Straight Pay for the Queer Guy? [1]
Earnings Differentials of Males and Females in
Same-sex Couples in Canada

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Abstract

Same-sex marriage in Canada has been federal law in Canada since July 2005. Although gays and lesbians in Canada may have attained equality in marriage rights, this doesn't mean that they do not suffer discrimination in other aspects of their lives. In particular, in the labour market there still may be earnings differentials that may be due to discrimination or other factors which we are unable to observe. This paper utilizes the 2001 General Social Survey to address the issue of differential earnings amongst members of same-sex couples compared to their counterparts in different-sex couples. We find that men in gay couples have an earnings penalty compared to heterosexual males in both common-law and married relationships, but no penalty exists for lesbians. These results are robust to changes in model specification. Finally, we reconcile our results with the sparse literature on gay and lesbian earnings differentials.

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[1] A popular television program in Canada and the United States is entitled "Queer Eye for the Straight Guy." Its original premise was for a caste of five gay males to offer various tips – grooming, decorating, cooking, etc. – to straight males who presumably lacked in these lifestyle skills.

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I. Introduction

Since July 2005, same-sex couples in Canada have had the same right to marry as their

different-sex counterparts. Part of the federal government's motivation for changing the marriage law was

to avoid any legal challenges to the previous law under the Charter of Rights and Freedoms. Although

legally same-sex couples cannot be discriminated against in their choice of a marriage partner, we have

little evidence to suggest that discrimination does not exist in other aspects of their lives. In particular,

does this legal equality in marriage extend to the workplace in Canada? Do members of same-sex

couples have labour market earnings that are comparable to those of members of different-sex couples?

Can differences be explained by observable differences between those in same-sex and different sex-

partnerships? If they cannot, then discrimination against members of same-sex couples may exist.

There has been practically no research using reliable data performed on the labour market

experiences of gays, lesbians, and bisexuals (GLB, to use the common acronym) anywhere in the world.

In Canada, only one study has been completed to date (Carpenter, 2007b) and this study has yet to be

published. Despite this, there is increasing interest in Canada, especially as the rights of gays and

lesbians to enter into marriages equal to the rights of heterosexual couples has recently been made the

law of the land. Part of the reason for the lack of information in this area is undoubtedly the paucity of

appropriate data on the subject. Also, arguably, the GLB rights movement in most countries is relatively

new and still in its infancy compared to the women's and minority rights movements of the post-World

War II period. These later two movements undoubtedly spawned the collection of appropriate data which

allowed competent earnings differential studies to be completed.

The purpose of this paper is twofold: first, to compare the previous work done in the United States

and elsewhere on same-sex partners. Secondly, we to try to corroborate and complement the only other

Canadian evidence on GLB earnings differentials (i.e., Carpenter, 2007b). Although there are very fewer

members of same-sex relationships in our data, the results show that gay men earn significantly less than

their observationally equivalent heterosexual counterparts, but lesbian females do not. When attempting

to replicate Carpenter's work, we find very similar results. Higher levels of job satisfaction might explain the earnings penalty for men, although more empirical support for this hypothesis is necessary.

The paper is organized in the usual way. The next section discusses the small literature on the earnings differentials of GLB vis-à-vis the heterosexual majority in the United States, the United Kingdom, the Netherlands, and Canada. The third section discusses the data and methodology utilized, as well as the limitations of both. Section IV presents the main multivariate estimation results. The final and fifth section concludes and offers some suggestions for future research using Canada data.

II. Literature Review

Very few studies have been conducted on earnings or wage differentials of homosexuals and/or bisexuals throughout the world. This is owing to the fact that reliable data on same-sex behaviour has been unavailable in all but a few surveys, as well as the fact that defining homosexuality and/or bisexuality has been somewhat difficult and even controversial. Table 1 gives a brief synopsis of these studies to date. The pioneering work in this area (Badgett, 1995) as well as many subsequent studies have been for the United States and have used the General Social Survey (GSS) in that country (Berg and Lien, 2002; Black, et al., 2003; Blandford, 2003). All of these studies define same-sex behaviour in one or more of the following ways: any same-sex behaviour since age 18, same-sex sexual behaviour in the past five years, any same-sex sexual behaviour in the past year, or more same-sex than different sex partners over the appropriate timeframe. In other words, sexual orientation is behaviour-based and depends on the relative number of same- and different-sex partners over a specific timeframe. Although each of these studies uses slightly different versions of the GSS as well as various methodologies, all arrive at the same basic conclusion: a double-digit earnings penalty for gay men, and a double-digit earnings premium for lesbian women compared to their observationally equivalent heterosexual counterparts.

Carpenter (2007a) wonders if these findings are due to the use of the GSS or if they can be confirmed using another data set. He uses the Third National Health and Nutrition Examination Survey (NHANES III) since it contains similar questions to those in the GSS. He finds that the income penalty in

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his estimates is similar to previous studies using these data. He also finds that those displaying the strongest gay behaviour have the largest penalties.

Other research for the United States has relied on the 1990 US Census. While the GSS definition of gays, lesbians (and sometimes bisexuals) is based on sexual behaviour, the census permits researchers to derive a same-sex partnership variable based on the common-law status of two partners, as well as the sex of the respondent and his/her partner's sex. Allegretto and Arthur (2001) argue that this self-reporting of lifestyle (i.e., cohabiting with a member of the same sex) is a strong point of their study – rather than defining gay men as those who have had homosexual experiences – since these experiences could have been experimental and not necessarily indicative of sexual orientation. This is especially true for younger adults who are more like to have some same-sex experiences before settling into a different-sex relationship. Klawitter and Flatt (1998) and Clain and Leppel (2001) also use these data and define homosexuals in the same way. These studies all find that men in same-sex partnerships earn less than males in different-sex unmarried partnerships and less still compared to married males. The latter two studies also find a premium for lesbians in same-sex partnerships relative to females with different-sex partners. Carpenter (2004) also studies same-sex unmarried partners. He uses the same definition as that used by researchers utilizing the census, but different data. Still, he finds a penalty for both male and female same-sex cohabiting couples compared to those living in a different-sex relationship, but a significantly larger penalty for both gays and lesbians relative to those in a marriage.

Generally, the results from the GSS (as well as other data sets such as the NHANES) suggest that the more "gay" an individual – based on the proportion of same-sex partners – the larger the income penalty. As Badgett (1995:731) points out: "A variable measuring the extent of workplace disclosure of gay behavior or identity would be more appropriate to include in the wage equation, since disclosure is necessary for direct discrimination to occur. Unfortunately, this information is not available." More specifically, this information was not available at the time of Badgett's study. Carpenter (2005) tries to overcome this identification problem using data from California Health Interview Survey, data in which GLB self-identify. Doing so he finds no statistical nor economically significant gay or lesbian effect on earnings compared to heterosexuals, although he does find some evidence of a penalty amongst

bisexuals as well as a marriage effect. Whether this is due to a California regional effect or some other factor is not clear.

Similarly, Carpenter (2007b) also uses the self-identification method in the first study conducted on Canadian GLB. He uses the 2003 Canadian Community Health Survey which explicitly asks individuals about whether they consider themselves to be heterosexual, homosexual, or bisexual. He argues that this may be better than other ways of identifying sexual orientation since self-reporting in the survey is likely closer to workplace disclosure of the same. In other words, those who classified themselves as GLB in the survey are also likely to be open about their sexual orientation to employers and colleagues. He finds that gay men have earnings up to nine per cent less than non-gay men and that lesbians have an advantage of about the same magnitude, although only the former tend to be statistically significant across different model specifications.

Additional evidence is supplied for the Netherlands by Plug and Berkhout (2004). They discover that self-identified gay males earn about three per cent less – and lesbian females about three per cent more – than observationally equivalent recent graduates of tertiary education. Whether or not these differentials change with time in the labour force is not known, but these estimates are similar to those for both Canada and the United States. The small differentials in the Netherlands may also be due to that country's tolerance of alternative lifestyles and/or legislation that prohibits discrimination based on sexual orientation, such as laws allowing homosexuals to marry and adopt children. For the UK, Frank (2006) finds no evidence of any earnings penalty for self-identified GLB, but his study uses only data from UK universities and he does argue that GLB face a glass ceiling when it comes to career advancement. Another study for the UK (Arabsheibani, et al., 2005) finds that male same-sex partners are at a five per cent earnings disadvantage compared to their different-sex partnered counterparts whereas same-sex females earn about eight per cent more.

In sum, the results of this sparse literature on same-sex wage differentials depend on the definition of homosexuality that is utilized. Generally, the literature suggests that those in same-sex cohabiting relationships earn less than those in relationships that contain two individuals of the opposite sex, and that the marriage effect tends to be significant. Furthermore, studies that use data in which

individuals self-identify show a lower GLB effect than any of the studies which use the behaviour definition based on the number and sex of sexual partners.

III. Data and Methodology

As mentioned above, there has been a great debate in the literature as to how to define homosexuals. Badgett (1995), as well as many who have followed, used the sexually behaviour of individuals, rather than self-reporting of sexual orientation, to determine the "gayness" of an individual. This often produces a variance of estimates depending on whether individuals are classified based on the sex of the majority of their sexual partners, any sexual activity with a same-sex partner, the time frame involved in reporting (e.g., one year versus lifetime), etc. Furthermore, the sexual behaviour of individuals changes over time; for example, young people are more likely to flirt with homosexuality and bisexuality before settling into a permanent heterosexual orientation. Obviously, the corresponding estimates of wage or earnings premia or penalties also tend to vary depending on the definition and the related concept of "openness" of an individual's homosexuality or bisexuality (Blandford, 2003; Carpenter, 2007a).

In Canada there are only three data sets capable of comparing the labour market experiences of GLB with those of their heterosexual counterpart: the 2001 Census, the 2003 Canadian Community Health Survey (CCHS), and the 2001 and 2005 General Social Survey (GSS). The first two datasets, as well as the 2005 edition of the GSS, do not allow the identification of GLB in the public-use files. Special permission and facilities from Statistics Canada are required to conduct any meaningful analysis. Both the census and the GSS use two individuals of the same-sex in a common-law relationship to define gays and lesbians. Of course, bisexuals cannot be identified in this way, nor can gays and lesbians not involved in a common-law relationship, or those who may be GLB and also married. The CCHS asks individuals if they consider themselves to be homosexual, bisexual, or heterosexual. The potential identification of GLB is therefore much larger than in the census or the GSS, but it lacks information on the individual's common-law status, unless they are married (a rare event). Another important difference is that the GSS is a telephone survey, compared to the face-to-face interviews conducted for the CCHS,

and the household identification which is collected on census forms. Thus, the GSS offers respondents a greater degree of confidentiality than either the census or the CCHS. This may be important given the potentially sensitive nature about revealing one's sexual orientation.

The data we utilize are from the Canadian 2001 GSS, Cycle 15. This survey asks explicitly about the marital or common-law status of the household reference person. This allows us to cross-reference the common-law variable with the sex of the respondent and his/her partner to determine if they are involved in a heterosexual, gay or lesbian common-law partnership.[2] The survey contains a total unweighted sample of 24,310 individuals of which 63 are in same-sex common-law relationships (31 gay males and 32 lesbian females). In the weighted original sample, these 63 individuals represent about 0.31 per cent of the population. The proportion of males in same-sex common-law relationships is 0.37 per cent and for females 0.25 per cent. These figures are comparable to other Canadian data sets. For example, Carpenter (2007b) includes all GLB who self-reported their sexual orientation in the CCHS of 2003. He finds that 24 per cent of gay men and 30 per cent of lesbian women report living in a common-law or married relationship. Although confidentiality requirements prevent him from reporting disaggregated sample sizes for GLB, his uncut sample contains about 1.11 per cent GLB (or 1,500 of 135,000). This means that the GSS appears to capture a comparable proportion of gays and lesbians in same-sex couples. The proportion of same-sex couples is also similar to the figure in the recent Canadian census.[3] Finally, previous evidence for the United States (Black, et al., 2000; Carpenter, 2004) show that the assumption that adults cohabitating with another same-sex adult are behaviourally gay or lesbian is likely to be correct. To summarize, the GSS seems to correctly capture a favourable proportion of same-sex couples compared to other data from the US and Canada.

Our final sample is obtained by dropping those who were attending school full-time, eliminating those under the age of 20 and over the age of 60 (to concentrate on individuals who are most likely to have a strong attachment to the labour force). Those with missing responses to various questions were also eliminated, as were those with hourly wages of less than one dollar and more than 500 dollars. Since

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[2] The question in the GSS itself is even more specific: "What is {household member x}'s relationship to {household member y}?" "Common law partner (same sex)" is one of the permitted responses.

[3] The 2001 census definition is for families and not individuals. It shows that 0.44 per cent of all families are same-sex common-law couples in the 2001 census (Statistics Canada, 2002). For the US Black et al. (2000) argue that only about one-third of gay and lesbian couples report themselves correctly in the census, making selection bias a problem. If the true proportion of those involved in same-sex relationships is the same in Canada as in the US, then the GSS appears to capture most if not all of these couples, greatly mitigating the potential problem of sample selection bias.

only gays and lesbians cohabitating in common-sex partnerships can be observed in the data, we limit the heterosexual sample to include only those in common-law or married partnerships.

The final sample size contains 3,334 males, 23 of whom reported to be in a same-sex common-law relationship. The female sample contains 3,010 observations of which 25 are in same-sex couples. The weighted samples represent about 4.3 million males and 3.2 million females. Some 0.71 per cent of cohabitating males and 0.72 per cent of cohabitating females are involved in same-sex common-law relationships. This is more than double the proportion in the sample of males used by Allegretto and Arthur (2001) and about triple the proportion found by Black, et al. (2000), both of which use the 1990 US census household files.

Summary statistics are presented in Table 2. The sample is first divided into males and females, and then into same-sex and different-sex couples by sex. The first thing that is worthy of note is that males in same-sex relationships have an unadjusted annual income 0.45 log points less than males in different-sex partnerships, or about 32 per cent less in hourly wages; not surprising considering those in same-sex relationships work both fewer hours per week and fewer weeks per year, they also possess less experience. However, years of education for same-sex males is about one-third of a year more. For females, those in same-partnerships earn about 17 per cent more in terms of annual income, but two per cent less in terms of the hourly wage. This higher annual income is consistent with more education, experience, and more annual hours of work (mainly more hours per week) compared to females in different-sex relationships. Same-sex couples are also less likely to have children in the household than different-sex couples – in the case of males, there are no children present in our sample of same-sex couples.

Ordinary least squares (OLS) is the statistical technique most often used in existing literature on same-sex earnings differentials. We will use this as our starting point in order to better compare our results with those contained in this body of work. We also add a correction for robust standard errors throughout the remainder of the paper.

The dependent variable throughout is the natural logarithm of annual personal income. This variable is not continuous, rather it is grouped into a number of ranges. Black, et al. (2003) came across a similar problem and used interval regressions to overcome it. They note, however, that the estimates from

OLS and interval regressions are very similar. The inclusion of hours per week and weeks per year is important, especially when comparing same-sex to different sex couples since gays have been shown to supply less labour to the market and lesbians more (Tebaldi and Elmslie, 2006). No urban variable exists in the GSS, nor is there a race variable. We do, however, include a dummy variable for immigrant status, a variable that tends to be positively correlated with both race and urban residence.

Ideally, we would have liked to be able to disaggregate the sample into various groups (e.g., married versus same-sex cohabiting partners) and perform tests to see if this restriction is valid. Unfortunately, sample size does not allow this. Still, the results obtained by Allegretto and Arthur (2001) using both aggregated and disaggregated samples are similar enough to justify using this approach.

IV. Multivariate Results

Table 3 contains the multivariate results of various specifications of the model. The upper panel contains the results for males, and the lower panel the results for females. The first column in each panel simply reflects the unadjusted annual earnings differential without any controls and are identical to the results presented in Table 2. The model is gradually built up to include more covariates as we move from left to right. The coefficients normally used in these types of analyses all have the correct signs and reasonable values. For example, the rate of return to a year of schooling is about 6.5 per cent of males and 10.9 per cent for women (column 2) and decreases to about 3.9 per cent for males and 4.8 per cent for women once all controls are added (column 7). Similarly, the returns to experience increase at a decreasing rate for both males and females, there exists a marriage premium for males (but not for women), and immigrants of either gender tend to earn significantly less than their Canadian-born counterparts. These results are well established in the literature.[4]

For gay males, the point estimates suggest that there is an annual earnings disadvantage of about 21 per cent relative to otherwise comparable males in different-sex households, based on the

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[4] The specification in column 7 was also done using age and age squared instead of experience and its square. The results for neither males nor females changed markedly.

estimates in the last column. Compared to married males, the gap widens to about 34 per cent.[5]

Allegretto and Arthur (2001) also find that men in same-sex relationships earn less compared to

unmarried men in different-sex-relationships, and less still compared to married men. They say that the

estimates of −2.4 per cent and −15.6 per cent form the upper and lower bounds of the wage penalty for

males. Our coefficients are larger, but still agree in direction if not magnitude. Furthermore, the size of the

marriage premium in our estimates (about 13 per cent) is about the same as their estimate (14.1 per

cent). Still, this leaves a large amount of the total income differential attributable to being in a same-sex

couple for males, a penalty that shrinks to practically nil in Allegretto and Arthur's work. Similarly, in other

work which addresses same-sex couples, the earnings penalty tends to be smaller than our estimates

(Arabsheibani, 2005; Carpenter, 2004; Clain and Leppel, 2003; Klawitter and Flatt, 1998).

For females in same-sex cohabiting relationship, the results in Table 3 show no statistically

significant differences compared to different-sex cohabiting couples. The coefficient on marriage is

practically zero, meaning that there is no difference in earnings between common-law and married

heterosexual women. This is generally different than the literature which shows an earnings premium for

these women compared to those in different-sex partnerships whether married or not. The exception is

Carpenter (2004) who also shows a earnings penalty for this group of women relative to both different-sex

common law and married women.

Table 4 addresses different specifications of the model presented in Table 3. Here, we still find

that males in same-sex relationship earn about 16-20 per cent less than males in different-sex

relationships, and about 30 per cent less compared to married males. For females as well, the results are

not dissimilar to those in Table 3; namely that females in same-sex couples do not earn significantly less

than those in different-sex couples.[6]

. In the only other Canadian study done on the earnings differentials of gays and lesbians,

Carpenter (2007b) finds an earnings penalty for gays of about 7 to 10 percent and a premium for lesbians

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[5] This is calculated as the value of the coefficient on the gay variable less the coefficient on the marriage variable (i.e., -0.210 – 0.132 = 0.342).

[6] Owing to the small number of gays and lesbians in our sample, and since OLS estimators are sensitive to outliers as well as violation of the assumption of identically distributed errors at each point throughout the conditional distribution, the models in Tables 3 and 4 were reestimated using median or quantile regressions. The general pattern of the results does not change, but the coefficient values increase in each case: the coefficients on the gay variables become less negative and less statistically significant and the coefficients on the lesbian variable become positive but remain insignificant. Since one of the goals of this paper is to compare our results to other studies – all of which use OLS – we report on the OLS results. The median regression results are available from the author upon request.

(albeit insignificant) of about the same. We find similar results for lesbians but a wage penalty about double that of Carpenter. The question is: why are the results different between the two studies? Carpenter uses a self-identification method of defining homosexuals while we use a variable for gay and lesbian couples derived from survey responses. This implies that the populations we are studying are somewhat distinct. If we ignore problems of sample selection bias, Carpenter captures all self-identified GLB (including those in common-law same-sex relationships), whereas we have only those in common-law same-sex relationships. Carpenter derives wages from annual personal income and hours and weeks worked variables, whereas we use personal annual income and include hours and weeks as regressors. Similarly, he limits his sample to full-time and full-year workers whereas we include all workers who meet our other criteria and control for hours and weeks.

Can these differences be reconciled? The results for lesbian females are similar in both papers so comments will be limited to the results for gay males. First, the data in Table 4 show that when our sample is limited to full-time and full-year workers, the coefficient on gay drops about .04 log points, or about 4 per cent compared to the base case (i.e., 0.210 to 0.173 in column 4). Similarly, when we use the logarithm of the hourly wage, there is about a five-percentage point drop in the value of the gay coefficient (0.210 to 0.162 in column 5). In column 6 these two are combined so that we that limit the sample to full-time and full-year workers, and we use the logarithm of the hourly wage as the dependent variable. Now the coefficient estimate drops to –0.109, and this is not significant at even the 10 per cent level. Thus, when we estimate a model similar to that of Carpenter's, the estimates are similar, and if fact may be identical if our sample were larger.

A second reason for the difference between the results could be the result of the degree of "gayness" exhibited by those in our sample versus those in Carpenter's sample. In the literature this factor has shown to have a negative effect on earnings. It would seem that living with a same-sex partner is more likely to be considered openly gay relative to those not living with same-sex partners but who self-identify as gay. For females, this does not seem to affect earnings differentials.

Finally, Carpenter shows that gay males exhibit statistically higher job satisfaction compared to non-gay males, whereas lesbian females do not have statistically different job satisfaction compared to other females. Higher job satisfaction is a compensating differential; so one would expect to find that gay

males earn less than other observationally equivalent males. For females, the results also make sense because there are not significantly different earnings amongst the group of lesbian females nor are there statistical differences in the estimates of job satisfaction.

To summarize, our OLS results show an earnings penalty of about 20 per cent for males in same-sex couples compared to males in different-sex couples, and about 30 per cent less than married males. For females in same-sex couples, we find neither statistically significant earnings premium nor penalty compared to the other two groups. These results are consistent throughout different specifications and are robust to changes in samples and variables. When the estimated model is specified comparable to the other Canadian study in this area, the results too are comparable.

V. Conclusions

We find that gay men in common-sex couples tend to earn less than men in different-sex married and common-law couples. This result is robust across alternative model specifications and data subsamples. For women we find no statistical difference in the earnings of coupled lesbians

Our results complement those of other related work and point to an unexplained and negative earnings differential for gay males, whether partnered or not. However, we have no way of knowing if any discrimination exists, only that we cannot explain all of the earnings differential between groups and this may be due to discrimination or because of other characteristics which change the productivity – and hence earnings – of homosexual men and women.

Clearly more research in this area seems appropriate. Larger sample sizes, such as those in the CCHS and the census, could prove valuable in pinpointing the exact sources of any wage differentials. Our results are aggregates, but this is not to say that differences do not exist between industries, occupations, or provinces. Future research might even find an earnings premium for some groups if the data can be appropriately disaggregated. Finally, exploiting the CCHS and explicitly controlling for job satisfaction seems like a potentially fruitful avenue for future research.

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Table 1 - Selected Studies on Gay/Lesbian/Bisexual Income Differentials

Author(s) (date)	Homosexuality definiton	Methodology	Country	Data used	Findings
Allegretto & Arthur (2001)	Gay men in unmarried partnered relationships, defined as unmarried male partner related to the male household head	OLS with gay indicator dummy	United States	US Census, 1990 5% PUMS	A 2.4% hourly earnings penalty for men in same-sex cohabiting relationships compared to heterosexual males in similar relationships, and 15.6% less than married males (these represent the upper and lower bounds of the wage penalty).
Arabsheibani, Marin & Wadsworth (2005)	Those living with same-sex partners	Blinder-Oaxaca decomposition	United Kingdom	Labour Force Survey (LFS), 1996-2002	About a 5% wage penalty for gays and a 8% premium for lesbians compared to heterosexuals of the same sex lilving with opposite-sex partners.
Badgett (1995)	Behaviourally gay or lesbian individuals defined as more same-sex than opposite-sex partners since age 18	OLS with gay indicator dummy	United States	General Social Survey (GSS), 1989-91	Gay men earned 11-28% less than heterosexual males. Similar results for lesbians but only male results are significant.
Berg & Lien (2002)	Any same-sex sexual behaviour in previous 5 years	Probit model to address the non-continuous nature of the GSS income variable.	United States	General Social Survey (GSS), 1991-96	Nonheterosexual men earn 16-28% less than their heterosexual counterparts and nonheterosexual women earn 13-47% more.
Black, et al. (2003)	Any same-sex sexual behaviour since age 18, and sexual behaviour in the past one- and five-year periods	OLS and interval regressions with gay indicator dummy	United States	General Social Survey (GSS), 1989-91, 1993, 1994 & 1996	14-16% earnings penalty for gay males, and 20-34% premium for lesbians.
Blandford (2003)	Exclusive same-sex sexual behaviour in the past 12 months (or five years)	OLS with gay indicator dummy, some with Heckman two-step correction	United States	General Social Survey (GSS), 1989-96	30-32% earnings penalty for gay and bisexual males, but a earnings premium of 17-23% for lesbian and bisexual women.
Carpenter (2004)	Same-sex unmarried partners	OLS, but results robust to choice of technique (interval regressions and ordered probit also tried but not reported)	United States	Centers for Disease Control's Behavioral Risk Factor Surveillance System (BRFSS), 1996-2000	Slight penalty for male same-sex cohabiting couples compared to married couples, but sensitive to specification. Significant penalty for female same-sex cohabiting couples, robust to specification. Also penalty for different-sex cohabiting couples compared to marrieds.
Carpenter (2005)	Self-reported sexual orientation	OLS with gay, lesbian, bisexual dummies	United States (California)	California Health Interview Survey (CHIS), 2001	No statisitically or economically significant effect of gay or lesbian sexual orientation; some evidence of a penalty amongst male and female bisexuals.

Table 1, cont.

Author(s) (date)	Homosexuality definiton	Methodology	Country	Data used	Findings
Carpenter (2007a)	Males only; three variables for various degrees of same-sex behaviour (except exclusively owing to small sample sizes)	OLS with gay indicator dummy (in particular interval regressions because of censored dependent variable)	United States	Third National Health and Nutrition Examination Surveys (NHANES III), 1988-94	Same-sex behaving men had an income penalty of 23-30%, highest for those with the strongest gay sexual orientation.
Carpenter (2007b)	Self-reported sexual orientation	OLS with separate gay/lesbian and bisexual dummies	Canada	Canadian Community Health Survey (CCHS), 2003	Gay men have earnings that are 6-9% less than heterosexual males, while lesbian women have earnings not statistically distinguishable than heterosexual females.
Clain & Leppel (2001)	Same-sex unmarried partners	OLS with Heckman selectivity correction	United States	US Census, 1990 1/1000 PUMS	Males in same-sex couples tend to earn less than other males (in partnerships or not) while females in same-sex couples tend to earn more than other females.
Frank (2006)	Self-identified gays, lesbians, and bisexuals	OLS with gay, lesbian, bisexual dummies	United Kingdom	UK Association of University Teachers Survey of six universities, 2000/01	No penalty for gays, lesbians or or bisexuals relative to hetereosexuals of the same sex in terms of earnings, but evidence of glass ceilings faced by gay and bisexual men.
Klawitter & Flatt (1998)	Same-sex unmarried partners	OLS with same-sex couple dummies for males and females	United States	US Census, 1990 5% PUMS	A 0-3% penalty for gay males compared to heterosexual males in partnerships. Premium of 3-10% more for those in lesbian couples. Double-digit penalty (premium) compared to married males (females).
Plug & Berkhout (2004)	Young (recent tertiary education graduates) self-identified gays, lesbians and bisexuals	OLS with gay and lesbian dummies	Netherlands	Survery of tertiary school graduates, 1998/99 & 1999/2000	A 3% penalty for gay males compared to heterosexual males. Premium of 3% for lesbians.

Table 2: Summary Statistics, Males and Females, Same-sex and Different-sex Couples

Males	Same-sex couple				Different-sex couple			
	Mean	Std. dev.	Minimum	Maximum	Mean	Std. dev.	Minimum	Maximum
Log annual income	10.320	0.493	8.923	11.156	10.768	0.553	7.824	11.608
Log hourly wage	2.790	0.386	1.899	3.293	3.114	0.559	0.023	6.128
Years of education	14.113	2.334	6.000	18.000	13.810	2.489	6.000	18.000
Experience	17.285	9.275	4.000	35.000	23.009	9.842	0.000	50.000
Married	0.000	0.000	0.000	0.000	0.798	0.401	0.000	1.000
Immigrant	0.039	0.199	0.000	1.000	0.190	0.392	0.000	1.000
Weeks worked	47.490	10.830	7.000	52.000	49.332	8.052	3.000	52.000
Hours per week	42.039	8.937	25.000	72.000	45.204	10.977	4.000	140.000
Children present	0.000	0.000	0.000	0.000	0.697	0.460	0.000	1.000
Sample size								
Unweighted	23				3,311			
Weighted	30,279				4,245,909			
Females								
Log annual income	10.361	0.669	8.923	11.608	10.190	0.743	7.824	11.608
Log hourly wage	2.843	0.681	1.388	4.135	2.859	0.644	0.184	6.128
Years of education	14.730	2.377	10.000	18.000	13.893	2.210	6.000	18.000
Experience	22.236	10.154	3.000	41.000	21.388	10.090	0.000	50.000
Married	0.000	0.000	0.000	0.000	0.789	0.408	0.000	1.000
Immigrant	0.146	0.360	0.000	1.000	0.168	0.374	0.000	1.000
Weeks worked	47.506	11.066	3.000	52.000	47.463	10.511	1.000	52.000
Hours per week	42.586	6.486	35.000	60.000	36.002	10.875	1.000	110.000
Children present	0.043	0.208	0.000	1.000	0.657	0.475	0.000	1.000
Sample size								
Unweighted	25				2,985			
Weighted	23,315				3,221,126			

Table 3: Estimates of OLS Log Annual Earnings Equations, Males and Females

	(1)		(2)		(3)		(4)		(5)		(6)		(7)	
Males (n = 3,334)														
Gay	-0.448	0.111 ***	-0.410	0.091 ***	-0.279	0.094 ***	-0.227	0.084 ***	-0.198	0.071 ***	-0.214	0.067 ***	-0.210	0.068 ***
Years of education			0.065	0.005 ***	0.061	0.004 ***	0.060	0.004 ***	0.039	0.005 ***	0.039	0.005 ***	0.039	0.005 ***
Experience			0.031	0.005 ***	0.027	0.005 ***	0.021	0.004 ***	0.020	0.004 ***	0.020	0.004 ***	0.020	0.005 ***
Experience^2/1000			-0.489	0.101 ***	-0.438	0.101 ***	-0.277	0.098 ***	-0.264	0.094 ***	-0.260	0.094 ***	-0.248	0.106 **
Married					0.178	0.024 ***	0.178	0.023 ***	0.157	0.022 ***	0.133	0.023 ***	0.132	0.024 ***
Immigrant							-0.137	0.028 ***	-0.121	0.027 ***	-0.157	0.027 ***	-0.158	0.027 ***
Weeks worked							0.020	0.002 ***	0.020	0.002 ***	0.018	0.002 ***	0.018	0.002 ***
Hours per week							0.009	0.001 ***	0.009	0.001 ***	0.008	0.001 ***	0.008	0.001 ***
Constant	10.768	0.011 ***	9.463	0.081 ***	9.443	0.080 ***	8.157	0.112 ***	8.613	0.128 ***	8.504	0.131 ***	8.503	0.131 ***
Occupation/industry controls	No		No		No		No		Yes		Yes		Yes	
Province controls	No		No		No		No		No		Yes		Yes	
Children present	No		No		No		No		No		No		Yes	
R^2	0.0046		0.1042		0.1196		0.2426		0.3105		0.3253		0.3253	
Females (n = 3,010)														
Lesbian	0.171	0.142	0.069	0.141	0.063	0.144	-0.061	0.134	-0.017	0.121	-0.051	0.120	-0.059	0.120
Years of education			0.109	0.007 ***	0.109	0.007 ***	0.097	0.006 ***	0.049	0.007 ***	0.048	0.006 ***	0.048	0.007 ***
Experience			0.031	0.006 ***	0.031	0.006 ***	0.017	0.005 ***	0.014	0.004 ***	0.015	0.004 ***	0.016	0.005 ***
Experience^2/1000			-0.476	0.141 ***	-0.480	0.143 ***	-0.217	0.118 *	-0.201	0.104 *	-0.210	0.103 **	-0.242	0.114 **
Married					-0.008	0.036	0.060	0.031 *	0.025	0.029	0.004	0.030	0.008	0.030
Immigrant							-0.079	0.038 **	-0.030	0.034	-0.080	0.035 **	-0.078	0.035 **
Weeks worked							0.020	0.002 ***	0.018	0.001 ***	0.017	0.001 ***	0.017	0.001 ***
Hours per week							0.028	0.002 ***	0.027	0.002 ***	0.027	0.002 ***	0.027	0.002 ***
Constant	10.190	0.016 ***	8.278	0.120 ***	8.279	0.120 ***	6.600	0.129 ***	7.548	0.164 ***	7.450	0.172 ***	7.456	0.172
Occupation/industry controls	No		No		No		No		Yes		Yes		Yes	
Province controls	No		No		No		No		No		Yes		Yes	
Children present	No		No		No		No		No		No		Yes	
R^2	0.0004		0.1069		0.1123		0.3796		0.4978		0.5115		0.5116	

Notes: Standard errors are italicized. One, five, and ten per cent levels of significance are denoted by ***, **, and *, respectively. Full regression results are available upon request.

Table 4: Robustness Tests of OLS Log Annual Earnings Equations, Males and Females

	(1) Comparison model		(2) Common-law only		(3) Categorical educ		(4) FT/FY workers		(5) Log wages		(6) (4) + (5)	
Males												
Gay	-0.210	0.068 ***	-0.203	0.077 ***	-0.189	0.070 ***	-0.173	0.076 **	-0.162	0.073 **	-0.109	0.078
Years of education	0.039	0.005 ***	0.056	0.011 ***			0.041	0.005 ***	0.037	0.006 ***	0.040	0.005 ***
Experience	0.020	0.005 ***	0.016	0.008 **	0.019	0.005 ***	0.025	0.005 ***	0.013	0.005 ***	0.023	0.005 ***
Experience^2/1000	-0.248	0.106 **	-0.132	0.173	-0.231	0.107 **	-0.390	0.116 ***	-0.064	0.120	-0.347	0.121 ***
Married	0.132	0.024 ***			0.133	0.024 ***	0.130	0.024 ***	0.127	0.026 ***	0.137	0.026 ***
Immigrant	-0.158	0.027 ***	-0.053	0.082	-0.170	0.027 ***	-0.136	0.026 ***	-0.136	0.030 ***	-0.126	0.027 ***
Weeks worked	0.018	0.002 ***	0.017	0.002 ***	0.018	0.002 ***	0.015	0.004 ***				
Hours per week	0.008	0.001 ***	0.005	0.002 **	0.008	0.001 ***	0.007	0.001 ***				
Constant	8.503	0.131 ***	8.697	0.255 ***	8.707	0.162 ***	8.721	0.236 ***	2.250	0.122 ***	2.182	0.122 ***
Occupation/industry controls	Yes		Yes		Yes		Yes		Yes		Yes	
Province controls	Yes		Yes		Yes		Yes		Yes		Yes	
Children present	Yes		Yes		Yes		Yes		Yes		Yes	
R^2	0.3253		0.3398		0.3324		0.2808		0.1821		0.2460	
n =	3,334		684		3,334		2,908		3,334		2,908	
Females												
Lesbian	-0.059	0.120	-0.106	0.122	-0.072	0.124	-0.038	0.118	-0.023	0.112	-0.027	0.120
Years of education	0.048	0.007 ***	0.050	0.012 ***			0.058	0.007 ***	0.051	0.007 ***	0.053	0.007 ***
Experience	0.016	0.005 ***	0.026	0.008 ***	0.017	0.005 ***	0.019	0.005 ***	0.003	0.005	0.017	0.005 ***
Experience^2/1000	-0.242	0.114 **	-0.486	0.221 **	-0.262	0.115 **	-0.244	0.121 **	0.056	0.125	-0.200	0.122 *
Married	0.008	0.030			0.006	0.030	0.021	0.028	0.027	0.032	0.019	0.029
Immigrant	-0.078	0.035 **	-0.118	0.118	-0.097	0.035 ***	-0.090	0.035 ***	-0.101	0.037 ***	-0.084	0.036 **
Weeks worked	0.017	0.001 ***	0.017	0.002 ***	0.018	0.001 ***	0.008	0.006				
Hours per week	0.027	0.002 ***	0.025	0.004 ***	0.026	0.002 ***	0.009	0.003 ***				
Constant	7.456	0.172	7.731	0.437 ***	8.478	0.267 ***	8.846	0.380 ***	1.935	0.162 ***	2.043	0.246 ***
Occupation/industry controls	Yes		Yes		Yes		Yes		Yes		Yes	
Province controls	Yes		Yes		Yes		Yes		Yes		Yes	
Children present	Yes		Yes		Yes		Yes		Yes		Yes	
R^2	0.5116		0.5477		0.5193		0.3898		0.2422		0.3695	
n =	3,010		648		3,010		1,898		3,010		1,898	

Notes: See notes to Table 3.