Same-Sex Partnership for What?
Evidence from Swedish Register Data

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Abstract

The expansion of legal rights to same-sex couples is afoot in a number of Western countries. The effects of this roll-out are not only important in their own right but can also provide a window on the institution of marriage and the rights bundled therein. In this paper, using Swedish longitudinal register data covering the period 1994-2007, we study the impact of the extension of rights to same-sex couples on labor earnings and fertility. In 1994, Registered Partnership for same-sex couples was introduced in Sweden. Registered partnership conferred almost all rights and obligations of marriage, a notable exception being joint legal parenting (paternity presumption). Joint legal parenting was added as an option to same-sex couples in registered partnership in 2002. We find registered partnership to be important to both gays and lesbians but for different reasons. For gays, resource pooling emerges as the main function of registered partnership. For lesbians, registered partnership appears to be an important vehicle for family formation, especially after the 2002-adoption law. In contrast to heterosexual couples (included for comparison), we find no evidence of specialization among lesbians. The lack of specialization is noteworthy given comparable fertility effects of registered partnership (after 2002) and the fact that the lesbian couples were less assortatively matched (on education) than the heterosexual couples, two factors commonly believed to promote specialization.

Keywords: Same-sex partnership, marriage premium, paternity presumption.
JEL: J12, J16, K36

1 Introduction

In 1989, Denmark became the first country to recognize same-sex unions. Since then, some 30 countries have followed suit, France being the latest to join the list. In the US, more than half of the states allow same-sex marriage and what rights and protections to be afforded homosexuals is an ongoing debate. Advocates invoke equality, fairness, and human rights; opponents see a threat to family and society (Chamie & Mirkin, 2011).

Despite growing demand, relatively little is known about the function of legal same-sex unions. What is it that legal status confers that cannot be achieved through private contract or actions such as cohabitation? Arguably, the same might be asked of opposite-sex marriage, an institution that has proven long lived in the face of changing social mores. But what holds for opposite-sex unions need not carry over to same-sex ones.

For instance, the returns to marriage in the Beckerian framework rests on returns to specialization and same-sex couples appear to specialize less (Jepsen & Jepsen, 2002). Long-term commitment is another celebrated function of marriage that may or may not translate to same-sex couples (Andersson, Noack, Seierstad, & Weedon-Fekjr, 2006), although the importance of duration may be questioned in an era of easy divorce. A potentially more problematic feature of marriage with respect to portability to the same-sex context is the so-called paternity presumption: the husband is the presumed father of children borne by the wife (Appleton, 2006). Same-sex marriage aside, paternity presumption is a universal feature of marriage and one that may even constitute its very core (Posner, 1992). Most same-sex unions carve out paternity presumption, and even when included, its application is far from straightforward because of the strong rights accorded birth mothers. By default, the mother is the woman who gives birth. If a man in a same-sex partnership acknowledges paternity of a child born to an unmarried woman, will the child have three parents? And if parental rights are at the heart of legal unions, then what is its relevance to all-male, and thus sterile, couples?

This paper seeks to shed some light on the practical implications for same-sex couples of greater access to legal rights formerly reserved for opposite-sex couples by studying an expansion of rights in Sweden. In January 1995, registered partnership was introduced. It confers almost the same rights and obligations as opposite-sex marriage. However, paternity presumption is carved out in an innocuous sounding exemption of rights extended to one sex only. The 2002-adoption law gave registered partners the right to adopt jointly or as step-parents, thereby allowing same-sex partners joint legal parenting. The law was enacted in 2002 and took effect January 1, 2003.

Research on same-sex legal unions has until now been scarce due to data limitations. In this paper, we analyze Swedish panel data covering the period from 1994 to 2007. Derived from Swedish registers, these data are high quality, have universal coverage, and allow us to follow individuals. Using these administrative data, we identify and follow all individuals who entered into registered partnerships in 1995-2006 (to allow for a post and pre-union year). For comparison, we include all who entered opposite-sex marriage in the said period. The data contain detailed information on earnings and children living in the household, which enables us to bring new insights on how entry into partnership/marriage affects labor market and parental outcomes. Our empirical strategy is to compare outcomes of

earnings and presence of children before and after union entry controlling for individual fixed effects so that the person serves as his or her own control group.

In 2009, registered partnership was replaced by same-sex marriage. Other than the name, the principal change was to allow the ceremony to take place in the Swedish Church. Since same-sex marriage was legalized outside of our sample period, and for ease of exposition, "marriage" in the text will refer to opposite-sex marriage unless otherwise noted. Registered partnership (RP) will be referred to as such, or abbreviated to partnership when context allows.

By exploiting longitudinal data we can avoid the problem of selection into partnership (or marriage) that arises in cross-sectional comparisons. However, the possibility that partnership/marriage entry is timed to coincide with other life changes remains. Milestones such as graduation or steady employment may both trigger marriage and presage earnings growth, resulting in an upward bias. On the other hand, a downward bias would result if partnership/marriage was timed to coincide with a downshift in labor market attachment (e.g., due to parenthood or retirement). Therefore, our estimates provide a description of labor market and parenting responses to partnership/marriage entry, but do no isolate the causal effect of entry into partnership/marriage.

Our most noteworthy finding pertains to parenthood. Following the 2002-adoption law giving partners in a registered partnership the right to joint or step-parent adoption, we see both a noticeable increase in lesbian partnership and children living with lesbians in partnership. The net effect of union entry on presence of children, especially after the 2002 reform, reveals similar effects of entry into legal union status for lesbian and opposite sex couples – couples with at least one woman. These findings highlight the importance of a legal framework for parental rights; indeed it underscores the role of joint parenting for fertility decisions.

These effects, however, are limited to lesbians. The absence of positive fertility effects among gays could be due to a number of reasons including lower demand for children. It is also the case that the route to joint parenthood is more difficult for partnered men. For step-parent adoption, a gestational carrier is needed and many adoption agencies restrict adoptions to husband-wife couples or single persons.

As for individual earnings, we find a substantial decline for gay men (-12 percent) whereas for lesbian women the effect is small (-2 percent) and highly insignificant. Turning to couple earnings, the pronounced decline seen for gays is absent, suggesting a high degree of income buffering (or negative sorting). By contrast, among lesbians, the income reduction seen at the individual level is amplified once viewed at the couple level, suggestive of within-couple positively correlated labor market responses to partnership entry. Within-couple earnings gaps change in a direction consistent with this interpretation. Among lesbians, there is a sizeable (but statistically insignificant) reduction in the within-couple earnings gap, whereas among gays there is only a small and highly insignificant effect on the gap.

As a point of reference, the effect of marriage entry among heterosexual couples is largely in line with what has been found in the literature: fertility increases, earnings of women decrease and there is an increase in the within-couple earnings gap. Men earn substantially more after marriage than before, but we find no evidence of a marriage premium employing

our within-individual comparison. Instead, we find a strong ramp up of earnings in the years leading up to marriage. Given the negative marriage premium for women and the absence of a positive premium for men, our finding that the combined earnings for the couple decline on marriage is perhaps unsurprising.

Taken together, these findings paint a picture of same-sex registered partnership filling a different role for same sex couples than marriage does for opposite sex couples, and the role is different for gays and lesbians. Generally speaking, as evidenced by the earnings gap, specialization on union entry is much more pronounced among heterosexual couples, and if anything, higher among gays than lesbians. This is particularly noteworthy given the close to zero fertility effect among gays and similar fertility effects for women, whether in a same- or opposite-sex union.

One possibility is that the specialization seen in opposite-sex couples stems from the fact that only one of the spouses, the woman, can bear children. If home production is defined as the bearing of children, then the inability of men in that department gives them infinite comparative advantage in market work – a reason for why the sexual division of labor might remain qualitatively unchanged regardless of the spouses' respective labor market productivity. In separate work, one of us has argued that marriage, because of paternity presumption, is a contract in which men gain paternity and obtain parental rights (Edlund, 2006; Edlund & Korn, 2002; Edlund, 2013). The argument is based on the twin observations that: (i) the act of giving birth assigns motherhood, and an unmarried mother is by default the child's only known parent and its sole custodian; and (ii) a married mother shares custody with her husband and presumed father of the child. In other words, an unmarried man has no guaranteed rights to either legal fatherhood or custodial rights regardless of biological parentage, whereas these rights are guaranteed a married man (again, regardless of biological links). This "transfer of children" to men in marriage could form the basis for a transfer in the other direction, that is unearned income to the woman (spousal earnings being a form of unearned income, e.g., Juhn and Murphy (1997)). Among lesbians, by contrast, the basis for compensation is more tenuous since either partner can bear children and obtain parental rights *without* union entry.

The remainder of the paper is organized as follows. Section 2 provides a literature review, a brief discussion of possible channels, and background on the institution. Section 3 describes our data. Section 4 considers individual and couple responses to union entry. Section 5 concludes.

2 Background

Our study is in the tradition of the literature on the so-called *marriage premium*, in the cross-section estimated to be in the 10-percentage range for men – a robust but intriguing association (Korenman & Neumark, 1991; Cornwell & Rupert, 1997; Ginther & Zavodny, 2001; Krashinsky, 2004; Antonovics & Town, 2004; Dougherty, 2006). Our findings for heterosexual men are in line with Dougherty (2006) who, analyzing the 1979 National Longitudinal Survey of Youth, used a similar individual fixed effects framework and found the marriage event to be largely indistinguishable from a smooth earnings profile. Zavodny

(2008) studied the effect of cohabitation on earnings among US homosexual men in a cross-sectional comparison using the General Social Survey and the National Health and Social Life Survey and found no evidence of a "cohabitation premium."

Turning to earnings and sexual orientation, a number of studies have found gay men to earn less than heterosexual men while lesbians typically out-earn heterosexual women (US, see M. V. L. Badgett (1995); Klawitter and Flatt (1998); Black, Gates, Sanders, and Taylor (2008); Allegretto and Arthur (2001); M. Badgett (2001); Clain and Leppel (2001); C. Carpenter (2004); C. S. Carpenter (2005); Australia, see C. Carpenter (2008); Europe, see G. Arabsheibani, Marin, and Wadsworth (2004); the UK, see G. R. Arabsheibani, Marin, and Wadsworth (2005); the Netherlands, see (Plug & Berkhout, 2004); Greece, see Drydakis (2011); Sweden, see Ahmed and Hammarstedt (2010); Ahmed, Andersson, and Hammarstedt (2011, 2013).

Our paper adds to a small but growing literature on marriage-like contracts for same-sex couples afforded by the recent expansion of such rights. How does entry into a legal union affect behavior of the concerned parties? Are there children, and how do they fare? What are the effects on others? Does societal acceptance of same-sex unions reduce the interest in traditional marriage? Questions like these may speak to the controversy surrounding recognition of same-sex unions. Homosexuality – particularly relations between men – has a long history of criminalization, e.g., Frank, Camp, and Boutcher (2010). Acceptance of male homosexuality, like prostitution, could tempt men to trade the role of breadwinning for a hedonistic existence with little concern for the wellbeing of the next generation.[1] Legal recognition of same-sex couples provide a unique opportunity to shed further light on these issue.

This literature includes C. Carpenter and Gates (2008); Langbein and Yost (2009); Dillender (2014, Forthcoming); Burn and Jackson (2014). For the United States, Langbein and Yost (2009) and Dillender (2014) found no evidence that legalization of same-sex unions eroded traditional values (e.g., marriage, divorce or abortion rates). While the Swedish environment does not allow for geographic and time variation, it can be noted that the expansion of right to same sex couples in Sweden has coincided with an increase in both the propensity to enter, and stability of, opposite-sex marriage marriages (Andersson & Kolk, 2011).

Burn and Jackson (2014) studied the marriage premium for gay men using a difference-in-difference-in-difference approach where the earnings growth of men in same-sex couples relative to married men over the 1990-2011 period was compared. They found that the earning growth had been substantially higher for men in same-sex couples relative to heterosexually married men in the six U.S. states that had legalized same-sex marriage compared to such men living in states that had not legalized same sex marriage.[2]

[1] A concern recently expressed by Rick Santorum, then U.S. senator from Pennsylvania and Republican primary candidate: "You say, well, it's my individual freedom. Yes, but it destroys the basic unit of our society because it condones behavior that's antithetical to strong healthy families. Whether it's polygamy, whether it's adultery, where it's sodomy, all of those things, are antithetical to a healthy, stable, traditional family." `http://2012.republican-candidates.org/Santorum/Same-Sex.php`

[2] The states are: Massachusetts (2004), Connecticut (2008), Vermont (2009), Iowa (2009), Washington, D.C. (2010), and New Hampshire (2010).

Consistent with children as an important function of formal unions and the limited fertility of gay couples, C. Carpenter and Gates (2008) in their study of homosexual men and women in California found lesbian couples to have been more prone to "legalize" their relationship, a finding echoed in Sweden of late.[3]

The paper perhaps closest to our study is Dillender (Forthcoming) who found that access to legal marriage altered the labor market participation of female same-sex couples, shifting these families from dual- to single-income households, a change that he attributed to access to partner's health insurance benefits.

Lastly, and not strictly about same-sex marriage, Rosenfeld (2010) found same-sex couples to be equally effective in raising children, as measured by the children's educational attainment.

2.1 Channels

There are a number of reasons registered partnership may be important; here we discuss three: intra-household specialization; income and asset pooling; and social recognition.

2.1.1 Theories of Marriage

In this section will discuss two theories of marriage – Becker's canonical theory and an alternative theory advanced by one of us in separate work (Edlund, 2013) – and their respective relevance and predictions for registered partnership.

In the seminal "A Theory of Marriage," Becker (1973) advanced the notion of household production of a household commodity using non-market time and market goods. Household commodities are "not marketable or transferable among households, although they may be transferable among members of the same household...[examples include] quality of meals, the quality and quantity of children, prestige, recreation, companionship, love and health status." Becker's theory abstracted from formal marriage "...two persons, M and F, who must decide whether to marry each other or remain single. For the present, 'marriage' simply means that they share the same household." It is an essentially gender symmetric theory where specialization arises from the need for non-market time, a specialization that does not hinge on formal marriage. The use of non-market time also underpins the case for negative sorting, which requires not only the high wage man to marry the low wage woman, but also the low wage man to marry the high wage woman (high and low are relative to others of the same sex).

While Becker did not limit household production to children, of the examples listed, children are of particular salience, both because of their importance and their lack of marketability.[4]

[3]Statistics Sweden. 2009. Fler kvinnor än män gifte sig med person av samma kön (Pressmeddelande) [More women than men married to someone of the same sex (Press Release)] `http://www.scb.se/sv_/Hitta-statistik/Statistik-efteramne/Befolkning/Befolkningsframskrivningar/Demografisk-analys/55349/55356/Behallare-for-Press/Infor-Stockholm-Pride/`

[4]Of the examples listed by Becker – quality of meals, the quality and quantity of children, prestige, recreation, companionship, love and health status – markets exist for quality of meals, prestige, recreation, health status. Companionship and love may not have markets, but it is also hard to see how they relate to

Children are at the heart of marriage in Edlund (2013), which emphasized the role of marriage in allocating parental rights. Marriage in this view based on family law is an asymmetric institution; the household commodities are children borne by the wife and the transfer between spouses is from the woman to the man. Financial transfers in the other direction are endogenous to this transfer. The sexual division of labor commonly observed could arise from comparative advantage but could equally be the result of women's unearned income. Negative sorting does not arise as readily as in Becker's theory based on household specialization. In particular, high wage women prefer to stay single than to marry low wage men (they may still have children).

Paternity presumption is a universal feature of marriage: the husband is the presumed father of children borne by the wife. It is also a unique feature of marriage. Save adoption and surrogacy, contracts on children are not allowed, and private contracts are typically not upheld. This gives marriage a particular legal function not easily mimicked.

In Sweden, women who give birth are the default mothers. If unmarried, she is also the child's sole custodian and the father is unknown. If the mother is married, the husband is the presumed father and he shares custodial rights with the mother. The right to joint legal custody transcends marriage; on divorce, custody is joint by default. The unmarried father's situation is less secure. First of all, the mother may refuse to acknowledge him. Even if paternity is established, it only comes with a restricted set of rights. Joint or full custody can be had, but is typically subject to the mother's approval.

While the wife needs to be able to bear children and therefore needs to be a woman, the husband role need not be filled by a man. Many African societies allow barren women to take wives, an early form of same-sex marriage (Evans-Pritchard, 1951). In fact, Appleton (2006) has argued that same-sex marriage, including paternity presumption, should be reserved for women only, based on the complication mentioned in the introduction. Male same sex marriage could easily result in three legal parents, a concept that for now at least is foreign to Western society. (However, as cross-racial adoptions illustrate, biological plausibility is not a *sine qua non* for legal parent-child relations.)

Registered partnership in Sweden carved out paternity presumption (a carve out that remains for same-sex marriage, registered partnership's 2009 incarnation). Thus, to the extent that the effects of marriage are tied to the transfer of parental rights they may not carry over to partnership. This carve-out is common to same-sex legal unions but not universal, e.g. Anderson (2006). The legal landscape is rapidly changing however. Whereas paternity presumption tends to remain carved out, legal unions are recognized and granted by an increasing number of jurisdictions, and may be seen as a precursor to greater parental rights. For instance, in France, the discussion of same-sex marriage has precipitated a discussion of same-sex adoption of children. In the U.S., a recent Supreme Court ruling mandates federal recognition of same-sex unions legally entered into in one of the U.S. states.

In Sweden, lesbians entering registered partnership do not automatically share parental rights to children borne by the partner. If one of the women becomes a mother, her partner does not automatically become a mother and custody is not joint. Since the 2002-adoption

marriage or could be produced through specialization or be transferable between spouses.

law, however, those in registered partnership have had the right to adopt jointly or as a step-parent. In 2005, lesbian women gained the right to artificial insemination under the auspices of the national health care system.

While the situation for gays is legally the same as for lesbians, the 2002-adoption law has little practical significance. For the law to be applicable, a child is needed and a man not married to a woman lacks default parental rights. Absent that, gay couples' options are limited to adoption or surrogacy. The supply of children for adoption is limited and many countries do not allow same-sex couples to adopt. As for surrogacy, although not illegal, surrogacy contracts are typically not enforced. This legal gray zone makes surrogacy emotionally and financially taxing and unpractical for the majority of couples. Thus, the gay couple may be for all practical purposes sterile, removing an important reason for household specialization.

Turning to the predictions of the two theories for same-sex registered partnership, it may be useful to distinguish between children and other household commodities, in the parlance of Becker. Excluding children, the Beckerian theory predicts negative sorting and specialization (although the two-sidedness of the market is lost). The view of marriage proposed by Edlund does not apply since it centered on the allocation of children.

If the household commodity is indeed children (which seems reasonable given Becker's definition, his other examples notwithstanding), the two theories have observationally different predictions for gay marriage. Becker's theory predicts that one person will spend more time in household production and therefore we will see that person lowering his or her participation in the labor market. By contrast, marriage as a contract regulating rights to children does not. The reason is that marriage in that view amounts to trade in children, from the woman to the man. The resulting compensation from the man to the woman then allows women to enjoy more leisure, observationally equivalent to reduced labor market attachment. However, in the context of same-sex couples, the basis for this payment is moot. Either or none of the partners can bear children. Given the difficulty gay men face in obtaining children, lesbian couples emerge as a testing ground of particular interest. Is partnership entry associated with more children for lesbians? If so, do lesbian couples specialize or not?

2.1.2 Financial Motives/Income Pooling

A number of financial incentives and programs are organized around the institution of marriage. However, there are few financial benefits tied to marriage in Sweden today. For instance, there is only individual tax filing status and all residents are covered by national health insurance. Additionally, the public pension is not inherited by the surviving spouse and there is no gift or inheritance tax.

The main financial consequences of registered partnership (and marriage) are: (i) all assets are treated as marital property (individual ownership but restrictions on disposal), unless otherwise specified in a prenuptial agreement or given as a gift expressly designated to be individual property; (ii) all assets accumulated during the partnership (or marriage) are community property; (iii) partners (spouses) have the right and obligation of mutual support and specifically have the right to the same standard of living; and (iv) default

inheritance rights of the surviving partner (spouse).

Thus partnership entails a resource transfer to the financially weaker partner. Furthermore, income pooling offers insurance and may therefore dull work incentives (potentially reducing the fiscal benefits of same-sex partnership recognition, e.g., Stevenson (2012)). As a result, we might expect partnership to result in a reduction in earnings.

2.1.3 Recognition and Social Acceptance

Since the 1970s, Western societies have seen the improved ability of unmarried fathers to establish paternity and obtain parental (and other, see e.g., Waaldijk (Ed.) (2005); Perelli-Harris and Sanchez Gassen (2012)) rights formerly reserved for marriage, as well as increasing acceptance and incidence of non-marital cohabitation and fertility. As a result, the practical and social significance of marriage has been reduced. Increasingly, marriage is viewed as a choice rather than a necessity and has emerged as a marker of prestige (Cherlin, 2004; Holland, 2013).

Social acceptance and prestige may be one reason same-sex marriage is demanded. Legal acknowledgment of ongoing commitment may translate into broad social acceptance of homosexual unions among friends, family and coworkers, and may thus bestow non-pecuniary benefits. Advocates of this idea focus on the importance of common institutions (i.e., marriage rather than registered partnership) to promote the idea that homosexual relationships are no different from heterosexual relationships.

Thus, partnership entry may boost mental and physical health. In the preliminary analysis we looked into the uptake of health related benefits in our administrative data. However, our data did not reveal a detectable effect of partnership entry (not reported).

2.2 Institutional Background

We analyze Swedish administrative data spanning 1994-2007, a period during which several rights were extended to homosexuals. The date in boldface indicates when the legal change takes effect.

1995 The Partnership Act of 1994 took effect January 1, 1995. It grants all rights provided to married couples, with an important exception for paternity presumption. Savolainen (2003, page 28): "...the presumption of paternity does not apply where a female partner gives birth to a child. The other partner does not become the legal parent of the child or acquire any parental rights of duties at the birth of the child by operation of law as is the case in respect of a child born in wedlock. These [Finnish and Swedish Partnership] Acts do not know any special procedure, agreement, consent or 'recognition of parenthood' whereby a partner could become a legal parent of a child produced by the other partner." (Savolainen, 2003) noted that this arguably important carve-out is buried in an exception for rights conferred by marriage to one sex but not the other, Swedish Partnership Act, Chapter 3, section 3.

Registered partners could neither jointly adopt a child adopt as step-parents, these

forms being only open to married couples (Savolainen, 2003, page 36).[5]

1999 Banning of workplace discrimination based on sexual orientation. An Ombudsman office is introduced. This law strengthened the 1987 law banning discrimination based on sexual orientation.

2003 The 2002-adoption law gave registered partners the right to adopt jointly or as step-parents.[6]

In Sweden, married couples can only adopt jointly, and for a man and a woman to adopt as a couple, they have to be married. Likewise, following the 2002-adoption law, same-sex couples in a partnership can only adopt jointly. Since some countries do not allow adoption by same-sex couples, the 2002-adoption law may be an impediment to partnership entry. Children available for adoption are limited. Therefore, the right to adopt as a step-parent may be the empirically more relevant right. Moreover, this right is more likely to be of use to lesbian than gay couples.

Consider a lesbian couple where one of the women is pregnant. The other woman could adopt her step child. Granted, the father of the child would need to relinquish his parental rights but that could be sidestepped if the mother declared the father unknown. Interestingly, the possibility of one woman bearing a child by an unknown father and raising it jointly with her partner precedes the law. Thus, any effects of partnership combined with this legal right on fertility would be testimony to the importance of the designation of parental rights.

For men, these rights are likely less consequential. If they had a child (say from a previous marriage), the mother would need to surrender her parental rights for a step-parent adoption to take place. Note that paternity presumption makes the spouse of the wife a parent, not the spouse of a husband. In other words, a married man who acknowledges paternity of a child born to a woman that is not his wife does not make the wife a mother.

These adoption rights allow partnership to be potentially at par with marriage. However, unlike marriage, it is an add-on requiring both partners' consent. (If same-sex partners are both legal parents, they have joint custody during partnership, and this is also the default custody arrangement on dissolution of the partnership.)

2003 The cohabitation law (sambo-lag) makes the joint residence communal property and in 2003 it was extended to same-sex couples. However, since there is no court-verifiable action that designates a couple as co-habitants, the protection offered by this law is weak. For opposite-sex couples, the focal event is the birth of a child where both partners are listed on the birth certificate and under the same address. For same-sex couples, there is no similar event since joint parenthood is predicated on partnership.

When unmarried parents separate, the default custody arrangement is for the mother to retain sole custody.

[5] `http://www.notisum.se/rnp/sls/lag/19941117.HTM`, `http://www.regeringen.se/sb/d/1522/a/17834`
[6] `http://www.adoptionpolicy.org/pdf/eu-sweden.pdf`

2005, July 1 Women in a partnership gain the right to artificial insemination or IVF treatment through the national health care system, a right previously reserved to married or cohabiting women (single women are still denied).

2009, November 1 Although outside our sample period, in 2009 same-sex marriage replaced same-sex partnership. Couples in same-sex partnership can convert their partnership into same-sex marriage (or remain in the partnership). The change from partnership to marriage was mainly cosmetic as the chief additional right was the right to marry in the "Svenska Kyrkan" [`http://www.rfsl.se/?p=420`]. The Swedish Church used to be the State Church of Sweden, and remains the dominant religious institution. Thereby, the blessings, tradition, liturgy, and venues administered by the Swedish Church were made available to same-sex couples. Paternity presumption remains excluded from same-sex marriage.

3 Data and Descriptive Statistics

We use data from LISA (Longitudinal Integration Database for Health Insurance and Labour Market Studies), a register-based longitudinal database developed by Statistics Sweden. Coverage is universal and includes demographic characteristics, labor market characteristics, and use of social benefits. Our analysis data set covers the period 1994 to 2007. In order to compare labor market outcomes before and after entry into partnership or marriage, we restrict the sample to individuals who entered partnership or marriage in the period 1995-2006.

All individuals who have entered a registered partnership are defined as homosexual and all opposite-sex couples who have entered marriage are defined as heterosexuals, following Ahmed and Hammarstedt (2010); Ahmed et al. (2011, 2013).

We are interested in the effect of partnership entry and arguably entry into first marriage corresponds most closely to partnership entry. For greater homogeneity, we also restrict attention to couples for which it is the first union for both. Furthermore, we restrict the sample to couples where both partners were between the ages 20 and 64 at the time of union entry.[7] After these restrictions, our sample consists of 672 female and 709 male homosexual couples, and 267,264 heterosexual couples. The panel is not completely balanced but the vast majority of couples were observed for all years (1994 to 2007).

We focus on the following labor market outcomes: individual and couple annual labor earnings, within-couple earnings differential, and the number of coresiding children. Annual labor earnings comprise earnings from wage employment and self-employment as well as other work-related benefits.

Figure 1 shows the number of heterosexual and homosexual marriages by year of union entry for our sample. The number of gay partnerships averages between 50-75 per year, except for the first year (1995) in which 127 gay couples entered partnership. Lesbian partnership, on the other hand, did not spike in the first year. Instead it is flat at around

[7] Retirement is mandatory at age 65. Employment beyond that is at the employers discretion, extensions are easy for the first two years. The self-employed are exempt.

40 per year until 2000, after which there is a steady increase. In the last year for partnership entry for our sample, 2006, about 120 lesbian couples entered partnership. The difference in pent-up demand for legal union status between gays and lesbians is intriguing. Can it be that men marry for retrospective reasons more than women, and if so, why? One possibility is that gays enter partnership for income pooling and estate planning, whereas lesbians are drawn to registered partnership for the joint parenting possibility, a motive that, at least viewed from the perspective of the daily juggle, loses its relevance once children are grown.

The shaded areas show the years of parliamentary legislation against workplace discrimination based on sexual orientation (enacted in 1998) and the right to adopt jointly or as a step-parent (enacted in 2002).[8] Partnership entry is a public act that reveals sexual orientation and in principle the 1998 law offering greater workplace protection could have encouraged partnership entry. However, no such response is evident in Figure 1. It is possible that the law was toothless. Alternatively, work place discrimination may have been negligible or irrelevant for the partnership decision.

Whether the 2002-adoption law enabling joint- or step-adoption boosted partnership entry by lesbians can be debated, but we see in that year that the number of lesbian partnerships overtakes the number of gay partnerships and the gap widens every year thenceforth. We also present the number of heterosexual marriages (right scale) for reference, and the most noteworthy feature is a spike in 2000. We are not aware of any particular event directly linked to family formation that can explain this increase in marriages. The spike may simply be related to salience attached to the number "2000" (e.g., see Ohlsson-Wijk (2014)).

3.1 Descriptive Statistics

Tables 1 and 2 present descriptive statistics for our samples. Homosexuals in our sample are older (due to sample construction and older age at union entry) by three years for women and nine years for men, with an average age for lesbians of 34 years and 42 years for gays. Homosexuals earn more than the heterosexuals in our sample, not surprising given the age and education differences. Whereas 42 percent of heterosexual women have a college degree, this is true of 52 percent of lesbian women. The numbers for men are 37 and 47 percent respectively. These findings remind us that by conditioning on partnership/marriage entry in a country where a high proportion of couples chose informal cohabitation, we are dealing with a (positively) selected sample. The extent to which this is truer of the homosexual sample is hard to ascertain since the underlying population is unknown, but is a conjecture that would be consistent with the literature (M. L. Badgett, Gates, & Maisel, 2008).

As for children, homosexuals have very few children living with them before partnership entry, perhaps unsurprising given that we exclude the previously married. By contrast, heterosexuals have on average "half" a child living with them before marriage. (The average is for all years before marriage, so for instance, if we observed a person for four years before marriage, and a child appears in year three, that would show up as 0.5 children.) The number of children after union entry stays at close to zero for gay men, but increases

[8] Generally, laws take force January 1 the year following enactment.

among the other groups, with the greatest increase among heterosexual couples.

We are also interested in couple-level outcomes. We treat the persons who enter a union in our sample as a couple throughout the period we observe them, although strictly speaking they may not be a couple for the entirety of the period. Table 2 shows couple level characteristics. Joint earnings are highest for gay couples, closely followed by heterosexual couples (after marriage). Lesbian couples have the lowest joint earnings, perhaps unsurprisingly.

The pronounced earnings advantage of homosexual gay couples before union entry (453' SEK vs 326' SEK for heterosexual couples) is attenuated after union entry. There is also a noticeable fall in employment among homosexual couples. Whereas some 86 percent of gay couples were dual earners before union entry, this number falls to 77 percent after union entry. By contrast, the percent dual earners increases among both heterosexuals and lesbians, from 85 to 89 percent among heterosexuals and from 81 to 84 percent among lesbians.

The couple-earnings gap increases on union entry for all types, but is more muted among homosexuals.

Turning to educational sorting, homosexual couples are less assortatively matched, the gap being the greatest for gays with on average almost two years of schooling separating partners compared to 1.3 years among heterosexuals. Union entry does not appear to change that much, which is perhaps unsurprising given that our sample catches people in their 30s and 40s.

While a higher share of married and lesbian couples are dual earners after union entry, there is a pronounced drop among gay households (from 86 to 77 percent).

To control for the effect of time-varying characteristics we now turn to regression analysis to parse the role of union entry. Motivated by the findings of Andersson et al. (2006) who showed substantial differences on observables by the sex composition of the couples (as well as union stability), we choose to estimate our models on gay, lesbian and heterosexual couples respectively rather than pooling our samples.

4 Econometric Analysis

Exploiting panel data for the years 1994-2007 we estimate the within-individual effect of partnership using a model of the form:

$$y_{it} = \beta UNION_{it} + X_{it} + \phi_i + \phi_t + \epsilon_{it} \tag{1}$$

where y_{it} is the outcome variable of interest: individual or couple earnings (logged); within-couple earnings gap (logged); and the number of co-residing children. Thus the unit of observation is either the individual or the couple. We will refer to the pair formed by the two individuals who enter registered partnership or marriage during our study period as a couple, even if they are not a couple for the entire period (before union entry or after union entry because of divorce, the term used by Statistics Sweden for same and opposite sex couples equally). $UNION_{it}$ is a dummy variable that is 1 from the year of union entry and onwards.

The parameter β can be interpreted as the effect of partnership/marriage on the outcome variable. In Sweden, the vast majority of marriages are preceded by cohabitation and therefore marriage or partnership effects likely isolate effects of change in legal status.

X_{it} is a vector of time varying individual or couple characteristics and includes dummy variables for age (average age in the case of a couple), year, county, dummy variables indicating divorce, receipt of disability pension (self, one partner in the couple, both partners in couple), and age>65 (self, one partner in the couple, both partners in couple). The reason for including divorce is that the effects of union entry may conceivably extend beyond divorce and therefore we keep couples that divorce in our analysis sample, but at the same time there are fewer reasons to expect specialization following divorce. A reason for including disability pension is that it clearly affects earnings, and the same can be said for reaching the retirement age of 65 (retirement in Sweden is mandatory).

In our preliminary analysis, we also included education as a control variable (despite it being potentially endogenous) but we present results without controlling for education because changes were small and its inclusion had minimal impact on results.

The presence of children, on the other hand, changed significantly on union entry and therefore we present results with and without controlling for children. Heterogeneity across individuals (couples) is captured by individual (couple) fixed effects, ϕ_i. Year specific effects, ϕ_t, capture the earnings growth common to all individuals (households).

To allow for within-individual (couple) correlation, we cluster the error term ϵ_{it} at the individual (couple) level.

Union entry is, at least in the case of marriage, a decision that is often many years in the making, preceded not only by an engagement but in many cases cohabitation and to a lesser extent joint children. To drill down on the question of dynamics surrounding union entry, for earnings we estimate a version of Equation 1 that allows for both lead and lag effects of union entry:

$$y_{it} = \sum_{k=-3}^{3+} \beta_k UNION_{i,t,k} + X_{it} + \phi_i + \phi_t + \epsilon_{it} \tag{2}$$

where $UNION_{i,t,k} = 1$ if period t is k years from the year of union entry and 0 otherwise. The reference period is four years or more before union entry. Years three and higher are treated as one group (3+).

For fertility outcomes we are also interested in the possibility of the 2002-adoption law affecting fertility for same-sex couples, lesbians in particular. To that end, we include an interaction term allowing for a differential effect after the 2002-adoption law, but to keep the specification tractable drop lead effects. That is, we estimate a regression model of the form:

$$y_{it} = \sum_{k=0}^{3+} (\beta_k + \gamma_k \mathbf{1}(t > 2002)) UNION_{i,t,k} + X_{it} + \phi_i + \phi_t + \epsilon_{it} \tag{3}$$

where y_{it} is the number of children living with the couple, and $\mathbf{1}(t > 2002) = 1$ if $t > 2002$ and 0 otherwise. Again, the reference period is the year before union entry; years three and higher are treated as one group (3+).

4.1 Earnings

Table 3 shows the results from estimating Equations 1 and 2 for (log) individual earnings. Unlike the raw before and after difference, we see that union entry does not have a positive effect and for heterosexual women and gays, the negative effect is statistically as well as economically significant at 16 and 12 percent earnings reduction (panel A). Controlling for the number of children attenuates the effect for heterosexual women but the 12 percent negative effect for homosexual men remains, which is perhaps unsurprising given the low presence of children among this group (panel B).

Panel C shows the results from estimating lag and lead effects per Equation 2. The reference period is 4 years or more before union entry. The results for homosexuals remain largely unchanged, although the negative effect for gays loses statistical significance in this specification. As for heterosexuals, we see a ramp up of male earnings in the years leading into marriage, which may account for the lack of positive marriage premium usually found in the literature. One possibility is that the ramp-up itself can be attributed to anticipated marriage, in which case, we underestimate the marriage premium. Alternatively, the ramp-up may be a response to greater familial responsibilities (children, cohabitation), with the formalization of the union being of little additional significance.

The findings for heterosexual women are qualitatively in line with what has been found in the literature: earnings dip markedly with marriage entry, a reduction that is attenuated once the number of children is controlled for (not reported).

In Table 4 we turn our attention to joint earnings and earnings gap. The unit of observation is the couple and we see that the estimated effect of union entry is negative for all groups, but only statistically significant for heterosexual couples. The latter is perhaps unsurprising given the absence of a positive marriage premium for men and the substantial marriage penalty for women (c.f. Table 3).

For gays, the pronounced decline found for individual earnings is absent once earnings are measured at the couple level, suggesting a high degree of income buffering (or negative sorting). By contrast, among lesbians, the income reduction seen at the individual level is amplified once viewed at the couple level, suggestive of within-couple positively correlated labor market responses to partnership entry. Within-couple earnings gaps change in a direction consistent with this interpretation. Among lesbians, there is a sizeable (but statistically insignificant) reduction in the within-couple earnings gap, whereas among gays there is only a small and highly insignificant effect.

The lack of evidence of specialization among lesbians could be the result of greater similarity pre-partnership. But as seen in the descriptives, that is not the case. Lesbians are if anything less positively matched on education than the men and women in our heterosexual sample. The absence of specialization among lesbians is also noteworthy in view of partnership entry's effect on fertility, the topic we now turn to.

4.2 Children

We now turn to parenthood. As discussed above, the exclusion of paternity presumption from the Partnership Act of 1994 means that the birth of a child to one partner does not

make the other partner a parent and consequently cannot confer any parental rights to that partner. The 2002-adoption law, however, allowed registered partners joint or step-child adoption. This right may have been of little practical importance for gay couples since a child is still required. While a man may father a child and be the legal father, the child would in the vast majority of cases have a legal mother who would have to surrender her parental rights in favor of the father's partner in order for an adoption to take place. The child of an unmarried woman, however, is by default fatherless and Swedish praxis is to not pursue positive paternity claims (cases pressed by men). Thus, an unmarried woman who declared the father unknown would be the sole legal parent and custodian. With the possibility of partners to jointly adopt, she also has the capacity to bestow parenthood on her partner (in a registered partnership).

Thus, one reason for analyzing the fertility response of partnership, especially after the 2002-adoption law, is that it may help unpack the demand for registered partnership. Fertility response to partnership may also help clarify the channels through which partnership impacted earnings for men and women in partnerships.

We now turn to children raised by the couple. Unfortunately, we do not have natality data. Instead, we use information on the number of co-residing children under the age of 18 (a number that can change in either direction, aging and moving out are the most important drivers of reductions). For brevity, we will refer to this measure as fertility, although strictly speaking it is not. We are particularly interested in investigating any fertility effects of the 2002 law that allowed for joint or step-parent adoption by individuals in registered partnership.

The results are presented in Table 5. Column 1 presents results from estimating a version of Equation 3 where we focus on children that follow union entry (that is, we ignore lead effects and the reference period is the time before union entry). We see a clear fertility effect of partnership on lesbians (panel A) but none among gays (panel B).

We next turn attention to the importance of the 2002-adoption law allowing joint- or step-adoption by same-sex couples. Column 2 presents results allowing for a trend-break reflecting this law.

For women (panel A, Column 2) there is a strong and positive fertility effect after 2002.

Columns 3 and 4 present the analogue results for heterosexual couples and we see that while fertility also increased for heterosexual women after 2002, the effects were much more modest. The pronounced effect of the 2002-adoption law change among lesbian women is interesting and points to an important role of legal parenthood for fertility decisions. Also, recall that lesbian partnership has been rising faster than gay partnership, with 2003 marking the year women overtook men (Figure 1).

For gays, Columns 1 and 2, partnership is if anything associated with a (small) reduction in the number of children, possibly reflecting gay men being almost 10 years older than heterosexual men and consistent with registered partnership being entered into for reasons other than joint parenting.

In sum, we see strong fertility effects of partnership entry among lesbians: for the first 3 years (years 0-2), these effects are stronger than for heterosexual women once same-sex joint adoption is allowed. The stronger effect is consistent with registered partnership

being a legally more enabling contract with respect to parental rights for same-sex couples than marriage is for opposite sex couples. A man and a woman seeking joint parental rights without marriage can achieve that without marriage (through paternity and custody assignment).

4.3 Other

There may also be less tangible benefits from social recognition of union status. Homosexual individuals have been identified as suffering worse health outcomes (Herrell et al., 1999; Cochran, 2001; Gilman et al., 2001; Sandfort, Graaf, Bijl, & Schnabel, 2001).

While our data are not particularly suited to look at mental or physical health outcomes, we have information on uptake of unemployment, disability and sickness benefits. Estimating Equation 1 with unemployment or disability pension as the left-hand side variable, we find no effects for homosexuals (but slight negative effects for heterosexuals).[9] These are crude measures of mental or physical health but taken at face value do not suggest health benefits of partnership.

5 Conclusion

Whether to allow same-sex couples to enter marriage-like legal unions is a contested issue currently on the legislative agenda of a number of countries and U.S. states. Despite the heated debate, the need for such unions is rarely articulated. Rather, it is often assumed that the benefits of marriage would carry over to the same-sex setting. In this paper, we have exploited legal reforms in Sweden to study the impact of an extension of rights to same-sex couples. In 1994, the Swedish parliament passed the Registered Partnership Act that gave same-sex couples entering registered partnership the same rights and obligations of marriage except in one sphere: joint parenting. Paternity presumption, the keystone of marriage, was carved out. Furthermore, joint parenthood through adoption was not included. A step towards joint legal parenthood was taken with the enactment in 2002 of an adoption law enabling joint- or step-child adoption to those in registered partnership.

Using registration data, we have created a panel of all individuals who enter registered partnership in the period 1995-2006 and studied their earnings and fertility outcomes. As a point of comparison, we have also created a similar panel of individuals who enter marriage in the same period. Our analysis sample thus contains men and women who entered either partnership or marriage and the effect of union entry is measured using a before-and-after comparison controlling for time varying characteristics, notably age.

We find registered partnership to be important to both gays and lesbians, but for distinctly different reasons. The overhang of gay couples entering partnerships in the first year allowed, the reduction in the combined earnings and the couple-earnings gap, and the virtual absence of children before and after union entry suggest that the main function of registered partnership for gays is resource pooling.

[9] Not reported, available from the authors on request.

For lesbians, on the other hand, the right to joint or step-parent adoption allowed in 2002 raised fertility and possibly entry into partnership. Although the trend precedes the 2002 law, 2002 marks the year more women than men enter registered partnership, and the gap has continued to widen. These findings underscore both the centrality of the woman for family formation and the importance of legal parenthood. Thus, for lesbians, – low initial uptake, the decrease in combined earnings and narrowing of the couple-earnings gap, and fertility effects of union entry comparable to heterosexual couples especially after the 2002 reform – point to registered partnership being an important vehicle for family formation.

The lack of specialization among lesbians is largely consistent with the literature that has found same-sex couples to be less traditional in their division of labor than opposite-sex married couples (e.g., Grossbard and Jepsen (2008); Rothblum (2009)). However, it is at odds with those of Dillender (Forthcoming) who found access to legal marriage to lead to more single earner families among female same-sex couples. The explanations of the different findings may lie in institutional differences in the respective countries. Unlike the U.S., Sweden has universal health insurance coverage. Another difference is that childcare is highly subsidized and all but universal once the child reaches age one. Before that, generous parental leave policies enable parents to stay home. While these are policies that apply to same- and opposite sex couples alike, they have contributed to making housewife status highly optional.

The lack of specialization among lesbians is noteworthy given that they have children and are less positively assortatively matched (on education) than heterosexual couples. This finding casts new light on the source of the earnings divergence typically observed among heterosexual couples and routinely attributed to the woman specializing in household work. The different findings for lesbian partners and married couples are consistent with men paying women for the ability to bear children. Among lesbian couples, the basis for such payment is undermined by the fact that both partners embody that capability.

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Figures

Tables

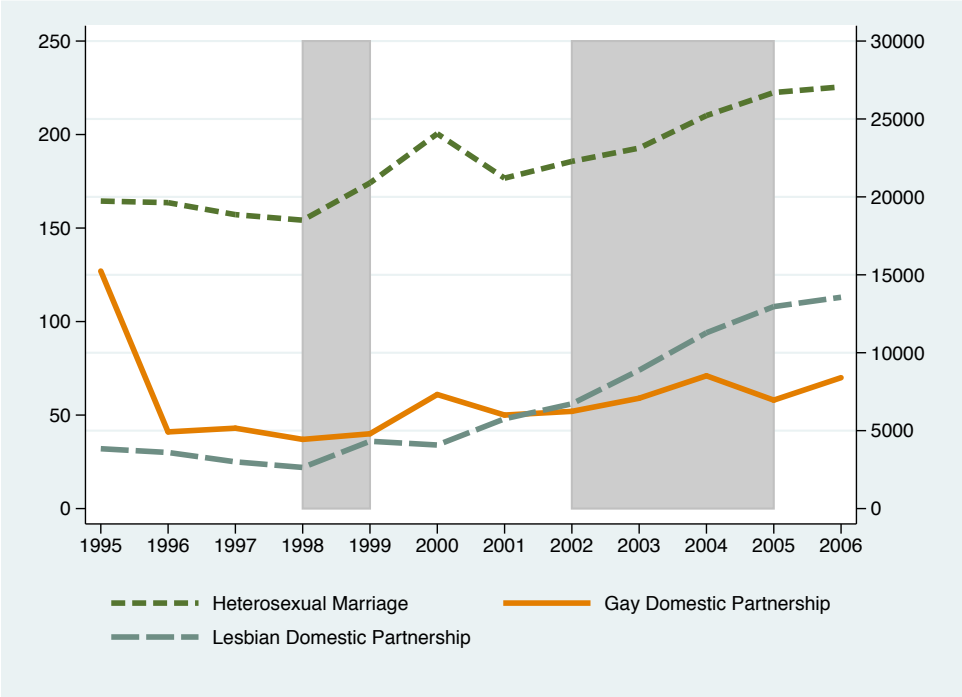

Figure 1: Union Entry, by Year

Notes: In-sample year of union entry. These numbers differ from official statistics because of the sample restrictions we have imposed.

Table 1: Characteristics of Individuals Entering Marriage or Partnership in Sweden 1994-2007

	Female		Male	
	Homosexual	Heterosexual	Homosexual	Heterosexual
Labor earnings[a]				
before union[b]	148.99	127.48	226.45	199.02
after union	228.15	193.61	267.18	320.69
Labor earnings>0, %				
before union	89	90	92	93
after union	90	92	86	96
Parental leave uptake, %				
before union	4	26	0	20
after union	20	67	1	56
Age	33.61	30.52	41.74	32.61
Metropolitan	60	41	74	41
Primary school	12	10	13	11
Secondary school	36	48	39	52
University degree	52	42	47	37
Unknown	0	0	1	
Years of schooling				
before union	12.71	12.39	12.59	12.31
after union	13.38	13.11	13.10	12.73
Number of children				
before union	0.06	0.51	0.01	0.45
after union	0.36	1.61	0	1.56
N individuals	1,418	267,264	1,344	267,264

[a] – Annual 2007 Swedish Krona (SEK) '000.

[b] – Registered partnership of marriage.

The variables are averaged across all years 1994-2007.

Table 2: Couple Characteristics of Individuals Entering Marriage or Partnership in Sweden 1994-2007

	Homosexuals		Heterosexuals
	Females	Males	
Couple earnings[a]			
before union[b]	298	452.89	326.5
after union	456.3	534.37	514.3
Couple earnings gap			
before union	98	144.2	113.15
after union	125.7	174.34	169.72
Dual earner, %			
before union	81	86	85
after union	84	77	89
Couple schooling gap (years)			
before union	1.48	1.97	1.29
after union	1.36	1.85	1.31
N couples	672	709	267,264

[a] – Annual 2007 Swedish Krona (SEK) '000.

[b] – Registered partnership of marriage.

Table 3: Individual Earnings Effects of Partnership or Marriage Entry

	Female		Male	
	Homosexual	Heterosexual	Homosexual	Heterosexual
	Not controlling for number of children			
Union[a]	-0.0246	-0.1577***	-0.1161**	-0.0024
	(0.0625)	(0.0042)	(0.0525)	(0.0033)
Adj-R^2	0.201	0.167	0.205	0.220
	Controlling for number of children			
	-0.0026	-0.0806***	-0.1167**	0.0004
	(0.0634)	(0.0041)	(0.0524)	(0.0033)
Adj-R^2	0.201	0.183	0.205	0.220
	Leads and Lags, reference period: 4+ years before union			
Union, years since				
-3	0.0437	0.0226***	0.0757	0.0496***
	(0.0635)	(0.0046)	(0.0563)	(0.0039)
-2	0.0686	0.0242***	0.0779	0.0658***
	(0.0790)	(0.0055)	(0.0710)	(0.0046)
-1	0.1339	-0.0019	0.0091	0.0840***
	(0.0888)	(0.0062)	(0.0795)	(0.0052)
0	0.1143	-0.0517***	-0.0399	0.0831***
	(0.1034)	(0.0070)	(0.0902)	(0.0057)
1	0.0679	-0.1559***	-0.0914	0.0613***
	(0.1157)	(0.0077)	(0.0995)	(0.0063)
2	-0.0264	-0.2967***	-0.1045	0.0378***
	(0.1353)	(0.0088)	(0.1126)	(0.0071)
3+	-0.0529	-0.3346***	-0.1964	-0.0038
	(0.1526)	(0.0101)	(0.1304)	(0.0085)
Adj-R^2	0.202	0.169	0.205	0.220
Observations	17860	3609338	18498	3609338

[a] – Marriage or partnership.

Standard errors in parentheses. All regressions include individual fixed effects, dummy variables for age, year, county, and dummy variables indicating legally separated, receipt of disability pension, and age>65. Standard errors are clustered at the individual level. * p<0.10, ** p<0.05, *** p<0.01

Table 4: Couple Earnings Effects of Partnership or Marriage

	Homosexuals		Heterosexuals
	Females	Males	
	Joint Earnings		
	w/o controls for number of children		
Union[a]	-0.0703	-0.0075	-0.0365***
	(0.0575)	(0.0377)	(0.0021)
Adj-R^2	0.275	0.295	0.333
	w/ controls for number of children		
Union	-0.0623	-0.0075	-0.0160***
	(0.0573)	(0.0377)	(0.0021)
Adj-R^2	0.275	0.295	0.336
	Earnings Gap		
	w/o controls for number of children		
Union	-0.0742	0.0132	0.0318***
	(0.0662)	(0.0540)	(0.0027)
Adj-R^2	0.067	0.119	0.104
	w/ controls for number of children		
Union	-0.1019	0.0138	-0.0004
	(0.0656)	(0.0541)	(0.0027)
Adj-R^2	0.068	0.120	0.109
Observations	8,930	9,249	3,609,338

[a] – Marriage or partnership.

Standard errors in parentheses All regressions include couple fixed effects, couple average age, year, county, and dummy variables indicating divorce, receipt of disability pension (one partner, both), and age>65 (one partner, both). Standard errors are clustered at the couple level.

* p<0.10, ** p<0.05, *** p<0.01.

Notes to Table 5.

[a] – Marriage or partnership.

All regressions include individual fixed effects, dummy variables for age, year, county, and dummy variables indicating legally separated, receipt of disability pension, and age>65. Standard errors are clustered at the individual level.

Standard errors in parentheses. * p<0.10, ** p<0.05, *** p<0.01.

Table 5: Fertility Effects

	Homosexual		Heterosexual	
		Year >2002		Year >2002
	Women			
Years since Union[a]				
0	0.1522***	0.1543***	0.0497***	0.0503***
	(0.0136)	(0.0182)	(0.0012)	(0.0015)
1	0.2114***	0.1932***	0.2066***	0.2148***
	(0.0160)	(0.0213)	(0.0016)	(0.0019)
2	0.2722***	0.2337***	0.3112***	0.3197***
	(0.0203)	(0.0251)	(0.0020)	(0.0022)
3+	0.3597***	0.3109***	0.4996***	0.4753***
	(0.0257)	(0.0255)	(0.0026)	(0.0025)
Years×I(Year>2002)				
0		0.0245		0.0179***
		(0.0227)		(0.0020)
1		0.0613***		0.0046*
		(0.0237)		(0.0024)
2		0.0937***		0.0071**
		(0.0255)		(0.0028)
3+		0.0998***		0.0613***
		(0.0212)		(0.0027)
Observations	17860	17860	3609338	3609338
Adj-R^2	0.246	0.247	0.552	0.552
	Men			
Years				
0	0.0010	-0.0019	0.1238***	0.1265***
	(0.0030)	(0.0028)	(0.0014)	(0.0017)
1	-0.0026	-0.0051*	0.2836***	0.2933***
	(0.0033)	(0.0031)	(0.0018)	(0.0022)
2	-0.0055*	-0.0063*	0.3890***	0.3979***
	(0.0033)	(0.0035)	(0.0022)	(0.0025)
3+	-0.0010	-0.0017	0.5680***	0.5539***
	(0.0044)	(0.0042)	(0.0028)	(0.0027)
Years×I(Year>2002)				
0		0.0093		0.0032
		(0.0066)		(0.0024)
1		0.0071		-0.0094***
		(0.0055)		(0.0027)
2		0.0033		-0.0056*
		(0.0038)		(0.0031)
3+		0.0026		0.0339***
		(0.0034)		(0.0030)
Observations	18498	18498	3609338	3609338
Adj-R^2	0.005	0.005	0.506	0.506

Notes on separate page.