage legalization after controlling for covariates on children across primary and secondary partners. The estimates yield interesting results. Primary partners have a 489.8% wage premium for the first two years since legalization, but this effect quickly dissipates after some time decay. For secondary partners though, the effect is more sticky, as it is consistently negative and significant. The effect attenuates with the passage of time since legalization. Secondary partners have a 259.7% wage penalty for the first two years after enactment, settling at penalty of 155.5% ten years after legalization.

5 Conclusions & Implications

This study illustrates that lesbians in general do not extract marriage premiums. This is potentially driven by heterogeneous behavior within the lesbian group of women as a whole. Across a variety of specifications, primary partners appear to be earning a statistically significant wage premium, while secondary partners are experiencing a similarly significant wage penalty. As some lesbian women specialise more, the wages of primary partners who specialize in market work are rising, while the wages of secondary partners who specialize in non-market work are falling, resulting in the net effect of same-sex marriage legalization being zero for lesbian women. The primary partner

marriage premium is offset by the secondary partner marriage penalty. Marriage, more than any other institutions like civil unions or domestic partnerships, signals greater commitment and thus facilitates specialization. Legal and institutional acknowledgement of ongoing commitment potentially translates into broader social acceptance and non-monetary but equally valuable returns.

For unmarried lesbians who are primary partners, I estimate a wage premium of 15.2% and for unmarried lesbians who are secondary partners, I estimate a more modest marriage premium of 3.7%. Married lesbians who are secondary partners experience a wage penalty of 10.7%. Furthermore, the dynamic nature of marriage as a legal institution is revealed through the analysis which demonstrates that for lesbians as a whole, the premium from same-sex relationship recognition kicks in 13 years after enactment. These dynamics are partially attributable to state-level heterogeneity as defined by state take-up rates. This premium when stratified across partnership status reveals that the effect is strongest at baseline; that is, past 13 years after enactment - but only for primary partners. When decomposed specifically into civil unions and domestic partnerships, primary partners once again have a wage premium of 19.3% that is highest under domestic partnerships. This effect is attenuated under civil unions at a premium of 15.9%. The premium persists for secondary partners at 10.5% but only under domestic partnerships. These results point to the importance of specialization in determining market-work and wages. An investigation of the impact of legalizing same-

sex marriage suggests that there is a 150% causal increase in specialization at baseline for lesbians in general. The effect is even stronger after dropping non-cohabitating couples. The effects of marriage market selection and employer discrimination have limited contributions in this setting.

This paper takes on a reduced form approach, producing empirical results about the impact of the availability of same-sex legalization on wages and specialization for lesbian women. To make progress about the mechanisms driving the results we observe, there is a need to develop structural theory that theorizes and accounts for the role that legal institutions play in shaping individuals' decisions. A starting point would be to open up the family and gender economics field to thinking about sexual orientation as a distribution factor in the intra-household resource allocation literature, and using cooperative and non-cooperatives games to model cohabitation and marriage decisions.

References

Ahituv, Avner and Robert I. Lerman, "Job Turnover, Wage Rates, and Marital Stability: How Are They Related?," *Review of Economics of the Household*, 2011, 9(2): 221-249.

Allegretto, Sylvia A. and Michelle M. Arthur, "An Empirical Analysis of Homosexual/Heterosexual Male Earnings Differentials: Unmarried and Unequal?," *Industrial and Labor Relations Review*, Apr. 2001, 54(3): 631-646.

Anderson, Deborah J., Melissa Binder, and Kate Krause, "The Motherhood Wage Penalty Revisited: Experience, Heterogeneity, Work Effort, and Work-Schedule Flexibility," *Industrial and Labor Relations Review*, January 2003, 56(2): 273-294.

Angrist, Joshua D., Guido W. Imbens, and Donald B. Rubin, "Identification of Causal Effects Using Instrumental Variables," *Journal of the American Statistical Association*, Jun. 1996, 91(434): 444-455.

Aldén, L., Lena Edlund, Mats Hammarstedt and Micheal Mueller-Smith, "Same-Sex Partnership for What? Evidence from Swedish Register Data," Working Paper, October 2014, 1-32.

Andersson, G., Turid Noack, Ane Seierstad, Harald Weedom-Fekjær, "The Demographics of Same-Sex Marriages in Norway and Sweden," *Demography*, February 2006, 43(1): 79-98. Antecol, Heather, Anneke Jong, and Michael Steinberger, "The Sexual Orientation Wage Gap: The Role of

Occupational Sorting and Human Capital," *Industrial and Labor Relations Review*, 2008, 61(4): 518-543.

Antonovics, Kate and Robert Town, "Are All the Good Men Married? Uncovering the Sources of the Marital Wage Premium," *American Economic Review, Papers and Proceedings*, May 2004, 94(2): 317-321.

Badgett, M. V. Lee, "The Wage Effects of Sexual Orientation Discrimination," *Industrial and Labor Relations Review*, 1995, 48(4): 726-739.

Bamule, A., "The Cost of Parenthood: Unraveling the Effects of Sexual Orientation and Gender on Income," *Social Science Quarterly*, December 2009, 90(4): 983-1002.

Becker, Gary, "A Theory of Marriage: Part I," *Journal of Political Economy*, Jul.-Aug. 1973, 81(4): 813-846.

Becker, Gary, *A Treatise on the Family*, 1981. Cambridge: Harvard University Press.

Berg, Nathan., Donald Lien, "Measuring the effect of sexual orientation on income: evidence of discrimination?," *Contemporary Economic Policy*, Oct. 2002, 20(4): 394-414.

Black, Dan A., Hoda R. Makar, Seth G. Sanders, and Lowell J. Taylor, "The Earnings Effects of Sexual Orientation," *Industrial and Labor Relations Review*, April 2003, 56(3): 449-469.

Blandford, John M., "The Nexus of Sexual Orientation and Gender in the Determination of Earnings," *Industrial and Labor Relations Review*, 2003, 56(4): 622-643.

Blinder, Alan S., "Wage Discrimination: Reduced Form and Structural Estimates," *Journal of Human Resources*, Autumn 1973, 8(4): 436-455.

Burn, Ian and Jackson, Osborne, "Valuable Vows: An Examination of the Marriage Premium Using Same-Sex Marriage Legalization," *Social Science Research Network Working Paper*, February 2014, 1-60. Carpenter, Christopher S., "Revisiting the Income Penalty for Behaviorally Gay Men: Evidence from NHANES III," *Labour Economics*, January 2007, 14(1): 25-34.

Chiodo, A., & Michael Owyang, "Marriage, Motherhood and Money: How Do Women's Life Decisions Influence their Wages?" *The Regional Economist*, April 2003, 1-6.

Clain, S.H., Karen Leppel, "An investigation into sexual orientation discrimination as an explanation for wage differences," *Applied Economics*, November 2010, 33(1): 37-47.

Daneshvary, Nasser, C. Jeffrey Waddoups, and Bradley S. Wimmer, "Educational Attainment and the Lesbian Wage Premium," *Journal of Labor Research*, December 2008, 29(4): 365-379.

Daneshvary, Nasser, C. Jeffrey Waddoups, and Bradley Wimmer, "Previous Marriage and the Lesbian Wage Premium," *Industrial Relations: A Journal of Economy and Society*, July 2009, 48(3): 432-453.

Gates, Gary J., "The Impact of Sexual Orientation Anti-discrimination Policies on the Wages of Gays and Lesbians," *California Center for Population Research On-line Working Paper Series*, 2009.

Ginther, Donna K. and Madeline Zavodny, "Is the Male Marriage Pre-

mium Due to Selection? The Effect of Shotgun Weddings on the Return to Marriage," *Journal of Population Economics*, Jun. 2001, 14(2): 313-328.

Greenhalgh, Christine, "Male-Female Wage Differentials in Great Britain: Is Marriage an Equal Opportunity?," *Economic Journal*, Dec. 1980, 90 (360), 751-775.

Human Rights Campaign, "Marriage Equality and Other Relationship Recognition Laws," May 2015. www.hrc.org/resources/entry/maps-of-state-laws-policies.

Hill, Martha S., "The Wage Effects of Marital Status and Children," *Journal of Human Resources*, Autumn 1979, 14(4): 579-594.

Holtz-Eakin, D., "The Potential Budgetary Impact of Recognizing Same-Sex Marriages," Congressional Budget Office Report, June 2004, 1-12.

Jepsen, L. K., & Christopher Jepsen, "An empirical analysis of the matching patterns of same-sex and opposite-sex couples," *Demography*, August 2002, 3(39): 435-453.

Juhn, C., Kevin Murphy & Brooks Pierce, "Wage Inequality and the Rise in Returns to Skill," *Journal of Political Economy*, June 1993 101(3): 410-442.

Kastanis, A., Badgett, M.V., & Herman, J., "The Economic Impact of Extending Marriage to Same-Sex Couples in Washington State," The Williams Institute, 2012, 1-12.

Killewald, A., & Margaret Gough, "Does Specialization Explain Marriage and Parenthood Penalties and Premiums?" *American Sociological Review*, June 2013, 78(3): 477-502.

Klawitter, Marieka M. and Victor Flatt, "The Effects of State and Local Antidiscrimination Policies on Earnings for Gays and Lesbians," *Journal of Policy Analysis and Management*, 1998, 17(4): 658-686.

Lafortune, Jeanne, "Making Yourself Attractive: Pre-marital Investments and the Returns to Education in the Marriage Market," *American Economic Journal: Applied Economics*, 2013, 5(2): 151-78.

Nakosteen, R., Olle Westerlund, and Michael A. Zimmer, "Marital Matching and Earnings: Evidence from the Unmarried Population in Sweden," *Journal of Human Resources*, Autumn 2004, 39(4): 1033-1044.

National Conference of State Legislatures, "Same Sex Marriage Laws," May 2015. www.ncsl.org/issues-research/human-services/same-sex-marriage-laws.

Neumark, David, "Employers' Discriminatory Behavior and the Estimation of Wage Discrimination," *Journal of Human Resources*, Summer 1988, 23(3): 279-295.

Oaxaca, Ronald, "Male-Female Wage Differentials in Urban Labor Markets," *International Economic Review*, Oct. 1973, 14(3): 693-709.

Plug, E., & Peter Berkhout, "Effects of sexual preferences on earnings in the Netherlands," *Journal of Population Economics*, February 2004, 17(1): 117-131.

Schneebaum, A., "Motherhood and the Lesbian Wage Premium," Working Paper 2013-04, 2013, 1-46.

Schoeni, Robert F., "Marital Status and Earnings in Developed Coun-

tries," *Journal of Population Economics*, Nov. 1995, 8(4): 351-359.

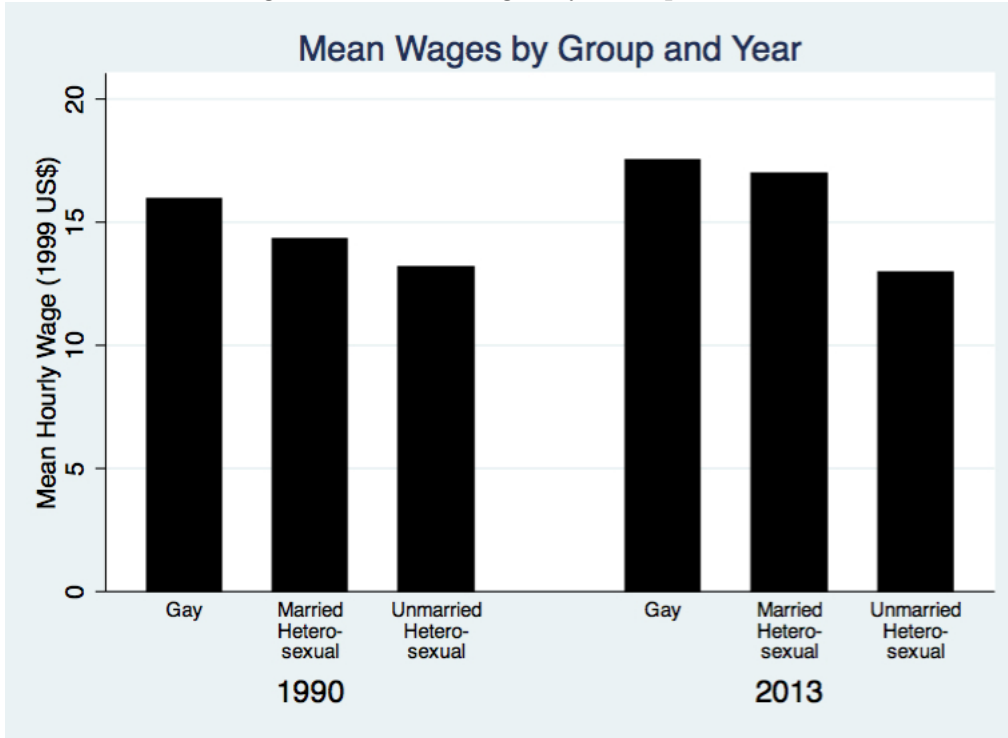
Shi, S., "Wage Differentials, discrimination and efficiency," *European Economic Review*, January 2006, 50: 849-875.

Solon, Gary, Steven J. Haider, and Jeffrey Wooldridge, "What Are We Weighting For?," Feb. 2013. NBER Working Paper No. 18859.

Stevenson, Adam, "The Labor Supply and Tax Revenue Consequences of Federal Same-Sex Marriage Legalization," *National Tax Journal*, Dec. 2012, 65(4): 783-806.

Zagorsky, J., "Marriage and Divorce's Impact on Wealth," *Journal of Sociology*, December 2005, 41(4): 406-424.

Figure 1: Mean Wages by Group and Year



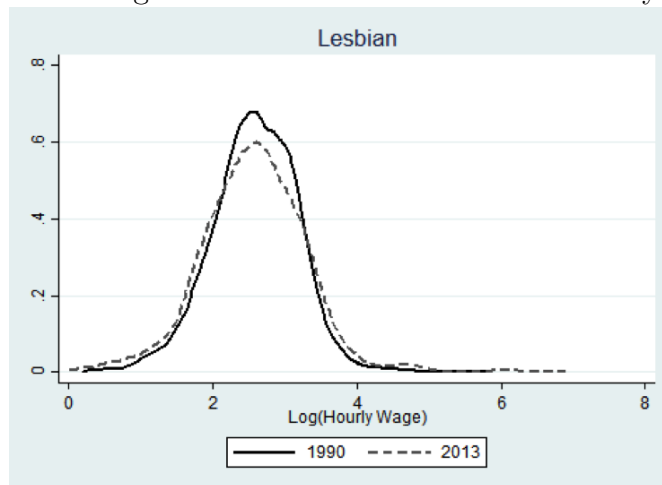
Sources: 1990 U.S. Decennial Census and 2013 American Community Survey. Calculations are weighted by corresponding individual sample weights.

Figure 2: Mean Wage Growth By Group and Legal State, 1990 to 2013



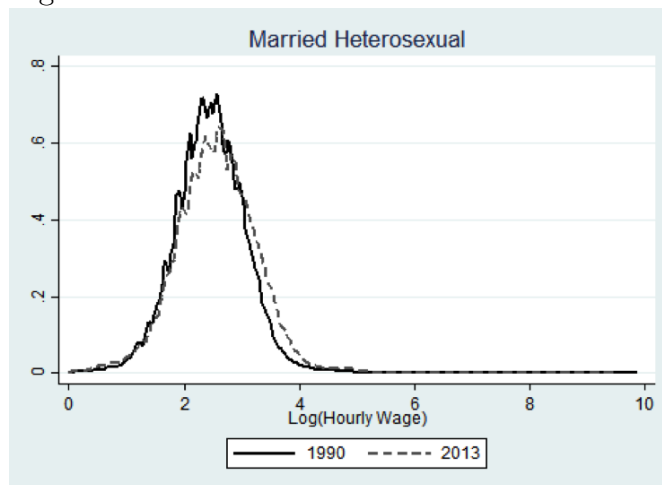
Sources: 1990 U.S. Decennial Census and 2013 American Community Survey. Calculations are weighted by corresponding individual sample weights.

Figure 3: Wage Distributions of Lesbian Women by Year



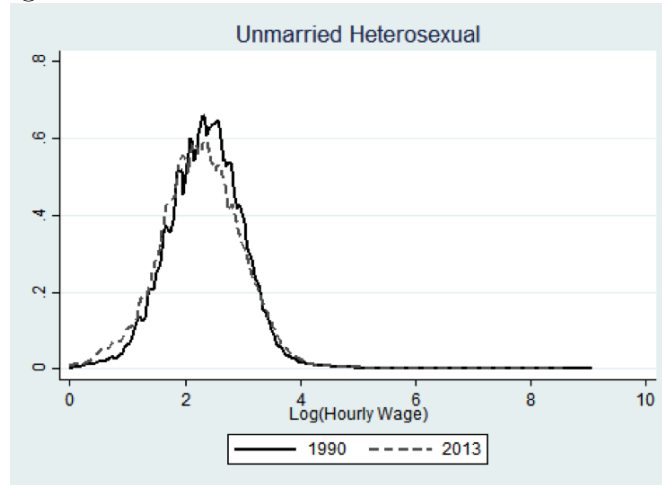
Sources: 1990 U.S. Decennial Census and 2013 American Community Survey. Distributions are kernel density plots weighted by corresponding individual sample weights.

Figure 4: Wage Distributions of Married Heterosexual Women by Year



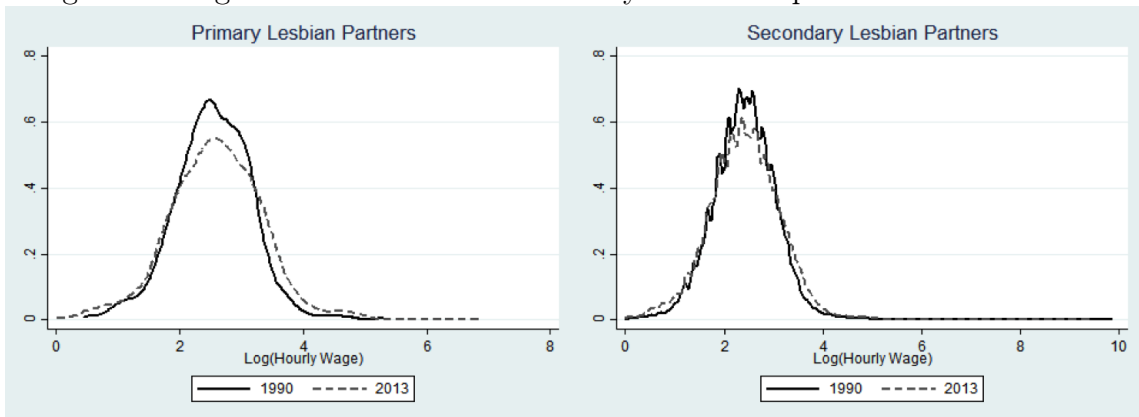
Sources: 1990 U.S. Decennial Census and 2013 American Community Survey. Distributions are kernel density plots weighted by corresponding individual sample weights.

Figure 5: Wage Distributions of Unmarried Heterosexual Women by Year



Sources: 1990 U.S. Decennial Census and 2013 American Community Survey. Distributions are kernel density plots weighted by corresponding individual sample weights.

Figure 6: Wage Distributions of Lesbians by Partnership Status & Year



Sources: 1990 U.S. Decennial Census and 2013 American Community Survey. Distributions are kernel density plots weighted by corresponding individual sample weights.

Table 1: List of Variables

Variable Definition
Dependent Variables
Natural logarithm of hourly earnings
Specialization
Independent Variables
Sexual Orientation (=1 if Lesbian, =0 if heterosexual)
Marital Status (=1 if married, =0 if otherwise)
Demographics
Experience, Experience Squared, Black, Hispanic, Non-Native English Speaker, Children, Children under the age of 5, Usual Hours Worked Per Week
Education (=1 if True, = 0 if False)
Schooling, Schooling Squared, High School, Associate’s Degree, Bachelor’s Degree, Master’s Degree, PhD degree, Professional Degree
Occupation (=1 if True, = 0 if False)
Service, Manager, Professional, Health Care Professional, Teacher, Technical Profession, Sales, Administrative, Finance, Agriculture, Craft/Repair, Laborer, Transportation, Military
Location (=1 if True, = 0 if False)
Urban
Region (=1 if True, = 0 if False)
New England, Mid-Atlantic, East North Central, West North Central, South Atlantic, East South Central, West South Central, Mountain, Pacific
Main Difference-in-Differences-in-Differences Variables (= 1 if True, = 0 if False)
Same-Sex Marriage Legalized in State
Civil Unions Recognised in State
Domestic Partnership Recognised in State
SSM, CCU, or DP Recognised in State
2013 ACS Respondent
Other Important Variables
Time Since SSR Recognition
Take-Up
Employer Non-Discrimination Act Protections Enacted
Proportion of Lesbians in State
Labor Force Participation Rate of Lesbians in State
Labor Force Participation Rate of Heterosexual Female in State

Table 2: History of Same-Sex Relationship Recognition

	State	Year	Take-Up (%)
Domestic Partnership	CA	1999	37.3
	RI	2002	33.1
	ME	2004	34.7
	WA	2007	36.8
	MD	2008	48.2
	OR	2008	20.9
	CO	2009	24.1
	NV	2009	30.7
	WI	2009	32.2
Civil Union	NJ	2007	32.5
	IL	2011	40.9
Same-Sex Marriage	MA	2004	59.0
	CT	2008	53.4
	VT	2009	49.0
	IA	2009	52.7
	DC	2010	28.5
	NH	2010	57.5
	NY	2011	45.5
	DE	2013	31.9
	HI	2013	21.4
	MN	2013	33.4
NM	2013	22.4	

Note: Take-up data is from the Census Bureau. It refers to the percentage of same-sex couples in each state who indicate on their census forms that they classify their relationship as a married couple.

Table 3: Descriptive Statistics by Year

Year	1990			2013		
	Lesbian	Married Heterosexual	Unmarried Heterosexual	Lesbian	Married Heterosexual	Unmarried Heterosexual
Wage	15.912 (13.478)	14.301 (25.973)	13.177 (24.408)	17.520 (28.885)	16.967 (27.317)	12.935 (22.311)
Schooling	15.414 (2.782)	14.158 (2.683)	13.937 (2.663)	15.512 (2.679)	15.136 (2.943)	14.492 (2.666)
Experience	13.565 (9.657)	20.656 (11.726)	16.086 (14.401)	20.473 (12.143)	25.169 (12.350)	18.356 (15.177)
HSG	0.163 (0.369)	0.337 (0.473)	0.288 (0.453)	0.181 (0.385)	0.218 (0.413)	0.237 (0.425)
Black	0.084 (0.277)	0.078 (0.268)	0.164 (0.370)	0.091 (0.288)	0.081 (0.273)	0.180 (0.384)
Hispanic	0.077 (0.266)	0.063 (0.244)	0.073 (0.260)	0.129 (0.335)	0.126 (0.331)	0.158 (0.365)
Speaks English	0.010 (0.097)	0.021 (0.143)	0.019 (0.135)	0.008 (0.088)	0.040 (0.195)	0.031 (0.173)

Note: Standard errors are presented in parentheses.

Table 4: Oaxaca-Blinder Decomposition Estimates

	LnWage		Specialization	
	1990	2013	1990	2013
Heterosexual	2.447***	2.561***	12.331***	13.803***
Lesbian	2.588***	2.556***	10.080***	12.286***
Gross Difference	-0.141***	0.004	2.251***	1.518***
Decomposition				
Endowments	-0.043*	0.024	1.156**	0.957***
Coefficients	-0.017	-0.002	1.129***	0.823**
Interaction	-0.080***	-0.017	-0.033	-0.263

Note: “Endowments” reflect the mean increase in lesbians’ wages if they had the same characteristics of heterosexual women. “Coefficients” quantifies the changes in lesbians’ wages when applying the coefficients of heterosexual women to lesbian women’s characteristics. “Interaction” measures the simultaneous effect of differences in endowments and coefficients.

Table 5: Static Same-Sex Marriage Wage-Legalization Specifications

<i>Dependent Variable : Log Wage</i>			
	<i>Married Lesbians</i>	<i>Unmarried Lesbians</i>	<i>All</i>
<i>Lesbian·Married·Post</i>	-0.047 (0.049)	0.062 (0.042)	0.023 (0.040)
<i>Controls</i>			
<i>Demographic</i>	X	X	X
<i>Occupation</i>	X	X	X
<i>Region</i>	X	X	X
<i>N</i>	1,644,156	1,272,632	2,912,949
<i>R²</i>	0.287	0.332	0.322

Notes: Unit of observation is at the individual-level. Weights in the estimation are individual sample weights. Regressions include demographic, occupation, and region controls. Standard errors are clustered at the state level and presented in parentheses. Demographic controls include schooling, schooling squared, experience, experience squared, dummy variables for having a high school degree, an A.A. degree, a B.A. degree, a M.A. degree, a Ph.D. degree, being Black, being Hispanic, and achieving English proficiency. Occupation controls are dummy variables for major occupation categories. Region controls are dummy variables for the U.S. Census divisions and urban residents. Statistical significance at the 10%, 5% and 1% levels are denoted by *, **, and ***. *N* is the number of observations. Source: 1990 U.S. Decennial Census and 2013 American Community Survey.

Table 6: Dynamic Same-Sex Marriage Wage-Legalization Specifications

<i>Dependent Variable : Log Wage</i>					
	<i>TSR</i> ≤ 2	<i>TSR</i> ≤ 3	<i>TSR</i> ≤ 5	<i>TSR</i> ≤ 6	<i>TSR</i> ≤ 8
<i>Lesbian·SSM · Post</i>	0.028 (0.063)	0.039 (0.054)	0.031 (0.053)	0.026 (0.042)	0.026 (0.042)
<i>Controls</i>					
<i>Demographic</i>	X	X	X	X	X
<i>Occupation</i>	X	X	X	X	X
<i>Region</i>	X	X	X	X	X
<i>N</i>	2,765,730	2,806,909	2,820,034	2,896,968	2,896,968
<i>R</i> ²	0.310	0.314	0.314	0.320	0.320

Notes: Unit of observation is at the individual-level. Weights in the estimation are individual sample weights. Regressions include demographic, occupation, and region controls. Standard errors are clustered at the state level and presented in parentheses. Demographic controls include schooling, schooling squared, experience, experience squared, dummy variables for having a high school degree, an A.A. degree, a B.A. degree, a M.A. degree, a Ph.D. degree, being Black, being Hispanic, and achieving English proficiency. Occupation controls are dummy variables for major occupation categories. Region controls are dummy variables for the U.S. Census divisions and urban residents. Statistical significance at the 10%, 5% and 1% levels are denoted by *, **, and ***. *N* is the number of observations. Source: 1990 U.S. Decennial Census and 2013 American Community Survey.

Table 7: Dynamic Same-Sex Relationship Wage-Recognition Specifications

<i>Dependent Variable : Log Wage</i>						
	<i>Baseline</i>	<i>TSR ≤ 4</i>	<i>TSR ≤ 6</i>	<i>TSR ≤ 8</i>	<i>TSR ≤ 10</i>	<i>TSR ≤ 13</i>
<i>Lesbian·Rec·Post</i>	0.070*	0.035	0.056	0.068	0.074	0.079*
	(0.038)	(0.059)	(0.052)	(0.051)	(0.046)	(0.045)
<i>Controls</i>						
<i>Demographic</i>	X	X	X	X	X	X
<i>Occupation</i>	X	X	X	X	X	X
<i>Region</i>	X	X	X	X	X	X
<i>N</i>	2,912,949	2,715,589	2,784,144	2,797,862	2,835,607	2,838,071
<i>R²</i>	0.322	0.308	0.312	0.312	0.316	0.317

Notes: Unit of observation is at the individual-level. Weights in the estimation are individual sample weights. Regressions include demographic, occupation, and region controls. Standard errors are clustered at the state level and presented in parentheses. Demographic controls include schooling, schooling squared, experience, experience squared, dummy variables for having a high school degree, an A.A. degree, a B.A. degree, a M.A. degree, a Ph.D. degree, being Black, being Hispanic, and achieving English proficiency. Occupation controls are dummy variables for major occupation categories. Region controls are dummy variables for the U.S. Census divisions and urban residents. Statistical significance at the 10%, 5% and 1% levels are denoted by *, **, and ***. *N* is the number of observations. Source: 1990 U.S. Decennial Census and 2013 American Community Survey.

Table 8: Same-Sex Marriage Wage-Legalization Specifications by State-Level Take-Up Rates

<i>Dependent Variable : Log Wage</i>				
	<i>Take - up ≤ 0.3</i>	<i>Take - up ≤ 0.4</i>	<i>Take - up ≤ 0.5</i>	<i>Take - up ≤ 0.6</i>
<i>Lesbian-Rec-Post</i>	0.212* (0.076)	0.120 * * * (0.039)	0.074* (0.039)	0.070* (0.038)
<i>Controls</i>				
<i>Demographic</i>	X	X	X	X
<i>Occupation</i>	X	X	X	X
<i>Region</i>	X	X	X	X
<i>N</i>	1, 672, 459	2, 321, 428	2, 742, 873	2, 912, 949
<i>R²</i>	0.305	0.317	0.320	0.322

Notes: Unit of observation is at the individual-level. Weights in the estimation are individual sample weights. Regressions include demographic, occupation, and region controls. Standard errors are clustered at the state level and presented in parentheses. Demographic controls include schooling, schooling squared, experience, experience squared, dummy variables for having a high school degree, an A.A. degree, a B.A. degree, a M.A. degree, a Ph.D. degree, being Black, being Hispanic, and achieving English proficiency. Occupation controls are dummy variables for major occupation categories. Region controls are dummy variables for the U.S. Census divisions and urban residents. Statistical significance at the 10%, 5% and 1% levels are denoted by *, **, and ***. *N* is the number of observations. Source: 1990 U.S. Decennial Census and 2013 American Community Survey.

Table 9: Same-Sex Relationship Wage-Recognition Decomposition Specifications

<i>Dependent Variable : Log Wage</i>		
	<i>Civil Unions</i>	<i>Domestic Partnerships</i>
<i>Lesbian-Rec-Post</i>	-0.064 (0.102)	0.129 * ** (0.042)
<i>Controls</i>		
<i>Demographic</i>	X	X
<i>Occupation</i>	X	X
<i>Region</i>	X	X
<i>N</i>	2,912,949	2,912,949
<i>R²</i>	0.320	0.320

Notes: Unit of observation is at the individual-level. Weights in the estimation are individual sample weights. Regressions include demographic, occupation, and region controls. Standard errors are clustered at the state level and presented in parentheses. Demographic controls include schooling, schooling squared, experience, experience squared, dummy variables for having a high school degree, an A.A. degree, a B.A. degree, a M.A. degree, a Ph.D. degree, being Black, being Hispanic, and achieving English proficiency. Occupation controls are dummy variables for major occupation categories. Region controls are dummy variables for the U.S. Census divisions and urban residents. Statistical significance at the 10%, 5% and 1% levels are denoted by *, **, and ***. *N* is the number of observations. Source: 1990 U.S. Decennial Census and 2013 American Community Survey.

Table 10: Dynamic Same-Sex Marriage Specialization-Legalization Specifications

<i>Dependent Variable : Specialization</i>						
	<i>Baseline</i>	<i>TSS ≤ 2</i>	<i>TSS ≤ 4</i>	<i>TSS ≤ 6</i>	<i>TSS ≤ 8</i>	<i>TSS ≤ 10</i>
<i>Lesbian.SSM.Post</i>	1.500* (0.766)	2.293 ** (1.074)	1.932* (1.033)	1.439* (0.766)	1.439* (0.766)	1.500* (0.766)
<i>Controls</i>						
<i>Demographic</i>	X	X	X	X	X	X
<i>Occupation</i>	X	X	X	X	X	X
<i>Region</i>	X	X	X	X	X	X
<i>N</i>	1,667,421	1,591,746	1,614,809	1,659,090	1,659,090	1,667,421
<i>R²</i>	0.044	0.044	0.044	0.044	0.044	0.044

Notes: Unit of observation is at the individual-level. Weights in the estimation are individual sample weights. Regressions include demographic, occupation, and region controls. Standard errors are clustered at the state level and presented in parentheses. Demographic controls include schooling, schooling squared, experience, experience squared, dummy variables for having a high school degree, an A.A. degree, a B.A. degree, a M.A. degree, a Ph.D. degree, being Black, being Hispanic, and achieving English proficiency. Occupation controls are dummy variables for major occupation categories. Region controls are dummy variables for the U.S. Census divisions and urban residents. Statistical significance at the 10%, 5% and 1% levels are denoted by *, **, and ***. *N* is the number of observations. Source: 1990 U.S. Decennial Census and 2013 American Community Survey.

Table 11: Dynamic Same-Sex Marriage Specialization-Legalization Specifications (2)

<i>Controlling for Non – Cohabiting Couples</i>					
<i>Dependent Variable : Specialization</i>					
	<i>TSS ≤ 2</i>	<i>TSS ≤ 4</i>	<i>TSS ≤ 6</i>	<i>TSS ≤ 8</i>	<i>TSS ≤ 10</i>
<i>Lesbian·SSM·Post</i>	2.810*	2.034	1.780*	1.780*	1.780*
	(1.492)	(1.413)	(1.024)	(1.024)	(1.024)
<i>Controls</i>					
<i>Demographic</i>	X	X	X	X	X
<i>Occupation</i>	X	X	X	X	X
<i>Region</i>	X	X	X	X	X
<i>N</i>	1,561,931	1,584,278	1,626,806	1,626,806	1,626,806
<i>R²</i>	0.044	0.044	0.044	0.044	0.044

Notes: Unit of observation is at the individual-level. Weights in the estimation are individual sample weights. Regressions include demographic, occupation, and region controls. Standard errors are clustered at the state level and presented in parentheses. Demographic controls include schooling, schooling squared, experience, experience squared, dummy variables for having a high school degree, an A.A. degree, a B.A. degree, a M.A. degree, a Ph.D. degree, being Black, being Hispanic, and achieving English proficiency. Occupation controls are dummy variables for major occupation categories. Region controls are dummy variables for the U.S. Census divisions and urban residents. Statistical significance at the 10%, 5% and 1% levels are denoted by *, **, and ***. *N* is the number of observations. Source: 1990 U.S. Decennial Census and 2013 American Community Survey.

Table 12: Dynamic Same-Sex Marriage Wage-Specialization Specifications

<i>Dependent Variable : Log Wage</i>			
	<i>TSS ≤ 2</i>	<i>TSS ≤ 4</i>	<i>TSS ≤ 6</i>
<i>Lesbian·SSM·Post</i>	0.032 (0.059)	0.037 (0.050)	0.020 (0.039)
<i>Controls</i>			
<i>Demographic</i>	X	X	X
<i>Occupation</i>	X	X	X
<i>Region</i>	X	X	X
<i>N</i>	1,591,746	1,614,809	1,659,090
<i>R²</i>	0.276	0.281	0.290

Notes: Unit of observation is at the individual-level. Weights in the estimation are individual sample weights. Regressions include demographic, occupation, and region controls. Standard errors are clustered at the state level and presented in parentheses. Demographic controls include schooling, schooling squared, experience, experience squared, dummy variables for having a high school degree, an A.A. degree, a B.A. degree, a M.A. degree, a Ph.D. degree, being Black, being Hispanic, and achieving English proficiency. Occupation controls are dummy variables for major occupation categories. Region controls are dummy variables for the U.S. Census divisions and urban residents. Statistical significance at the 10%, 5% and 1% levels are denoted by *, **, and ***. *N* is the number of observations. Source: 1990 U.S. Decennial Census and 2013 American Community Survey.

Table 13: Dynamic Same-Sex Marriage Wage-Legalization Specifications - Marriage Market Selection Hypothesis

<i>Dependent Variable : Log Wage</i>						
<i>Control</i>	<i>Proportion of Lesbians in Population</i>			<i>Lesbian & Hetero LFP in Population</i>		
	<i>TSR ≤ 2</i>	<i>TSR ≤ 4</i>	<i>TSR ≤ 6</i>	<i>TSR ≤ 2</i>	<i>TSR ≤ 4</i>	<i>TSR ≤ 6</i>
<i>Lesbian-SSM-Post</i>	0.028 (0.063)	0.028 (0.052)	0.025 (0.042)	0.029 (0.064)	0.030 (0.053)	0.027 (0.042)
<i>Controls</i>						
<i>Demographic</i>	X	X	X	X	X	X
<i>Occupation</i>	X	X	X	X	X	X
<i>Region</i>	X	X	X	X	X	X
<i>N</i>	2,765,730	2,820,034	2,896,968	2,760,023	2,814,327	2,891,261
<i>R²</i>	0.310	0.315	0.321	0.311	0.315	0.321

Notes: Unit of observation is at the individual-level. The dependent variables are binary indicators for the decision to work, the decision to work away from home, and the decision to work for one's self. The treatment group includes married women, while the control group includes widowed women. Individual control variables include age, years of education, household size, owning a tv, owning a radio, and having access to electricity. Results presented are odds ratios are produced by logistic regressions. Standard errors are clustered at the year-region level. Statistical significance at the 10%, 5% and 1% levels are denoted by *, **, and ***. Reported R^2 is pseudo R^2 . Source: Demographic Health Survey (DHS) 1995, 2000, 2005, and 2008.

Table 14: Dynamic Same-Sex Marriage Wage-Legalization Specifications - Employment Non-Discrimination Act (ENDA)

<i>Controlling for ENDA</i>			
<i>Dependent Variable : Log Wage</i>			
	<i>TSS ≤ 2</i>	<i>TSS ≤ 4</i>	<i>TSS ≤ 6</i>
<i>Lesbian·SSM·Post</i>	0.028 (0.064)	0.035 (0.054)	0.026 (0.042)
<i>Controls</i>			
<i>Demographic</i>	X	X	X
<i>Occupation</i>	X	X	X
<i>Region</i>	X	X	X
<i>N</i>	2,765,739	2,811,637	2,896,968
<i>R²</i>	0.310	0.314	0.321

Notes: Unit of observation is at the individual-level. Weights in the estimation are individual sample weights. Regressions include demographic, occupation, and region controls. Standard errors are clustered at the state level and presented in parentheses. Demographic controls include schooling, schooling squared, experience, experience squared, dummy variables for having a high school degree, an A.A. degree, a B.A. degree, a M.A. degree, a Ph.D. degree, being Black, being Hispanic, and achieving English proficiency. Occupation controls are dummy variables for major occupation categories. Region controls are dummy variables for the U.S. Census divisions and urban residents. Statistical significance at the 10%, 5% and 1% levels are denoted by *, **, and ***. *N* is the number of observations. Source: 1990 U.S. Decennial Census and 2013 American Community Survey.

Table 15: Static Same-Sex Marriage Wage-Legalization Specifications Stratified by Partnership Status

<i>Stratification</i>	<i>Dependent Variable : Log Wage</i>			
	<i>Primary Partner</i>		<i>Secondary Partner</i>	
	<i>Married Lesbians</i>	<i>Unmarried Lesbians</i>	<i>Married Lesbians</i>	<i>Unmarried Lesbians</i>
	<i>All</i>	<i>All</i>	<i>All</i>	<i>All</i>
<i>Lesbian-Married, Post</i>	0.063 (0.060)	0.152 *** (0.054)	-0.107* (0.058)	0.037 ** (0.045)
		0.141 (0.053)		-0.029 (0.044)
<i>Controls</i>				
<i>Demographic</i>	X	X	X	X
<i>Occupation</i>	X	X	X	X
<i>Region</i>	X	X	X	X
<i>N</i>	217, 138	724, 921	1, 427, 018	547, 711
<i>R</i> ²	0.315	0.309	0.272	0.254
		0.315		0.313

Notes: Unit of observation is at the individual-level. Weights in the estimation are individual sample weights. Regressions include demographic, occupation, and region controls. Standard errors are clustered at the state level and presented in parentheses. Demographic controls include schooling, schooling squared, experience, experience squared, dummy variables for having a high school degree, an A.A. degree, a B.A. degree, a M.A. degree, a Ph.D. degree, being Black, being Hispanic, and achieving English proficiency. Occupation controls are dummy variables for major occupation categories. Region controls are dummy variables for the U.S. Census divisions and urban residents. Statistical significance at the 10%, 5% and 1% levels are denoted by *, **, and ***. *N* is the number of observations. Source: 1990 U.S. Decennial Census and 2013 American Community Survey.

Table 16: Dynamic Same-Sex Relationship Wage-Recognition Specifications Stratified by Partnership Status
Dependent Variable : Log Wage

<i>Stratification</i>	<i>Primary Partner</i>				<i>Secondary Partner</i>					
	<i>Baseline</i>	<i>TSR ≤ 6</i>	<i>TSR ≤ 8</i>	<i>TSR ≤ 10</i>	<i>TSR ≤ 13</i>	<i>Baseline</i>	<i>TSR ≤ 6</i>	<i>TSR ≤ 8</i>	<i>TSR ≤ 10</i>	<i>TSR ≤ 13</i>
<i>Lesbian-Rec-Post</i>	0.159 *** (0.049)	0.0844 (0.066)	0.125* (0.073)	0.131 ** (0.065)	0.135 ** (0.064)	0.034 (0.047)	0.052 (0.059)	0.051 (0.056)	0.058 (0.054)	0.064 (0.053)
<i>Controls</i>										
<i>Demographic</i>	X	X	X	X	X	X	X	X	X	X
<i>Occupation</i>	X	X	X	X	X	X	X	X	X	X
<i>Region</i>	X	X	X	X	X	X	X	X	X	X
<i>N</i>	940,607	879,020	886,021	904,268	905,480	1,972,342	1,905,124	1,911,841	1,931,339	1,932,591
<i>R²</i>	0.315	0.306	0.306	0.310	0.310	0.312	0.304	0.304	0.308	0.308

Notes: Unit of observation is at the individual-level. Weights in the estimation are individual sample weights. Regressions include demographic, occupation, and region controls. Standard errors are clustered at the state level and presented in parentheses. Demographic controls include schooling, schooling squared, experience, experience squared, dummy variables for having a high school degree, an A.A. degree, a B.A. degree, a M.A. degree, a Ph.D. degree, being Black, being Hispanic, and achieving English proficiency. Occupation controls are dummy variables for major occupation categories. Region controls are dummy variables for the U.S. Census divisions and urban residents. Statistical significance at the 10%, 5% and 1% levels are denoted by *, **, and ***. *N* is the number of observations. Source: 1990 U.S. Decennial Census and 2013 American Community Survey.

Table 17: Same-Sex Relationship Wage-Recognition Decomposition Specifications Stratified by Partnership Status

<i>Dependent Variable : Log Wage</i>				
<i>Stratification</i>	<i>Primary Partner</i>		<i>Secondary Partner</i>	
	<i>Civil Union</i>	<i>Domestic Partnership</i>	<i>Civil Union</i>	<i>Domestic Partnership</i>
<i>Lesbian·Rec·Post</i>	0.159 *** (0.95)	0.193 *** (0.050)	-0.011 (0.110)	0.105* (0.060)
<i>Controls</i>				
<i>Demographic</i>	X	X	X	X
<i>Occupation</i>	X	X	X	X
<i>Region</i>	X	X	X	X
<i>N</i>	940,607	940,607	1,972,342	1,972,342
<i>R²</i>	0.315	0.312	0.311	0.311

Notes: Unit of observation is at the individual-level. Weights in the estimation are individual sample weights. Regressions include demographic, occupation, and region controls. Standard errors are clustered at the state level and presented in parentheses. Demographic controls include schooling, schooling squared, experience, experience squared, dummy variables for having a high school degree, an A.A. degree, a B.A. degree, a M.A. degree, a Ph.D. degree, being Black, being Hispanic, and achieving English proficiency. Occupation controls are dummy variables for major occupation categories. Region controls are dummy variables for the U.S. Census divisions and urban residents. Statistical significance at the 10%, 5% and 1% levels are denoted by *, **, and ***. *N* is the number of observations. Source: 1990 U.S. Decennial Census and 2013 American Community Survey.

Table 18: Dynamic Same-Sex Marriage Wage-Legalization Specifications Stratified by Partnership Status
Controlling for Children

<i>Stratification</i>	<i>Dependent Variable : Log Wage</i>									
	<i>Primary Partner</i>					<i>Secondary Partner</i>				
	<i>TSR ≤ 2</i>	<i>TSR ≤ 4</i>	<i>TSR ≤ 6</i>	<i>TSR ≤ 8</i>	<i>TSR ≤ 10</i>	<i>TSR ≤ 2</i>	<i>TSR ≤ 4</i>	<i>TSR ≤ 6</i>	<i>TSR ≤ 8</i>	<i>TSR ≤ 10</i>
<i>Lesbian-SM-Post</i>	4.898 ** (2.092)	3.474 (2.141)	2.337 (1.551)	2.337 (1.551)	2.120 (1.496)	-2.597 *** (0.947)	-2.205 ** (0.894)	-1.658* (0.925)	-1.658* (0.925)	-1.555* (0.896)
<i>Controls</i>										
<i>Demographic</i>	X	X	X	X	X	X	X	X	X	X
<i>Occupation</i>	X	X	X	X	X	X	X	X	X	X
<i>Region</i>	X	X	X	X	X	X	X	X	X	X
<i>N</i>	183,734	193,599	211,636	211,636	215,220	1,408,012	1,421,210	1,447,454	1,447,454	1,452,201
<i>R²</i>	0.043	0.043	0.043	0.043	0.043	0.050	0.050	0.050	0.050	0.050

Notes: Unit of observation is at the individual-level. Weights in the estimation are individual sample weights. Regressions include demographic, occupation, and region controls. Standard errors are clustered at the state level and presented in parentheses. Demographic controls include schooling, schooling squared, experience, experience squared, dummy variables for having a high school degree, an A.A. degree, a B.A. degree, a M.A. degree, a Ph.D. degree, being Black, being Hispanic, and achieving English proficiency. Occupation controls are dummy variables for major occupation categories. Region controls are dummy variables for the U.S. Census divisions and urban residents. Statistical significance at the 10%, 5% and 1% levels are denoted by *, **, and ***. *N* is the number of observations. Source: 1990 U.S. Decennial Census and 2013 American Community Survey.