Domestic partnership for what? Evidence from Sweden
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Lina Aldén, Lena Edlund, Mats Hammarstedt
and Michael Mueller-Smith*

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*Aldén: Linnaeus University Centre for Labour Market and Discrimination Studies (email: lina.alden@lnu.edu); Edlund: Department of Economics, Columbia University (email: le93@columbia.edu); Hammarstedt: Linnaeus University Centre for Labour Market and Discrimination Studies, (email: mats.hammarstedt@lnu.edu); Mueller-Smith: Department of Economics, Columbia University (email: mgm2146@columbia.edu). Lena Edlund is the corresponding author. The authors would like to thank the participants at the Workshop on Topics in Labor Economics in Växjö in May 2013 for their comments.
Abstract

Same-sex marriage is a topical but contested issue. While marriage benefits are often assumed to translate to the same-sex context, their nature are rarely articulated or studied. Sweden introduced Registered Partnership for same-sex couples in 1994. Using Swedish administrative data to create individual panel data, we find that for women, partnership facilitated parenthood and earnings converged and increased on partnership. For males, fertility effects were slight while earnings converged and decreased. These findings highlight the importance of biological and legal restrictions on parenthood, the role of income pooling, and the rationale for household specialization commonly observed among heterosexuals.

Keywords: Same-sex partnership, marriage premium, paternity presumption.

JEL: J12, J16, K36
In 1989, Denmark became the first country to recognize same-sex unions. Since then, some 30 countries have followed suit. France is the latest country to allow same-sex marriage, a topic currently on the legislative agenda of a number of US states. What rights and protections to be afforded homosexuals, individually or as a family, is an ongoing debate. Advocates invoke equality and fairness, even human rights. Opponents see a threat to the traditional family and, by extension, society (Chamie and Mirkin, 2011).

Despite the heated rhetoric and the topicality of the issue, few studies have formally considered the purpose of same-sex marriage. While marriage is commonly considered a desirable status conferring distinct advantages, including higher productivity for men, e.g., Waite (1995), it is unclear whether and to what extent these benefits carry over to a same-sex setting.

Would gay couples behave like two husbands, or two wives, or neither? While a seemingly flippant question, same-sex marriage tests “One of family law’s most venerable doctrines, the presumption of legitimacy” Appleton (2006, p. 228). This presumption, henceforth paternity presumption, may in fact have formed the definition of marriage (Posner, 1992). Paternity presumption makes the husband of a woman who gives birth to a child the presumed father and gives him custodial rights. Paternity presumption also disqualifies any other men from claiming paternity regardless of biological paternity.\textsuperscript{1}

Paternity presumption is not sex neutral. If a married woman has a child, the presumed other parent is her spouse. If a married man has a child, the presumed other parent is not his spouse; the presumed other parent is the

\textsuperscript{1}For instance, see Michael H v. Gerald D., 491 U.S. 110 (1989).
woman who gave birth to the child – another venerable doctrine of family law (Edlund, 2006). Thus, how paternity presumption would translate to a same-sex setting is not clear.

In this study, we look at the Swedish Partnership Act of 1994 (effective January 1, 1995) which allowed same-sex couples to enter into registered partnership (henceforth, partnership). In view of the challenges same-sex couples face regarding legal and biological parenthood and the apparent specialization in market and non-market work that is often observed among heterosexual couples, we focus our study on fertility and labor market outcomes. This interest makes heterosexual couples a natural reference point and we will therefore include them in our analysis.

We use Swedish administrative data covering the period 1994-2007 allowing us to identify and follow all individuals who entered partnership or marriage during that period. Our data include information from the tax authorities, notably information on earnings and parental leave uptake.

Our empirical strategy is to compare outcomes before and after entry into partnership controlling for individual fixed effects so that the person serves as his or her own control group. We do this partly out of necessity. An individual is identified as a homosexual from entry into partnership. While we can construct a group of single homosexuals, everybody in this group eventually enters partnership by construction. Therefore, a within-person comparison is only feasible for our estimate of the effect of partnership.

By exploiting longitudinal data we avoid the problem of selection into partnership (or marriage) that arises in cross-sectional comparisons. However, the possibility that union entry is timed to coincide with other life
changes should be born in mind. For instance, 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 marriage was timed to coincide with a downshift in labor market attachment because of, e.g., parenthood or retirement. In either case, whether the effect should be attributed to marriage or not depends on its centrality to subsequent events. The current social and legal situation is one of marriage being neither pivotal nor incidental. While the social significance of marriage is downplayed in Swedish contemporary culture and more than 50 percent of births are to unmarried mothers, it is still that case that marriage both has legal consequences and social cache.

As mentioned, paternity presumption poses a legally thorny issue. One possibility is for the “female” version of paternity presumption to apply to men and women in same-sex partnership. That is, if one person in a partnership becomes a parent, the other person is also made a parent. This rule would create the hitherto unusual situation of a child having three legal parents.\textsuperscript{2} A second possibility is to preserve the sex-asymmetric feature of paternity presumption and apply it to women only. Such a rule would not create a third-parent problem since for a partnered woman there is no presumed other parent. A third possibility is to exclude paternity presumption from same-sex legal unions.

That was the route taken by Swedish legislators. While expedient, such a carve-out leaves the institution of registered partnership short of a key

\textsuperscript{2}Biological implausibility is not an absolute bar to legal parent-child relationships. For instance, family law accommodates international adoptions, arrangements which routinely result in “biologically implausible” families. However, thus far, family law has insisted on recognizing no more than two legal parents.
feature of the marriage contract. In 2002, a step towards bridging the gap between partnership and marriage was taken when the right to joint or step-child adoption of children by same-sex couples in a partnership was passed in parliament.

We find partnership entry to herald changes to both labor market and fertility outcomes. Following the 2002 right to joint or step-parent adoption (if in a partnership), we see both a noticeable increase in lesbian partnership and fertility among lesbians in partnership. The possibility of one woman bearing a child by an unknown father and raising it jointly with her partner precedes the law. Thus, our findings pointing to the importance of legal regulation of the parent-child relationship. There is also a statistically significant, but small, effect for homosexual men post-2002.

Turning to earnings, instead of evidence of specialization, we find earnings to convergence. This finding holds for both homosexual men and women, but is particularly noteworthy in the case of women in view of our fertility findings. The other notable finding is a substantive decline in earnings among homosexual men. One interpretation is that the income pooling entailed by partnership affords gay men more, and more joint, leisure.

A back of the envelop calculation yields that for a couple who entered partnership in 2001 (the middle of our sample period): gay partnership entailed a 17 percent earnings loss but an additional 0.15 additional children; lesbian partnership entailed a 4 percent earnings gain but an additional 0.6 children. As a point of reference, our estimates indicate that marriage entailed 3 percent earnings loss but 0.75 additional children;

The remainder of the paper is organized as follows. Section 1 provides
a literature review, a brief discussion of possible channels and institution background. Section 2 describes our data. Section 3 considers the individual and couple responses to union entry. Section 4 concludes.

1 Background

The literature on consequences of entry into a legally sanctioned same-sex union is scarce and to the best of our knowledge, we are the first to study its the impact on labor market and fertility outcomes. 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 and Neumark, 1991; Cornwell and Rupert, 1997; Ginther and Zavodny, 2001; Krashinsky, 2004; Antonovics and Town, 2004; Dougherty, 2006). To anticipate events, our findings for heterosexual men is in line with Dougherty (2006) who 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 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 Badgett (1995); Klawitter and Flatt (1998); Allegretto and Arthur (2001); Badgett (2001); Clain and Leppel (2001); Carpenter (2004, 2005); Australia, see Carpenter (2008); Europe, see Arabsheibani, Marin
and Wadsworth (2004); the UK, see Arabsheibani, Marin and Wadsworth (2005); the Netherlands, see Plug and Berkhout (2004); Greece, see Drydakis (2011); Sweden, see Ahmed and Hammarstedt (2010); Ahmed, Andersson and Hammarstedt (2011, 2013).

We are obviously not the first to exploit Swedish register data and the introduction of partnership. In addition to the papers cited above, Andersson et al. (2006) studied Swedish and Norwegian same-sex partnerships and found them to be less stable than marital unions.

1.1 Channels

Our study is grounded in the literature on the marriage premium. Specialization in the household is a candidate reason for why marriage would boost men’s productivity (Becker, 1973, 1974, 1981), as is the presence of children.

1.1.1 Household Specialization and Legally Sanctioned Unions

Becker (1973)'s seminal work focussed on a non-marketable good “not marketable or transferable among households, although they may be transferable among members of the same household” produced by the household using time and market goods. Implicitly, time bought in the market place cannot substitute for time provided by a household member, leaving children as the leading candidate for the household good in question. Becker’s theory abstracted from formal marriage and is in principle applicable to homosexual couples, assuming the existence of a child that “may be transferable among members of the same household.”

This brings us to the question of formal marriage. As argued in the intro-
duction, paternity presumption is a defining feature of marriage. The woman who gives birth to a child (regardless of genetic provenance) is the child’s legal mother and, in modern societies, its only legal custodian. Marriage designates her husband as the father, and also vests him with custodial rights. Since these rights have the nature of a private good, marriage amounts to a contract in which rights to children are transferred, from the mother to her husband. Biological fatherhood is not a precondition for paternity assignment and transfer of rights, and thus, this function does not hinge on the sex of the husband, although most marriages have been restricted to couples in which legal fiction is not obviously contradicted (for instance, the husband has to be alive to enter marriage and the marriage dissolves on death).

It is important to note that paternity presumption does not carry over to partnership in Sweden. Since 2003, however, same-sex couples in 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.

1.1.2 Transfer of Parental Rights

Other than specialization in market work on marriage, another reason marriage may raise male wages or earnings is that marriage entails the transfer of parental rights from the wife to the husband; increased male earnings may be how men pay for these rights. Similarly, an opposite effect on women’s wages or earnings of marriage could follow not from specialization in home production, but from the boost in unearned income.

However, as noted, same-sex partnership in Sweden carve out paternity
presumption. Thus, to the extent that 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 as illustrated by recent events, notably the push for same sex marriage in France and the U.S. Supreme Court ruling mandating federal recognition of same sex unions legally entered into in one of the U.S. states.

1.1.3 Financial Motives/Income Pooling

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

Instead, the main consequence of marriage is mandated resource pooling which provides insurance in addition to redistribution to the financially weaker party. Specifically, the main financial consequences of 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 marriage are community property; (iii) 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 spouse.

As a result, we might expect partnership to result in a reduction in earn-
ings. Income pooling offers insurance and dulls work incentives, potentially reducing the fiscal benefits of same-sex partnership recognition (see, Steven-
son (2012)).

1.1.4 Recognition and Social Acceptance

In addition to the previous motives, advocates of same-sex marriage argue that it provides a specific non-pecuniary benefit to homosexual couples as the availability of state-sanctioned marital contract signifies implicit societal approval. This legal acknowledgment of ongoing commitment may translate into broad social acceptance of homosexual unions among friends, family and coworkers. Advocates of this idea focus on the importance of common institutions (i.e., marriage not civil union) in order to strengthen the idea that homosexual relationships are no different from heterosexual relationships.

Thus, partnership entry may boost mental and physical health and to the extent allowed by our data, we shall look into this question. To anticipate events, we find no evidence in the administrative benefits data suggesting an affect of partnership on health – which is not to say there are no health benefits, simply that they do not manifest in the use of public benefits.

1.2 Institutional Background

We analyze Swedish administrative data spanning 1994-2007, a period during which several gay rights, detailed below, were extended. The year in bold-
face indicates the year the law takes effect.

1995 The Partnership Act of 1994 takes 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 in the Swedish Partnership Act, Chapter 3, section 3.

Registered partners could neither jointly adopt a child, nor were step-child adoption open, these forms being only open to married couples (Savolainen, 2003, page 36).\(^3\)

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 In 2003, same-sex couples in partnership gained the right to adopt jointly or as a step-parent (enacted in 2002).\(^4\)

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, fol-

\(^3\)http://www.notisum.se/rnp/sls/lag/19941117.HTM, http://www.regeringen.se/sb/d/1522/a/17834
\(^4\)http://www.adooptionpolicy.org/pdf/eu-sweden.pdf
lowing the 2002-law, same-sex couples in a partnership can only adopt jointly. Since some countries do not allow adoption by same-sex couples, the 2002 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 side-stepped 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 not his wife does not make his wife a mother.

These adoption rights allows 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 cus-
2003  The cohabitation-law [sambo-lag] applies to same-sex couple. This law makes the joint residence communal property. However, since there is no court-verifiable action that designates a couple as cohabitants, 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 conditional on partnership.

When unmarried parents separate, the default custody arrangement is mother only.

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  Although outside our sample period, for completeness we also mention that 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 “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.

2 Data and Descriptive Statistics

We use data from the register-based longitudinal data base LISA (Longitudinal Integration Database for Health Insurance and Labour Market Studies) developed by Statistics Sweden. LISA contains information on everyone in Sweden, 16 years and older, and his or her demographic characteristics, labor market characteristics, and use of social benefits. In the analysis we use data for the years 1994 to 2007. In order to compare labor market outcomes before and after entry into partnership or marriage, we restrict the sample to individuals with observations at least one year before and one year after union entry. We restrict our sample to individuals entering partnership or marriage in the period 1995-2006.

All individuals who have entered a civil union are defined as homosexual and all opposite-sex couples who have entered marriage or domestic partnership are defined as heterosexuals, following Ahmed and Hammarstedt (2010); Ahmed, Andersson and Hammarstedt (2011, 2013).

We are interested in the effect of partnership entry and arguably entry into first marriage corresponds most closely to partnership entry. Therefore, for heterosexuals, we restrict the sample to those previously unmarried. Furthermore, we restrict our sample to couples where both partners were between the ages 20 and 64 at the time of union entry.\(^5\) After these selections

\(^5\)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.
the total sample consists of 1,813 (900 male and 913 female) homosexual couples, and 267,264 heterosexual couples. Although the panel is not completely balanced the vast majority of the individuals are observed for all years from 1994 to 2007.

We focus on the following labor market outcomes: individual and household annual labor earnings, within-couple earnings differential, and uptake of parental leave. Annual labor earnings comprise earnings from wage employment and self-employment as well as other work-related benefits, notably parental leave. An individual is defined to have taken parental leave if the “registered parent’s allowance” is greater than zero.

Figure 1 shows the number of heterosexual and homosexual marriages over our sample period. The number of gay partnership averages between 50-75 per year, except for the first year (1995) in which 170 gay couples entered partnership. Lesbian partnership, on the other hand, did not spike in the first year. Instead it is flat at around 50 per year until 2000, after which there is a steady increase. In the penultimate year of our sample period, 2006, about 150 lesbian couples entered partnership. The shaded areas show the years the parliament legislates against workplace discrimination based on sexual orientation (enacted in 1998) and the right to adopt jointly or as step-parent (enacted in 2002). 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

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6 Generally, laws take force January 1 the year following enactment.
irrelevant for the partnership decision. By contrast, the 2002 law enabling joint- or step-adoption appears to have had an effect on partnership entry by lesbians. In 2002, the number of lesbian partnerships overtake the number of gay partnerships and rises 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.”

2.1 Descriptive Statistics

Descriptive statistics at the individual level are in Table 1. Starting with males, gay males are older, better educated, and significantly more likely to reside in metropolitan areas than heterosexual males. The higher educational attainment of homosexual men may partly be due to positive selection into partnership, cf. Badgett, Gates and Maisel (2008). Twelve percent of the homosexual men were previously married. (By sample construction, none of the heterosexual men and women were previously married.)

Similar demographic differences are evident between homosexual and heterosexual women, although the age and location differentials are less pronounced. A full 50 percent of lesbian women have a university degree, compared to 42 percent of heterosexual women. Fifteen percent of the homosexual women were previously married.

These results have been documented in Ahmed and Hammarstedt (2010) and Ahmed, Andersson and Hammarstedt (2011).
Table 1 also presents descriptive statistics on labor market outcomes before and after union entry. All groups show significantly higher earnings after union entry. The increase is the smallest for gay men, but they are also older and therefore at a flatter portion of their age-earnings profile. Turning to the share with positive labor earnings, gay men stand out in that there is a seven percentage point drop in this metric following partnership entry.

As for uptake of parental leave (a strong indicator of parenthood for both men and women in Sweden), the likelihood of parental-leave uptake more than doubles for heterosexual men on marriage (from 20 to 56 percent) but barely moves for homosexual men, staying close to zero percent. For heterosexual women, the increase is similar to their spouses in percentage terms, while 26 percent had taken parental leave before marriage, 67 percent did so after marriage for the years in our sample (one reason fewer married men have non-zero parental leave than married women is that the leave does not need to be taken in the child’s first year, and fathers typically take the leave later than mothers). It is noteworthy that relatively few homosexual women had taken parental leave before entry into partnership (7 percent), a number that more than doubles following partnership (17 percent).

We are also interested in household-level outcomes. Table 2 shows descriptive statistics at the couple level. Gay couples have the highest annual combined earnings and lesbian couples the lowest. Household earnings are higher following union entry for heterosexual and female homosexual couples. Earnings differentials increase on union entry for all types of couples, but is more muted among homosexual couples. 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 76 percent).

3 Econometric Analysis

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

\[ y_{it} = \gamma_1 UNION_{it} + \gamma_2 PARTNERSHIP_{it} + X_{it} + \alpha_i + \beta_t + \epsilon_i \]  

where \( y_{it} \) is the outcome variable of interest (e.g. logged earnings and parental leave). \( UNION_{it} \) takes the value 1 at year \( t \) and all years thereafter if the individual (individuals in the household) was married or in a registered partnership at \( t \) and zero otherwise. \( PARTNERSHIP_{it} \) similarly takes the value 1 at year \( t \) and all years thereafter but only for individuals in registered partnerships (i.e. same-sex couples). The parameter \( \gamma_1 \) can be interpreted as the common effect of partnership and marriage on the outcome variable. The parameter \( \gamma_2 \) shows the specific additional effect of partnership for same-sex couples. To estimate the net effect of registered partnerships for same-sex couples, \( \gamma_1 \) and \( \gamma_2 \) should be added together. In Sweden, the vast majority of marriages are preceded by “marriage-like” cohabitation and as a result the effects of marriage or partnership measured in \( \gamma_1 \) and \( \gamma_2 \) likely isolate the effect of change to legal status.

\( X_{it} \) is a vector of time-varying individual characteristics and includes dummy variables for age, year, county, age-specific time trends, county-specific time trends, dummy variables indicating legally separated, receipt of disability pension, and age>65. Heterogeneity across individuals (house-
holds) is captured by individual fixed effects, \( \alpha_i \). Year specific effects, \( \beta_t \), capture the earnings growth common to all individuals (households).

### 3.1 Earnings

The effects of marriage on individual earnings are in Table 3. The first two columns estimates Equation 1 for women and men respectively and reveal a robust negative marriage premium for heterosexual women of 12 percent and a small but statistically significant marriage premium of 2 percent for heterosexual men. The estimate for men is low but in line with Dougherty (2006) who also used a within-person comparison. Turning to homosexuals, we find a strong (9 percent) positive effect on earnings for women and a strong negative effect for men (16 percent).

In Columns 3 and 4, we divide the sample by within-couple age. Column 3 present the results for the younger partner. Women entering heterosexual marriage as the younger spouse see an 12 percent penalty whereas women entering homosexual partnership gain 5 percent. For men junior to their partner, there is a 3 percent marriage premium. For homosexual men, on the other hand, we estimate a reduction in earnings of 12 percent.

Turning to the older person in the couple, Column 4, the results for heterosexuals are virtually unchanged. In other words, among heterosexual couples, sex not age is the relevant dimension. Turning to homosexuals, being older is associated with an earnings advantage. We estimate a higher partnership premium (10 instead of 5 percent) for lesbians and a lower penalty for gays (10 instead of 12 percent).

In Table 4, we turn our attention to joint earnings and earnings gap. The
unit of observation is the couple. Consistent with our findings for individual earnings, there is a strong negative effect of marriage on combined earnings. In Column 1, the focal person is male and in Column 2 the focal person is female. Turning to homosexual couples, we see a robust decline in joint earnings among men (17 percent) but an increase among women (4 percent). The earnings decline for gay couples is noteworthy because it is not driven by fertility (see next section); joint leisure and the insurance offered by income pooling in partnership are candidate explanations.

Turning to the earnings gap within couples, consistent with household specialization, we find heterosexual marriage to widen the gap by three percent. Among homosexuals, however, we find partnership to significantly narrow the earnings gap by 14 and 12 percent among men and women respectively (Columns 3 and 4).

It is possible that the convergence of earnings seen among homosexual couples is the result of greater similarity pre-partnership. Heterosexual couples may be more dissimilar education-wise boosting returns to household specialization. To investigate this possibility, we calculate the pre-union entry education gap. Since we have estimated a widening earnings gap in favor of men among heterosexual couples, we are particularly interested in the male-female pre-union earnings gap.

For homosexual couples, we assigned a “male” and “female” label based on who is the primary earner using the following algorithm:

1. A same-sex partner is coded as male if his/her earnings in the last year of observation are higher than that of the spouse.

2. If both same-sex partners have the same earnings in that year, the older
partner is coded as male.

3. If both same-sex partners are of the same age, the partner with the highest earnings over the entire observation period is coded as male.

For comparability, we also apply above algorithm to the heterosexual sample. Using either comparison, homosexual couples appear less assortatively matched than heterosexual couples, Figure 2.

3.2 Fertility

We now turn to parenthood. The role of marriage in family formation is widely recognized and celebrated but the legal details are often ignored and obscured by woolly reference to tradition or commitment (or crass demands for benefits or preferential tax treatment). However, marriage performs two important legal roles with respect to parenthood and parental rights.

Legal marriage makes the husband the presumed father of children born by the wife. Legal marriage also makes the husband the custodian of those children – a universal and in many ways unique function of marriage. The privileged status of the marriage contract is linked to private contracting being severely circumscribed in the realm of rights over children – such contracts approach contracts on children and therefore slavery (Posner, 1992).

As discussed above, the exclusion of paternity presumption from 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. In 2003, however, same-sex partners obtained the right to joint or step-child adoption. This right may have been
of little practical importance for male, same-sex 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.

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

We measure fertility from uptake of parental leave, which for Sweden is a reasonably accurate indicator. Roughly speaking, the arrival of a child makes its parents eligible for one year of parental leave paid at around 80% of pre-leave salary. This benefit can be stretched in various ways (two years at half-pay, etc.). Two months of paid leave is dedicated to each parent and cannot be used by the other parent, earning it the moniker *pappamånad* [daddy-month]. The use-it-or-lose-it feature of the daddy-month (in place since January 1995, extended to two months in 2002) combined with the leave being paid has resulted in a high uptake among fathers (Ekberg, Eriksson and

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8We do not have access to natality data.
Friebel, 2005). While the leave can be taken until the child is in first grade, the bulk of the leave is taken in the first two years. As a first approximation, the arrival of one child is likely to give rise to positive parental leave up-take over two calendar years.

The results are presented in Table 5. Columns 1 and 2 present results from estimating an augmented version of Equation 1 on men and women separately. We see that marriage raises the probability of parental leave by 7 percentage points in the first year, 18 percentage points in the second year and about 23 percent in subsequent years (within the sample period). As hypothesized, the parental leave uptake is remarkably similar between men and women. This finding confirms parental leave uptake as a fairly reliable measure of the birth (or adoption) of a child for both genders. Turning to homosexual men, Column 1, we see that partnership is not associated with higher fertility in the first years. For homosexual women, there is a positive but consistently smaller effect than for heterosexual women.

We next turn attention to the importance of the law allowing joint- or step-adoption by same-sex couples starting in 2003. In Columns 3 and 4 we present results when we allow for a trend-break for those in partnership starting in year 2003. For men, Column 3, we see that 2002 and earlier, there is no effect of partnership on fertility for men (relative to men who had not yet entered a union). After 2002, men in partnership are more likely to take parental leave, but the effect is smaller and delayed relative to married men, consistent with the greater obstacles homosexual men face acquiring a child. Two years out, there is a 1.5 percentage point increase in probability and three years or more out, the increase is nine percentage points. For
women, Column 4, there is a strong and positive fertility effect after 2002. The fertility effect is delayed compared to heterosexual women but three years out, the effect of marriage and partnership on fertility is similar, 24.6 percent and 23.8 percent for marriage and partnership respectively.\textsuperscript{9}

The pronounced effect of the 2003 law change among lesbian women is interesting and points to an important role of legal parenthood for joint fertility decisions. Also, recall that the steady increase in lesbian partnerships started in 2003 (Figure 1).

### 3.3 Other

There may also be less tangible benefits from social recognition of union status. Homosexual individuals have been identified to suffer worse health outcomes (Herrell et al., 1999; Cochran, 2001; Gilman et al., 2001; Sandfort et al., 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 that that for homosexuals, partnership entry is associated with lower unemployment but higher disability uptake of roughly equal magnitude. By contrast, for heterosexuals, marriage is associated with reduced probability of both outcomes. For all groups, union entry is associated with higher uptake of sick leave, but no more or less for homosexuals.\textsuperscript{10} These are crude measures of mental or

\textsuperscript{9}The marriage effect on fertility did not increase after 2002, results are available from the authors on request.

\textsuperscript{10}Not reported but available from the authors on request.
physical health but taken at face value do not suggests health benefits of partnership.

These results also point to the possibility of reverse causality. Disability pension is rarely the result of a discrete event but rather the outcome of a gradually deteriorating condition reducing employability. It is not unusual for disability pension to follow on prolonged unemployment. Thus, private knowledge of impending disability may prompt individuals to regulate relationship status. This can be because of a heightened demand for income pooling. Also, as noted earlier, partnership entry changes inheritance rights in favor of the surviving partner.

4 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 US states. Despite the heated debate, the consequences of such unions are 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 the roll out of rights on behavior of same-sex couples. In 1994, parliament passed the Registered Partnership Act that extended all rights and obligations of married couples to same-sex couples entering registered partnership, with one important exception. The partnership Act carved out paternity presumption. In 2002, a further step towards marriage was taken when those in partnership were allowed joint or step-child adoption.
In this paper, we have studied the impact of partnership entry on earnings and fertility outcomes using register data for the period 1994-2007. Register data mean that we have annual observations on each individual, allowing us to employ individual fixed effects. As a point of reference and of interest in their own right, we have also included men and women who married for the first time during the study period. Our analysis sample thus contain 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 partnership entry to be associated with a significant decline in earnings of gay but not lesbian couples. For both men and women, union-entry heralded a convergence in earnings, in contrast with heterosexual couples among whom earnings diverged. A perhaps surprising finding for heterosexual couples is that marriage is associated with a decline in joint earnings, the combined effect of a substantial drop in female earnings and only a modest increase in male earnings. The within-individual comparison likely contributes to the small marriage premium found for men. Another factor may be the low social significance assigned marriage in Sweden; premarital cohabitation is all but universal and premarital child bearing is common. As a result, one may argue, our estimates of union-entry are to a large extent purged of effects that stem from cohabitation (and to some extent of those stemming from child bearing and rearing).

Having said that, we do find fertility effects of partnership entry, especially for women once joint or step-parent adoptions were allowed in 2002, which also is the year female partnership entry overtakes male partnership entry.
For gay couples, partnership raise fertility after 2002, but the effect is small. These findings underscores the both the centrality of the woman for family formation and the importance of legal parenthood.

To sum up, for gay couples, the main benefit of partnership entry appears to be income stability, affording lower and more joint labor supply. For lesbian couples, once joint and step-parent adoption is allowed, partnership entry facilitates parenthood at a rate similar to marriage. However, earnings among lesbian partners converge on partnership entry.

This finding casts new light on the source of earnings divergence among heterosexual couples commonly 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 are capable of bearing children.
References


Figures
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.
Figure 2: “Male-Female” Pre-Union Education Gap

Notes: Notes: Couple education gap in terms of levels: primary school secondary school and university degree. The gap is male minus female education.

Gays and lesbians have been coded as “male” and “female” (i.e., primary earner, secondary earner) using the following algorithm:
1. A partner is coded as male if his/her earnings in the last year of observation are higher than that of the partner.
2. If both partners have the same earnings in that year, the older partner is coded as male.
3. If both partners are of the same age, the partner with the highest earnings over the entire observation period is coded as male.

Figure A for heterosexuals is created based on the actual sex. For comparability with the homosexual samples, Figure B assigns sex according to algorithm used for the homosexuals. In 28 cases, criteria 1-3 did not determine sex, in which case actual sex was used.
Tables
Table 1: Characteristics of Individuals Entering Marriage or Partnership in Sweden 1994-2007

<table>
<thead>
<tr>
<th></th>
<th>Male</th>
<th>Female</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Homosexual</td>
<td>Heterosexual</td>
</tr>
<tr>
<td>Labor earnings&lt;sup&gt;a&lt;/sup&gt;</td>
<td></td>
<td></td>
</tr>
<tr>
<td>before union&lt;sup&gt;b&lt;/sup&gt;</td>
<td>229.6</td>
<td>199.0</td>
</tr>
<tr>
<td>after union</td>
<td>261.8</td>
<td>320.7</td>
</tr>
<tr>
<td>Labor earnings&gt;0, %</td>
<td></td>
<td></td>
</tr>
<tr>
<td>before union</td>
<td>92</td>
<td>93</td>
</tr>
<tr>
<td>after union</td>
<td>85</td>
<td>96</td>
</tr>
<tr>
<td>Parental leave %</td>
<td></td>
<td></td>
</tr>
<tr>
<td>before union</td>
<td>02</td>
<td>20</td>
</tr>
<tr>
<td>after union</td>
<td>01</td>
<td>56</td>
</tr>
<tr>
<td>Age</td>
<td>42.5</td>
<td>32.6</td>
</tr>
<tr>
<td>% Metropolitan</td>
<td>71</td>
<td>41</td>
</tr>
<tr>
<td>Educational attainment %</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Primary school</td>
<td>13</td>
<td>11</td>
</tr>
<tr>
<td>Secondary school</td>
<td>39</td>
<td>52</td>
</tr>
<tr>
<td>University degree</td>
<td>47</td>
<td>37</td>
</tr>
<tr>
<td>Unknown</td>
<td>01</td>
<td>00</td>
</tr>
<tr>
<td>Previously married, %</td>
<td>12</td>
<td>00</td>
</tr>
<tr>
<td>N Individuals</td>
<td>1,800</td>
<td>267,264</td>
</tr>
</tbody>
</table>

<sup>a</sup> – Annual 2007 Swedish Krona (SEK) '000.
<sup>b</sup> – Registered partnership of marriage.

The variables are averaged across all years between 1994 and 2007.
Table 2: Couple Characteristics of Individuals Entering Marriage or Partnership in Sweden 1994-2007

<table>
<thead>
<tr>
<th></th>
<th>Heterosexuals</th>
<th>Homosexuals</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Males</td>
<td>Females</td>
</tr>
<tr>
<td><strong>Couple earnings</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>before union</td>
<td>326.5</td>
<td>459.1</td>
</tr>
<tr>
<td>after union</td>
<td>514.3</td>
<td>523.6</td>
</tr>
<tr>
<td><strong>Couple earnings gap</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>before union</td>
<td>113.1</td>
<td>147.0</td>
</tr>
<tr>
<td>after union</td>
<td>169.7</td>
<td>174.5</td>
</tr>
<tr>
<td><strong>Dual earner, %</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>before union</td>
<td>85</td>
<td>86</td>
</tr>
<tr>
<td>after union</td>
<td>89</td>
<td>76</td>
</tr>
<tr>
<td><strong>Coresiding children</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>before union</td>
<td>0.86</td>
<td>0.14</td>
</tr>
<tr>
<td>after union</td>
<td>1.84</td>
<td>0.05</td>
</tr>
<tr>
<td><strong>N Couples</strong></td>
<td>267,264</td>
<td>900</td>
</tr>
</tbody>
</table>

Notes:  

- Annual 2007 Swedish Krona (SEK) ’000.  
- Registered partnership of marriage.  
- Maximum number of children co-residing with either of the spouses before and after union entry. For instance, if we observe that a man and a woman had two children each, we assume that these children are common and the maximum number of children before union entry is two. Note that this is a crude measure of fertility in a union. First, we may underestimate the number of children before union entry. For instance, if the man and the woman had two children each in separate households before marriage, the correct number of children should be four. In that case we will overestimate couple fertility effects once married or partnered. This is likely to be a problem especially for homosexual couples, since their possibilities to have common children before union entry are limited by law (see Section 2.2). Among heterosexuals, the children are more likely to be common children as premarital cohabitation is very common and more 50 percent of births are to unmarried mothers. Second, children may leave the household due to age as well as to live the other parent. For instance, a mother who had shared custody of a child after a divorce enters partnership. The father may then seek custody and the child will live with the father. This may be more likely for homosexuals and would lead to an underestimate of fertility on partnership entry.
Table 3: Individual Earnings Effects of Partnership or Marriage Entry

<table>
<thead>
<tr>
<th></th>
<th>Female</th>
<th>Male</th>
<th>Young</th>
<th>Old</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Union</strong></td>
<td>-0.1235***</td>
<td>0.0177***</td>
<td>-0.1230***</td>
<td>-0.1299***</td>
</tr>
<tr>
<td></td>
<td>(0.0042)</td>
<td>(0.0033)</td>
<td>(0.0048)</td>
<td>(0.0086)</td>
</tr>
<tr>
<td><strong>Partnership</strong></td>
<td>0.2126***</td>
<td>-0.1735***</td>
<td>0.1705***</td>
<td>0.2367***</td>
</tr>
<tr>
<td></td>
<td>(0.0400)</td>
<td>(0.0416)</td>
<td>(0.0580)</td>
<td>(0.0553)</td>
</tr>
<tr>
<td><strong>Male×Union</strong></td>
<td></td>
<td></td>
<td>0.1546***</td>
<td>0.1500***</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>(0.0090)</td>
<td>(0.0093)</td>
</tr>
<tr>
<td><strong>Male×Partnership</strong></td>
<td>-0.3264***</td>
<td>-0.3580***</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>(0.0792)</td>
<td>(0.0838)</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Adjusted R-2</strong></td>
<td>0.169</td>
<td>0.221</td>
<td>0.196</td>
<td>0.183</td>
</tr>
</tbody>
</table>

Notes: * p<0.10, ** p<0.05, *** p<0.01  
Standard errors in parentheses, clustered at the individual-level  
\(^a\) – Marriage or partnership.  
All regressions include individual fixed effects, dummy variables for age, year, county, age specific time trends, county specific time trends, dummy variables indicating legally separated, receipt of disability pension, and age>65. The specifications in column 3 and 4 also include sex specific dummy variables for age.
Table 4: Couple Earnings Effects of Partnership or Marriage

<table>
<thead>
<tr>
<th>Focal person:</th>
<th>Joint Earnings</th>
<th>Gap</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Male</td>
<td>Female</td>
</tr>
<tr>
<td>Union*</td>
<td>-0.0229***</td>
<td>-0.0311***</td>
</tr>
<tr>
<td></td>
<td>(0.0021)</td>
<td>(0.0022)</td>
</tr>
<tr>
<td>Partnership</td>
<td>-0.1462***</td>
<td>0.0743**</td>
</tr>
<tr>
<td></td>
<td>(0.0390)</td>
<td>(0.0363)</td>
</tr>
<tr>
<td>Observations</td>
<td>3,632,788</td>
<td>3,633,602</td>
</tr>
<tr>
<td>Adjusted R-2</td>
<td>0.315</td>
<td>0.306</td>
</tr>
</tbody>
</table>

Notes: * p<0.10, ** p<0.05, *** p<0.01
Standard errors in parentheses, clustered at the couple-level
* – Marriage or partnership.
All regressions include individual fixed effects, dummy variables for age, year, county, age specific time trends, county specific time trends, dummy variables indicating legally separated, receipt of disability pension, and age>65.
Table 5: Fertility Effects of Partnership or Marriage

<table>
<thead>
<tr>
<th>Focal person:</th>
<th>Parental leave</th>
<th>Parental leave, 2003 break</th>
</tr>
</thead>
<tbody>
<tr>
<td>Parental leave</td>
<td>Male</td>
<td>Female</td>
</tr>
<tr>
<td>0</td>
<td>0.0690***</td>
<td>0.0742***</td>
</tr>
<tr>
<td></td>
<td>(0.0009)</td>
<td>(0.0009)</td>
</tr>
<tr>
<td>1</td>
<td>0.1758***</td>
<td>0.1838***</td>
</tr>
<tr>
<td></td>
<td>(0.0012)</td>
<td>(0.0012)</td>
</tr>
<tr>
<td>2</td>
<td>0.2275***</td>
<td>0.2457***</td>
</tr>
<tr>
<td></td>
<td>(0.0014)</td>
<td>(0.0014)</td>
</tr>
<tr>
<td>3+</td>
<td>0.2348***</td>
<td>0.2455***</td>
</tr>
<tr>
<td></td>
<td>(0.0016)</td>
<td>(0.0017)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Partnership years since:</th>
<th>Parental leave</th>
<th>Parental leave, 2003 break</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>-0.0923***</td>
<td>-0.0556***</td>
</tr>
<tr>
<td></td>
<td>(0.0044)</td>
<td>(0.0084)</td>
</tr>
<tr>
<td>1</td>
<td>-0.1875***</td>
<td>-0.0996***</td>
</tr>
<tr>
<td></td>
<td>(0.0050)</td>
<td>(0.0098)</td>
</tr>
<tr>
<td>2</td>
<td>-0.2202***</td>
<td>-0.1167***</td>
</tr>
<tr>
<td></td>
<td>(0.0055)</td>
<td>(0.0112)</td>
</tr>
<tr>
<td>3+</td>
<td>-0.1620***</td>
<td>-0.0198*</td>
</tr>
<tr>
<td></td>
<td>(0.0058)</td>
<td>(0.0116)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Partnership \times I(Year&gt;2002) years since:</th>
<th>Parental leave</th>
<th>Parental leave, 2003 break</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>-0.0120</td>
<td>-0.0063</td>
</tr>
<tr>
<td></td>
<td>(0.0074)</td>
<td>(0.0141)</td>
</tr>
<tr>
<td>1</td>
<td>-0.0055</td>
<td>0.0480***</td>
</tr>
<tr>
<td></td>
<td>(0.0076)</td>
<td>(0.0152)</td>
</tr>
<tr>
<td>2</td>
<td>0.0151**</td>
<td>0.0961***</td>
</tr>
<tr>
<td></td>
<td>(0.0072)</td>
<td>(0.0159)</td>
</tr>
<tr>
<td>3+</td>
<td>0.0589***</td>
<td>0.1246***</td>
</tr>
<tr>
<td></td>
<td>(0.0037)</td>
<td>(0.0082)</td>
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</table>

<table>
<thead>
<tr>
<th>Observations</th>
<th>3,632,788</th>
<th>3,633,602</th>
<th>3,632,788</th>
<th>3,633,602</th>
</tr>
</thead>
<tbody>
<tr>
<td>Adjusted R-squared</td>
<td>0.222</td>
<td>0.265</td>
<td>0.222</td>
<td>0.265</td>
</tr>
</tbody>
</table>

Notes: * $p<0.10$, ** $p<0.05$, *** $p<0.01$
Standard errors in parentheses, clustered at the individual-level
*a* – Marriage or partnership.

All regressions include individual fixed effects, dummy variables for age, year, county, age specific time trends, county specific time trends, dummy variables indicating legally separated, receipt of disability pension, and age>65.