SEXUAL ORIENTATION AND EARNINGS: NEW EVIDENCE FROM THE UNITED KINGDOM

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Most prior work on sexual orientation and labor market earnings has relied either on individual-level surveys with small samples of sexual minorities or on large samples of same-sex couples. For this study, the authors use a large individual-level data set from the United Kingdom that allows investigation of both constructs. They replicate the well-documented lesbian advantage and gay male penalty in couples-based comparisons but show that these effects are absent in similarly specified models of non-partnered workers. This finding suggests that couples-based samples overstate the true earnings differences attributable to a minority sexual orientation as well as that household specialization plays an important role in the lesbian earnings advantage. Results also show that no significant lesbian advantage or gay male penalty is observed in London. Finally, they find robust evidence that bisexual men earn significantly less than otherwise similar heterosexual men. The authors discuss how the effects reconcile with theories of specialization and discrimination.

A growing literature in labor economics examines earnings differences between sexual minorities and heterosexuals using population-representative data sets. To identify sexual minorities, researchers have used either: 1) *individual-level data* with self-reports of a gay, lesbian, or bisexual orientation (e.g., Plug and Berkhout 2004; Carpenter 2005, 2008a) or same-sex sexual behavior (e.g., Badgett 1995; Black, Makar, Sanders, and Taylor 2003); or 2) *couples-based data* in which sexual orientation is inferred through same-sex living arrangements and the identification of relationships between individual members of the household (e.g., Allegretto and Arthur 2001;

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Arabsheibani, Marin, and Wadsworth 2004; Antecol, Jong, and Steinberger 2008).[1] Two stylized facts have emerged from couples-based investigations: 1) men in cohabiting same-sex couples earn significantly less than men in different-sex relationships; and 2) women in cohabiting same-sex couples earn significantly more than women in different-sex relationships. By contrast, studies with individual-level sexual orientation information generally (but not always) display smaller or insignificant earnings differences.

Because sexual minorities are only a small part of the overall population, the literature has struggled with a trade-off between representativeness and sample size. Couples-based data sets, such as population censuses in Canada, the United States, and the United Kingdom, yield very large samples of same-sex couples but do not identify the sexual identity of non-partnered individuals. By contrast, data sets with individual-level information on sexual orientation or sexual behavior, such as the General Social Survey or the National Health and Nutrition Examination Survey, have generally been much smaller in size, yielding very small numbers of sexual minorities. The few studies with individual-level information on sexual orientation and reasonably large samples of sexual minorities have been limited to single states (e.g., Carpenter 2005), limited to young adults (e.g., Plug and Berkhout 2004; Sabia 2014), or lacked information on labor market earnings (Carpenter 2008a). As a result, it has been difficult to know whether differences in estimated earnings effects of a minority sexual orientation are caused by differences in the samples, populations, or outcomes. Relatedly, it has been difficult to disentangle alternative theories underlying sexual orientation–based differences in labor market outcomes (e.g., specialization versus discrimination).[2]

We overcome these challenges by using confidential versions of the 2012–2014 U.K. Integrated Household Surveys (IHS) to which high-quality labor market earnings data from the country's Annual Population Survey (APS) have been linked. These data allow us to identify large samples of sexual minority individuals—more than 2,500 self-identified lesbians, gay men, and bisexuals (LGB)—through responses to a direct question about sexual orientation. Our sample is considerably larger than other studies that have used individual-level sexual orientation information in the United Kingdom (Bryson 2014 and Uhrig 2015, described below), and indeed ours is the first population-representative data set with information on both sexual orientation and earnings for a large sample of adults from a single country. Moreover, our IHS data permit us to identify not only individual-level sexual orientation but also same-sex partnerships. This scope of data means we can directly test for how measurement of sexual orientation (i.e.,

[1]The limitations of these alternative methods for identifying sexual orientation in large data sets have been discussed at length elsewhere (see, e.g., Carpenter and Gates 2008).

[2]Klawitter's (2015) meta-analysis of studies on this topic published between 1995 and 2012 showed that the sample size of sexual minorities and the measure of sexual orientation (couple-status versus sexual identity or sexual behavior) were both significantly related to the estimated earnings difference associated with a minority sexual orientation.

individual-level self-reports versus same-sex partnerships) is related to earnings differences between sexual minorities and heterosexuals. It also allows us to comment more directly on the possible explanations for earnings differentials. For example, the returns to specialization within the household should accrue to partnered rather than single individuals. By contrast, no clear prediction from economic theory elucidates why partnered or non-partnered sexual minorities should suffer greater or lesser discrimination (although it could be that sexual orientation for partnered sexual minorities is more observable to employers, an issue we discuss below).

We show that having data on both partnered and non-partnered sexual minorities is substantively important. After controlling for observable determinants of earnings (such as education, location, and family structure), we find a positive and statistically significant earnings differential for partnered lesbians compared to partnered heterosexual women but no earnings differential for non-partnered lesbians compared with similarly situated non-partnered heterosexual women. We find a negative and marginally significant earnings penalty for partnered gay men compared to partnered heterosexual men but no earnings differential for non-partnered gay men compared with similarly situated non-partnered heterosexual men. Taking together the overall population of both partnered and non-partnered individuals, we find that the earnings difference associated with a gay sexual orientation for men is near zero, and the associated population-based earnings difference among women associated with a lesbian orientation is a premium of about 5.5% and is statistically significant.

The different results found for partnered and non-partnered sexual minorities, compared to heterosexuals of the same partnership status, are consistent with models of specialization within the household. Traditional heterosexual households specialize in market and non-market work, with disproportionate market activity done by the male partner. Even if same-sex partnerships have the same degree of specialization, it will not be associated with gender. Everything else including degree of specialization being equal, the average partnered gay male will earn less than the average partnered heterosexual male, and the average partnered lesbian will earn more than the average partnered heterosexual female. This effect does not hold when comparing single gay men and lesbians to single heterosexuals, since no household specialization takes place.

In addition to comparing partnered and non-partnered sexual minorities, we establish several other interesting facts about the subgroups experiencing sexual orientation differences in earnings. The lesbian earnings advantage is driven by women without a university degree and by women who live outside of London, not by a metropolitan elite. A significant gay male earnings penalty in samples of older men (45–64 year olds) occurs, consistent with possible historical discrimination against gay men. We also find that bisexual men are estimated to earn significantly less than otherwise similar heterosexual men in the private sector but not in the public sector.

Literature Review

Our study contributes to the literature on sexual orientation and earnings among adults that uses population-representative data sets to identify sexual minorities.[3] Badgett (1995) pioneered studies on this topic by identifying sexual minorities using information on reports of same-sex sexual behavior in the General Social Surveys (GSS), finding a significant gay male earnings penalty and a lesbian earnings advantage. Several follow-up studies found broadly similar results using behavior-based measures in the GSS and other data (Black et al. 2003; Blandford 2003; Carpenter 2007a).

Less consistency is seen in results across studies using data sets that identify sexual minorities through direct questions about sexual orientation identity (as opposed to same-sex sexual behavior). Carpenter (2008a) examined data from a large health survey in Canada and found that gay men had significantly lower personal incomes than did otherwise similar heterosexual men whereas lesbians had significantly higher personal incomes than did heterosexual women. Carpenter (2005) studied adults in California and found no evidence of significant earnings differentials for gay men or lesbians. Uhrig (2015) used data from the U.K. Household Longitudinal Study (UKHLS) collected in 2011–2012 and found a statistically significant bisexual male earnings penalty of about 12% and a statistically significant lesbian earnings premium of about 12%, with no earnings differences experienced by gay men or bisexual women. Bryson (2014) used data from the U.K.'s 2011 Workplace and Employment Relations Study (WERS) and found that bisexual men earn significantly less than similarly situated heterosexual men, whereas gay men and lesbians do not in general earn wages different from those earned by heterosexuals.

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[3]We do not review here correspondence studies that consistently show evidence of hiring discrimination against sexual minorities. For the United States, Tilscik (2011) found strong evidence of discrimination against fictitious applicants who appeared to be gay. Similar experiments in other countries have returned evidence of differential treatment against lesbians in Austria (Weichselbaumer 2003), against gay men in Greece (Drydakis 2009), and against gay men and lesbians in Sweden (Ahmed, Andersson, and Hammarstedt 2013). For tractability, we restrict attention in this article to studies of prime age adults similar to the sample we study here. A handful of studies have examined data on college students or young adults. Plug and Berkhout (2004) studied young people in the Netherlands and found very small earnings differences associated with a gay or lesbian orientation. Carpenter (2008b) examined young women in Australia and found that young lesbians had significantly lower personal incomes than similarly situated young heterosexual women. Sabia (2014, 2015) studied young adults in the United States from the National Longitudinal Study of Adolescent Health (Add Health) and found that young gay men earn significantly less than young heterosexual men and that this difference cannot be explained by numerous controls for family- and individual-level heterogeneity. By contrast, young lesbians did not earn significantly different wages from otherwise similar young heterosexual women in the young adult sample. Finally, although we focus only on studies using large samples of data from representative surveys, it is worth noting that one study provides evidence on sexual orientation and salary among U.K. academics. Frank (2006) found no evidence that gay or lesbian academics in the United Kingdom experience salary differences compared to otherwise similar heterosexual academics, although he does find differences in promotions.

To gain larger sample sizes, much recent work on this topic has used data from population censuses or administrative register data that identify sexual minorities through same-sex couples. This work was pioneered by a series of papers that used the 1990 Decennial Census to study same-sex unmarried partner couples in the United States (Klawitter and Flatt 1998; Black, Gates, Sanders, and Taylor 2000; Allegretto and Arthur 2001). Klawitter and Flatt (1998) and Allegretto and Arthur (2001) both found that men in same-sex couples in the 1990 Census earned significantly less than similarly qualified men in different-sex couples. Clain and Leppel (2001) used data from the 1990 U.S. Census to show that women in same-sex partnerships earned significantly more than women in different-sex partnerships. Jepsen (2007) and Antecol et al. (2008) both used the 2000 U.S. Census to further explore couples-based wage gaps. Jepsen (2007) found a significant lesbian premium with evidence that this premium was not driven by household specialization. Antecol et al. (2008) found a lesbian premium and a gay male penalty with evidence that the premium might be due to human capital differences and the penalty might be due to discrimination. International studies have also examined sexual orientation–based differences in earnings using couples data sets. Arabsheibani et al. (2004, 2005) used the U.K. Labour Force Survey and found a couples-based gay male penalty and a lesbian premium, while Ahmed and Hammarstedt (2010) used Swedish register data to identify couples who had formalized their relationship with the government and found a gay male earnings penalty.

Studies that infer sexuality from partnership are important since they tend to have much larger sample sizes than the existing individual-level samples in the literature. However, this work raises the question of whether partnered sexual minorities are representative of the overall sexual minority population. Carpenter (2008a) had a sufficiently large Canadian data set to provide a first answer to that question. His study found much larger differences in partner-based comparisons of total personal income versus population-based comparisons. Total personal income may be misleading though because it includes significant government transfer income. Transfers based on marital status or the presence of children in the household are likely to be correlated with sexual orientation. In the current study, we have data on labor market earnings and provide the first country-level study of sexual orientation and labor market earnings for a large population-representative sample of adults using large samples of sexual minority individuals.

Data Description and Empirical Approach

Our data come from a special license of confidential versions of the 2012–2014 U.K. Integrated Household Survey (IHS) with Annual Population Survey (APS) earnings variables linked to the individual records. The IHS is a large, representative household survey of U.K. residents similar to the March Current Population Survey in the United States. Approximately

350,000 individuals are sampled in each wave of the IHS. For our purposes, the key feature of these data is that the IHS asked respondents a direct question about their sexual orientation. Most studies in the literature on sexual orientation and earnings have relied on indirect methods for identifying sexual minorities, such as same-sex sexual behavior (as in some public health surveys) or, more commonly, the presence of a cohabiting same-sex partner (such as the UKLFS that was used in Arabsheibani et al. 2004, 2005). Since people who do not engage in sexual relations can still identify as sexual minorities, and since non-partnered sexual minorities may have outcomes that differ from cohabiting partnered sexual minorities, our individual-level data on self-reported sexual orientation provide a more comprehensive sample of the overall population of LGB individuals. Note that we also have information on which of the self-reported sexual minority individuals are in partnerships.

The IHS contains both a telephone and a face-to-face survey mode. In the telephone mode, respondents age 16 and older are told, "I will now read out a list of terms people sometimes use to describe how they think of themselves. (INTERVIEWER: read list to end without pausing. Note that 'Heterosexual or Straight' is one option; 'Gay or Lesbian' is one option.) 1. Heterosexual or Straight, 2. Gay or Lesbian, 3. Bisexual, 4. Other (Spontaneous DK/Refusal). As I read the list again please say 'yes' when you hear the option that best describes how you think of yourself. (INTERVIEWER: Pause briefly after each option during second reading)." In the face-to-face interviews, participants age 16 and older are shown a card that has the terms printed next to a number (such as "27. Heterosexual/Straight"). Individuals are then asked, "Which of the options on this card best describes how you think of yourself? Please just read out the number next to the description." Notably, sexual minorities do not have to verbalize the words "gay," "lesbian," or "bisexual" to indicate their sexual orientation in either the telephone or the face-to-face survey modes, which presumably reduces potential stigma.[4] Approximately 1.4 to 1.7% of individuals participating in the survey who are 16 and older self-identified as gay, lesbian, or bisexual in each wave of the IHS, which is similar to other large population-based surveys in the United Kingdom, United States, and Canada (Joloza, Evans, O'Brien, and Potter-Collins 2010).

Individuals are asked about their employment status as well as their gross weekly pay before deductions.[5] In addition to the critical questions on

[4]In our empirical models below we include a dummy variable for interviews that were conducted face-to-face. The sexual orientation question was not asked in cases of proxy interviews for which a different member of the household provided the information. Of the interviews conducted, 44% were either by proxy or for respondents under age 16. We exclude these observations without sexual orientation information.

[5]In results not reported but available upon request, our main results are robust to excluding a small number of observations (less than one-tenth of 1% of the full sample) with earnings less than £20 and more than £7500 per week.

sexual orientation and earnings, the IHS includes standard demographic characteristics such as sex, age, race/ethnicity, educational attainment, partnership/marital status, and the presence of children in the household. We restrict attention to individuals age 25 and older to focus on individuals most likely to have completed their education.[6]

We first estimate the relationship between sexual orientation and employment by estimating linear probability models separately by sex and partnership status.[7] These models take the form:

$$(1) \qquad \text{EMPLOYED}_i = \alpha + \beta_1 X_i + \beta_2(\text{GAY/LESBIAN})_i + \beta_3(\text{BISEXUAL})_i + \varepsilon_i$$

where EMPLOYED is an indicator variable for being employed or being full-time employed, depending on the model. X is a vector of demographic variables that (depending on the model) include age and its square; education dummies (degree levels, higher education qualification below degree level, A-levels, O-levels); race dummies (white, black, Asian, mixed race, other race); location dummies (London, England excluding London, Scotland, and Northern Ireland); and dummy variables for the presence of children in the household (any child younger than age 5, any child at least age 5). Note that in this model the relevant excluded category for sexual orientation is composed of individuals who report a heterosexual orientation. In all models we separately include dummy variables for people who reported "other" to the sexual orientation question, who refused to provide a response, or who reported "don't know" (although we do not report the coefficients in the results tables).[8] We also include in all models a dummy variable for interviews performed face-to-face. We estimate standard errors robust to heteroscedasticity.

To assess the relationship between sexual orientation and earnings we estimate earnings models separately for males and females and for partnered and non-partnered individuals, among the sample of full-time workers. These models take the form:

$$(2) \quad \text{LOG EARNINGS}_i = \alpha + \beta_1 X_i + \beta_2(\text{GAY/LESBIAN})_i + \beta_3(\text{BISEXUAL})_i + \varepsilon_i$$

where all variables are as described above.[9]

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[6]In results not reported but available upon request, we found that lowering our minimum age in the sample to 18 does not meaningfully change the results.

[7]Partnership is based on a dummy variable indicating the person is in any type of partnership (marriage, registered civil union, or a cohabiting partnership not officially recognized by the government).

[8]Appendix Table A.1 reports demographic characteristics for individuals who did not provide a valid response to the sexual orientation question.

[9]We also estimated models in which we included job characteristics (a private-sector dummy, establishment size dummies, industry dummies, and occupation dummies), though a challenge in doing so is that these variables may be channels through which labor market discrimination operates, and thus it does not make sense to control for them in an attempt to distinguish discrimination from specialization. Prior work has demonstrated strong evidence of occupational sorting by sexual orientation (Antecol et al. 2008).

Results

Descriptive Statistics

Table 1 presents descriptive statistics for demographic and employment characteristics from the IHS data broken down by self-reported sexual orientation and gender.[10] Self-identified gay men and bisexual men (compared to heterosexual men) are significantly more likely to have a university degree, less likely to be partnered, less likely to have children in the household, and more likely to live in London. Gay men (but not bisexual men) are less likely to belong to a racial/ethnic minority and more likely to live in England (rather than Wales, Scotland, or Northern Ireland). In the raw data, gay men have significantly higher average weekly earnings than do heterosexual men, whereas bisexual men have significantly lower average weekly earnings. There is no significant differential in full-time employment among heterosexual men, gay men, and bisexual men.

Self-identified lesbians (compared to heterosexual women) are significantly more likely to have a university degree, less likely to belong to a racial/ethnic minority, less likely to have children in the household, and more likely to live in England and specifically in London. Notably, the partnership and presence of children differences between lesbians and heterosexual women are substantially smaller than those between gay men and heterosexual men. In the raw data, lesbians are significantly more likely to be full-time workers and have higher average weekly earnings than heterosexual women. Bisexual women are significantly more likely than heterosexual women to have a university degree, more likely to be partnered, and more likely to be full-time workers.[11]

Full-Time Employment

In Table 2 we examine the relationship between individual characteristics—including sexual orientation—and full-time employment (the likelihood of any employment is examined in Appendix Table A.2) for men (columns (1) and (2)) and women (columns (3) and (4)).[12] We estimate models separately for the full sample in the top panel (combining partnered and non-partnered people and including a control for being in a partnership), for

[10]We use the subsample of the IHS for which we have earnings information.

[11]Note that our estimates of the proportion of self-identified sexual minorities who report being partnered are independently interesting contributions to the literature since very few data sets have had information on sexual orientation at the individual level, particularly on a large national scale. Table 1 shows that a larger proportion of lesbians reports being partnered compared to gay men (69% of lesbians compared to nearly 50% of gay men). These patterns—that the lesbian partnership rate is very similar to the partnership rate of heterosexual women and that the gay male partnership rate is substantially lower than the partnership rate of heterosexual men—were also found for adults in California (Carpenter and Gates 2008). Black, Sanders, and Taylor (2007) found a similar pattern using data from the GSS that identify sexual minorities from responses about same-sex sexual behavior. Our data also suggest that bisexual men have partnership rates (51.7%) that are more similar to those of gay men than to those of heterosexual men, while those of bisexual women (73.4%) are slightly higher than those of either lesbians or heterosexual women.

[12]Full-time workers are defined as employees working more than 30 paid hours per week (or 25 or more for the teaching professions).

Table 1. Descriptive Characteristics: Demographics

Variable	*Heterosexual men*	*Bisexual men*	*Gay men*	*Heterosexual women*	*Bisexual women*	*Lesbians*
Age	44.91 (10.63)	43.63 (11.30)	41.95 (9.80)	44.23 (10.26)	41.45 (10.18)	40.78 (9.36)
Highest education level						
University degree	0.308 (0.462)	0.409 (0.493) [A]	0.470 (0.499) [A]	0.307 (0.461)	0.427 (0.495) [B]	0.440 (0.497) [B]
Some higher education	0.118 (0.322)	0.119 (0.325)	0.121 (0.327)	0.131 (0.337)	0.103 (0.304)	0.139 (0.347)
A ("advanced") level	0.255 (0.436)	0.165 (0.372) [A]	0.202 (0.401) [A]	0.194 (0.395)	0.166 (0.372)	0.179 (0.383)
O ("ordinary") level	0.210 (0.407)	0.165 (0.372)	0.158 (0.365) [A]	0.278 (0.448)	0.252 (0.435)	0.194 (0.396) [B]
White	0.905 (0.293)	0.795 (0.405) [A]	0.952 (0.215) [A]	0.928 (0.258)	0.911 (0.284)	0.963 (0.189) [B]
Partnered	0.737 (0.440)	0.517 (0.501) [A]	0.497 (0.500) [A]	0.665 (0.472)	0.734 (0.442) [B]	0.690 (0.463)
Any child < 16	0.278 (0.448)	0.182 (0.387) [A]	0.012 (0.110) [A]	0.340 (0.474)	0.305 (0.461)	0.129 (0.335) [B]
England	0.744 (0.436)	0.744 (0.437)	0.829 (0.377) [A]	0.730 (0.444)	0.800 (0.401) [B]	0.789 (0.408) [B]
London	0.087 (0.282)	0.210 (0.409) [A]	0.226 (0.419) [A]	0.079 (0.270)	0.163 (0.370) [B]	0.113 (0.317) [B]
N. Ireland, Wales, and Scotland	0.256 (0.436)	0.256 (0.437)	0.171 (0.377) [A]	0.270 (0.444)	0.200 (0.401) [B]	0.211 (0.408) [B]
Average weekly earnings	639.00 (515.30)	527.50 (316.30)[A]	677.10 (814.70) [A]	396.00 (411.80)	409.30 (278.40)	515.20 (310.10) [B]
Full-time worker	0.917 (0.275)	0.903 (0.296)	0.903 (0.296)	0.564 (0.496)	0.615 (0.487) [B]	0.807 (0.395) [B]
Sample size	73,318	176	1,220	94,810	429	839

Source: U.K. Integrated Household Surveys (IHS) 2012–2014.

Notes: Demographics are from those with earnings information. Weighted means (standard deviations). Not reported (but included in the models) are 7,020 men and 7,469 women who, when asked about sexual orientation, responded "other," "don't know," or who refused a response.

[A]Superscript letter A means statistically significant difference ($p < 0.05$) between the groups of gay men and bisexual men in contrast to the heterosexual men.

[B]Superscript letter B means statistically significant difference ($p < 0.05$) between the groups of lesbians and bisexual women in contrast to the heterosexual women.

Table 2. Sexual Orientation and Full-Time Employment

	Males		*Females*	
Controls for →	*(1) Sexual orientation + year dummies*	*(2) + demographic characteristics (age, race, education, any kids, residence) + year dummies*	*(3) Sexual orientation + year dummies*	*(4) + demographic characteristics (age, race, education, any kids, residence) + year dummies*
Full sample				
Gay/Lesbian	0.020	–0.045***	0.230***	0.082***
	(0.013)	(0.012)	(0.017)	(0.017)
Bisexual	–0.107***	–0.119***	–0.022	–0.054***
	(0.034)	(0.032)	(0.021)	(0.020)
R-squared	0.001	0.164	0.003	0.161
N	121,206	121,206	175,285	175,285
Non-partnered				
Gay/Lesbian	0.092***	–0.008	0.099***	–0.052*
	(0.019)	(0.018)	(0.032)	(0.031)
Bisexual	–0.069	–0.117***	–0.056	–0.146***
	(0.046)	(0.043)	(0.039)	(0.035)
R-squared	0.003	0.171	0.002	0.202
N	39,508	39,508	62,650	62,650
Partnered				
Gay/Lesbian	0.025	–0.061***	0.300***	0.154***
	(0.018)	(0.016)	(0.020)	(0.019)
Bisexual	–0.029	–0.029	–0.004	–0.014
	(0.047)	(0.047)	(0.025)	(0.023)
R-squared	0.001	0.178	0.004	0.149
N	81,698	81,698	112,635	112,635

Source: U.K. IHS 2012–2014.

Notes: Adults age 25+. Specific controls in columns (2) and (4) include a dummy variable for being interviewed face-to-face; age and its square; dummy variables for degree levels, higher education (HE qualification below degree level), A-levels, O-levels; race/ethnicity dummies (white, black, Asian, mixed race, other race); location dummies (London, England, Scotland, and Northern Ireland); the presence of children (any child < 5 and any child ≥ 5) in the household; and year dummies. Columns (2) and (4) in the top panel also include a control for being in any kind of partnership.

*Significant at 10%; ** at 5%; *** at 1%.

non-partnered individuals in the middle panel, and for partnered individuals in the bottom panel. Each column shows coefficients on the gay/lesbian and bisexual indicator variables; the odd-numbered columns report estimates from models that control for sexual orientation only, and the even-numbered columns add all the individual demographic characteristics (including residential location and presence of children). In column (2) of Table 2, we find that gay men are 4.5 percentage points less likely to be working full-time, and bisexual men are 11.9 percentage points less likely, than otherwise similar heterosexual men. Notably, this difference for gay men is driven by the partnered sample. Partnered gay men are 6.1 percentage points less likely to be working full-time than otherwise similar partnered heterosexual men. By contrast, the difference for bisexual men is driven

primarily in the non-partnered sample, where non-partnered bisexual men are 11.7 percentage points less likely to be working full-time than otherwise similar non-partnered heterosexual men. These patterns are qualitatively identical for the analyses of the likelihood of any employment in Appendix Table A.2.

The results for women, column (4) of Table 2, for full-time employment show that lesbians are 8.2 percentage points more likely to be working full-time than otherwise similar heterosexual women, whereas bisexual women are 5.4 percentage points less likely to be working full-time. The lower likelihood of working full-time among bisexual women compared to heterosexual women is entirely driven by comparisons in samples of non-partnered women, similar to the pattern observed for men. As with gay males, the lesbian difference in full-time employment (although of opposite sign to that for gay males) is predominantly driven by the partnered sample. Partnered lesbians are 15.4 percentage points more likely to be working full-time than similar partnered heterosexual women. What differs for lesbians compared to gay males is that the differential reverses when we look at the likelihood that lesbians have any employment (as opposed to full-time employment) in the sample of partnered women after controlling for observables (see Appendix Table A.2). This difference arises since heterosexual women in partnerships are more likely than lesbians to engage in part-time work.

These results are consistent with the model of specialization in traditional heterosexual partnerships. Partially, this may be the result of a substantially lower likelihood of children in the household for both gay men and lesbians, compared to their heterosexual counterparts (Table 1), which may reduce the need for partnered gay men to work full-time in the same way as partnered heterosexual men. Conversely, lesbians on average have fewer childcare responsibilities than heterosexual women and can remain in full-time employment (Black et al. 2007).

Earnings

Table 3 presents estimates of the association between minority sexual orientation and earnings among full-time workers. We focus on full-time workers to be consistent with most of the prior literature; we consider all workers in Tables 4A and 4B. The format of Table 3 follows Table 2 in that the top panel shows results for the full sample (combining partnered and non-partnered people and including a control for being in a partnership), the middle panel examines non-partnered individuals, and the bottom panel examines partnered individuals. Columns (1) and (2) present results for men and columns (3) and (4) present results for women; the odd-numbered columns include only the sexual orientation variables and year dummies, whereas the even-numbered columns add all the demographic and family characteristics.

The results in Table 3 are striking. For all comparisons without controls for demographic characteristics in columns (1) and (3), we find that gay men and lesbians earn significantly more than heterosexual men and women, a finding that was previewed in Table 1. More important, once we control for

Table 3. Sexual Orientation and Log Earnings, Full-Time Workers

	Males		*Females*	
Controls for →	*(1) Sexual orientation + year dummies*	*(2) + demographic characteristics (age, race, education, any kids, residence) + year dummies*	*(3) Sexual orientation + year dummies*	*(4) + demographic characteristics (age, race, education, any kids, residence) + year dummies*
All				
Gay/Lesbian	0.061***	–0.027	0.124***	0.054***
	(0.021)	(0.019)	(0.024)	(0.021)
Bisexual	–0.134**	–0.149***	0.004	–0.036
	(0.053)	(0.044)	(0.035)	(0.032)
R-squared	0.001	0.198	0.001	0.231
N	75,017	75,017	59,221	59,221
Non-partnered				
Gay/Lesbian	0.126***	–0.006	0.115**	0.029
	(0.027)	(0.025)	(0.047)	(0.037)
Bisexual	–0.038	–0.110	0.013	–0.097*
	(0.082)	(0.068)	(0.053)	(0.050)
R-squared	0.007	0.189	0.003	0.247
N	19,905	19,905	22,385	22,385
Partnered				
Gay/Lesbian	0.062*	–0.050*	0.124***	0.067***
	(0.032)	(0.028)	(0.028)	(0.025)
Bisexual	–0.164**	–0.189***	–0.002	–0.009
	(0.066)	(0.057)	(0.044)	(0.040)
R-squared	0.001	0.191	0.002	0.224
N	55,112	55,112	36,836	36,836

Source: U.K. IHS 2012–2014.

Notes: Adults age 25+. Specific controls in columns (2) and (4) include a dummy variable for being interviewed face-to-face; age and its square; dummy variables for degree levels, higher education (HE qualification below degree level), A-levels, O-levels; race/ethnicity dummies (white, black, Asian, mixed race, other race); location dummies (London, England, Scotland, and Northern Ireland); the presence of children (any child < 5 and any child ≥ 5) in the household; and year dummies. Columns (2) and (4) in the top panel also include a control for being in any kind of partnership.

*Significant at 10%; ** at 5%; *** at 1%.

education, age, and other characteristics in columns (2) and (4), we find important differences by partnership status. In the bottom panel of columns (2) and (4), comparing only partnered sexual minorities to otherwise similar partnered heterosexuals who are full-time workers—as is common in most of the prior literature—we find the usual pattern that partnered gay men earn significantly less than otherwise similar partnered heterosexual men, whereas partnered lesbians earn significantly more than otherwise similar partnered heterosexual women. By contrast, the middle panel of columns (2) and (4) for non-partnered individuals returns much smaller coefficients on the gay/lesbian indicator variables that are not statistically significant. The results for the full sample in the top panel of columns (2) and (4) confirm that the overall earnings effects of a gay or lesbian orientation are smaller than those

Table 4A. Sexual Orientation and Log Earnings, Various Subsamples, Males

	(1) Baseline: full-time workers (Table 3, column (2))	*(2) All workers*	*(3) London residents, full-time workers*	*(4) Non-London residents, full-time workers*	*(5) Private-sector full-time workers*	*(6) Public-sector full-time workers*
All males						
Gay	–0.027	–0.041**	0.051	–0.070***	–0.022	–0.030
	(0.019)	(0.021)	(0.039)	(0.020)	(0.024)	(0.027)
Bisexual	–0.149***	–0.185***	–0.190**	–0.126***	–0.174***	–0.017
	(0.044)	(0.062)	(0.076)	(0.054)	(0.051)	(0.079)
R-squared	0.198	0.182	0.179	0.191	0.199	0.199
N	75,017	81,734	6,793	68,224	58,539	16,459
Non-partnered males						
Gay	–0.006	–0.035	0.057	–0.041	0.011	–0.026
	(0.025)	(0.028)	(0.050)	(0.027)	(0.030)	(0.041)
Bisexual	–0.110	–0.134	–0.166	–0.095	–0.122*	–0.029
	(0.068)	(0.084)	(0.130)	(0.080)	(0.074)	(0.112)
R-squared	0.189	0.175	0.169	0.176	0.188	0.198
N	19,905	21,910	2,237	17,668	15,804	4,089
Partnered males						
Gay	–0.050*	–0.049	0.049	–0.094***	–0.059	–0.013
	(0.028)	(0.031)	(0.062)	(0.029)	(0.037)	(0.036)
Bisexual	–0.189***	–0.242***	–0.220**	–0.168**	–0.235***	–0.023
	(0.057)	(0.091)	(0.100)	(0.072)	(0.068)	(0.100)
R-squared	0.191	0.174	0.187	0.183	0.193	0.194
N	55,112	59,824	4,556	50,556	42,735	12,370

Source: U.K. IHS 2012–2014.

Notes: Adults age 25+. Specification is Table 3, column (2). For details on control variables, see notes to Table 3. Models in the top panel also include a control for being in any kind of partnership.
*Significant at 10%; ** at 5%; *** at 1%.

implied by the partner-based comparisons, and only the estimate for lesbians is statistically significant in the combined sample. We also find a bisexual male earnings penalty relative to similarly situated heterosexual men that is approximately equal in partnered and non-partnered comparisons; by contrast, no earnings difference resulted for bisexual women compared to otherwise similar heterosexual women, except for a marginally significant bisexual female earnings penalty among non-partnered individuals.[13]

[13]Appendix Table A.3 reports the values of all the coefficients in the fully saturated model (columns (2) and (4) in Table 3). Appendix Tables A.4 and A.5 (for men and women, respectively) show that these same basic patterns are robust to controlling additionally for sector of employment, establishment size, and industry of employment (either alone or in combination). Occupation controls do matter in one instance, however: the lesbian premium for non-partnered individuals only obtains significance after accounting for unrestricted occupation controls; including controls for establishment size, private sector, and industry dummies alone or in combination does *not* return a significant lesbian premium in the non-partnered sample. This result confirms prior work that occupational sorting is important for understanding sexual orientation–based differences in labor market outcomes (Plug, Webbing, and Martin 2014).

Table 4B. Sexual Orientation and Log Earnings, Various Subsamples, Females

	(1) Baseline: full-time workers (Table 3, column (4))	*(2) All workers*	*(3) London residents, full-time workers*	*(4) Non-London residents, full-time workers*	*(5) Private-sector full-time workers*	*(6) Public-sector full-time workers*
All females						
Lesbian	0.054***	0.135***	0.014	0.063***	0.044	0.067**
	(0.021)	(0.028)	(0.071)	(0.020)	(0.028)	(0.030)
Bisexual	–0.036	–0.062	–0.059	–0.030	–0.048	–0.020
	(0.032)	(0.039)	(0.064)	(0.037)	(0.044)	(0.041)
R-squared	0.231	0.224	0.180	0.219	0.211	0.243
N	59,221	103,547	5,753	53,468	33,695	25,521
Non-partnered females						
Lesbian	0.029	–0.014	–0.000	0.036	0.008	0.063
	(0.037)	(0.064)	(0.092)	(0.040)	(0.051)	(0.055)
Bisexual	–0.097*	0.146**	–0.119	–0.094*	–0.087	–0.120
	(0.050)	(0.060)	(0.132)	(0.054)	(0.059)	(0.084)
R-squared	0.247	0.279	0.185	0.233	0.221	0.273
N	22,385	34,792	2,749	19,636	13,259	9,122
Partnered females						
Lesbian	0.067***	0.199***	0.036	0.075***	0.064*	0.072**
	(0.025)	(0.029)	(0.098)	(0.024)	(0.034)	(0.036)
Bisexual	–0.009	–0.040	–0.029	–0.003	–0.027	0.011
	(0.040)	(0.049)	(0.073)	(0.048)	(0.060)	(0.045)
R-squared	0.224	0.203	0.190	0.212	0.208	0.230
N	36,836	68,755	3,004	33,832	20,436	16,399

Source: U.K. IHS 2012–2014.

Notes: Adults age 25+. Specification is Table 3, column (4). For details on control variables, see notes to Table 3. Models in the top panel also include a control for being in any kind of partnership.
*Significant at 10%; ** at 5%; *** at 1%.

In Tables 4A and 4B and 5A and 5B, we report the sexual orientation coefficients in log earnings regressions for various subsamples, following the baseline specification in columns (2) and (4) of Table 3 for males and females, respectively. In addition to the estimates of the fully saturated model for full-time workers (reprinted in column (1) of Tables 4A and 4B and 5A and 5B for comparison purposes), we show results for samples that include all workers (including part-time workers) in column (2) of Tables 4A and 4B. These models include a control for being a full-time worker. For men, adding part-time workers makes the negative gay male earnings effect become statistically significant, primarily because of an increase in the estimated negative earnings effect of a gay orientation for non-partnered men when part-time workers are added to the model. For women, the original patterns in column (4) of Table 3 remain, though the magnitudes on the lesbian coefficient are much larger.

These earnings results shed light on the differential results in the literature when the sample is the full population of self-identified sexual minorities compared to samples that identify only those sexual minority individuals who are in partnerships. By having a large sample with both

individual-level self-identification and partnership status, our results directly confirm that the significant earnings differentials are predominantly observed in partner-based samples.

Additional Earnings Effects

Columns (3) and (4) of Tables 4A and 4B examine earnings differences when separating the sample by residence in London. Prior work has found this to be an important feature for understanding earnings of gay men (Arabsheibani et al. 2004). Although many differences separate London from the rest of the United Kingdom, one of the most salient in this context is that discrimination on the basis of sexual orientation is less likely to occur in London. Table 1 indicated London is a disproportionately popular residence choice for gay and bisexual men and lesbian and bisexual women. We find in column (3) of Table 4A that the estimated coefficient on the gay male indicator is positive in sign (suggesting a gay male premium in London), though it is not statistically significant. By contrast, we estimate in column (4) that gay men outside of London experience a significant wage penalty, and again this penalty is larger in partner-based samples. For bisexual men we estimate sizable earnings penalties both inside and outside of London, though the bisexual male coefficients are not statistically different from each other in the London versus non-London comparisons. These London-based patterns for men are interesting, as one could imagine that gay men would earn significantly less in London to compensate them for the city's more progressive attitudes. Instead, it appears that gay men with higher unobservable attributes may choose to move to London, or alternatively, London employers have less of a taste for discrimination.[14]

For women in Table 4B we also find an intriguing difference when we stratify by residence in London. Specifically, we find that the entire lesbian earnings advantage is found outside of London, with much smaller and statistically insignificant lesbian coefficients in London. Moreover, the London lesbian differential is the exact opposite of the finding for gay men (who are estimated to do systematically better than their heterosexual male counterparts only inside London). We find no strong difference in bisexual female earnings by residence inside or outside of London.

Columns (5) and (6) of Tables 4A and 4B examine earnings effects of a minority sexual orientation for full-time workers separately by public- and private-sector employment. This margin is potentially interesting since one might expect there to be stronger anti-discrimination protections in the public sector. In the United Kingdom, the public sector has a "positive duty" to

[14]The disproportionately high representation of gay men and lesbians in London could also be related to their lower likelihood of having children in the household in a way that interacts strongly with differential returns to household specialization for sexual minorities compared to heterosexuals. Black, Gates, Sanders, and Taylor (2002) argued that the spatial distribution of gay and lesbian couples into disproportionately expensive, high-amenity locations reflects their differential consumption of non-child goods.

address discrimination that goes beyond the relatively passive requirement upon the private sector not to discriminate.[15] Despite this, we find no meaningful differences in earnings effects of a gay sexual orientation for men in Table 4A by sector of employment. There is, however, some indirect evidence from columns (5) and (6) of Table 4A regarding possible discrimination against bisexual men: although bisexual men suffer an extremely large and statistically significant earnings penalty in the private sector, the estimated penalty in the public sector is small and insignificant. We acknowledge that the presence of a bisexual male earnings penalty and the absence of a gay male earnings penalty is puzzling and on its face is difficult to reconcile with simple theories of discrimination. For women, we do estimate a larger lesbian premium for public-sector workers, though the estimate for the public-sector sample is not statistically distinguishable from the insignificant lesbian coefficient in the private-sector sample in column (5) of the top row of Table 4B.

Tables 5A and 5B present further results by demographic group, and the format of these tables follows that of Tables 4A and 4B (including that we reprint the full sample estimates in column (1)). Columns (2) and (3) of Tables 5A and 5B present results for full-time workers of ages 25–45 and 46–65, respectively; columns (4) and (5) present results for full-time workers with at least some university education compared to those without any university education.

Results in Table 5A for men return evidence that older gay men experience an earnings penalty relative to similarly situated older heterosexual men. For women in Table 5B we document that the lesbian earnings premium is much larger and stronger in the sample of women without any university education. This finding is interesting since it has been hypothesized that highly educated sexual minorities might be more able to avoid some of the negative earnings effects of discrimination in the labor market; the fact that the lesbian advantage is observed in the relatively lower-educated sample is less consistent with a simple taste-based discrimination explanation.

Effects by Head of Household Status

Our argument on specialization and the lesbian earnings premium and the gay male penalty was based on the gendered nature of heterosexual household specialization. The argument would hold if lesbian and gay male households specialized to the same degree as heterosexual households. If diminishing returns to market specialization occur, however, then if an average lesbian or gay male household specializes less than an average heterosexual household, the lesbian premium would be increased or the gay male penalty would be decreased. Likewise, if an average lesbian or gay male household specializes more than an average heterosexual household, the lesbian premium would be lessened or the gay male penalty would be increased. Of course, it is of interest in its own right as to whether

[15]Prior work on different U.K. data than we use here shows that lesbians earn relatively higher wages at employers with explicit anti-discrimination protections compared to those without (Bryson 2014).

Table 5A. Sexual Orientation and Log Earnings, by Demographics, Males

	(1) Baseline: full-time workers (Table 3, column (2))	*(2) 25–45 year olds, full-time workers*	*(3) 46–65 year olds, full-time workers*	*(4) Education greater than A-levels, full-time workers*	*(5) Education A-levels or less, full-time workers*
All males					
Gay	–0.027	0.001	–0.092***	–0.029	–0.021
	(0.019)	(0.023)	(0.032)	(0.024)	(0.029)
Bisexual	–0.149***	–0.161***	–0.124*	–0.195***	–0.138*
	(0.044)	(0.055)	(0.070)	(0.057)	(0.074)
R-squared	0.198	0.214	0.177	0.111	0.087
N	75,017	39,069	35,948	32,640	38,656
Non-partnered males					
Gay	–0.006	0.007	–0.041	–0.023	0.039
	(0.025)	(0.031)	(0.039)	(0.033)	(0.036)
Bisexual	–0.110	–0.094	–0.114	–0.159*	–0.126
	(0.068)	(0.089)	(0.088)	(0.089)	(0.115)
R-squared	0.189	0.206	0.173	0.108	0.073
N	19,905	10,814	9,091	8,219	10,457
Partnered males					
Gay	–0.050*	–0.011	–0.134***	–0.035	–0.084*
	(0.028)	(0.033)	(0.050)	(0.036)	(0.047)
Bisexual	–0.189***	–0.221***	–0.121	–0.227***	–0.159*
	(0.057)	(0.066)	(0.105)	(0.075)	(0.093)
R-squared	0.191	0.210	0.167	0.101	0.080
N	55,112	28,255	26,857	24,421	28,199

Source: U.K. IHS 2012–2014.
Notes: Adults age 25+. Specification is Table 3, column (2). For details on control variables, see notes to Table 3. Models in the top panel also include a control for being in any kind of partnership.
*Significant at 10%; ** at 5%; *** at 1%.

specialization in lesbian or gay partnerships is less than in traditional heterosexual households.

We use information in the IHS to determine whether an individual in a partnership is a "household head" or "not a household head."[16] If gay

[16]The IHS data include a measure for "household reference person" (HRP). The Office of National Statistics defines the HRP as "the person who is the main owner, renter or in some other way responsible for the accommodation, and who has the highest income (and in some circumstances who has the highest income and is oldest). The rationale for this definition is that the main householder is the person who exerts the most influence on the household's living patterns and circumstances." This variable indicated that 44.4% of partnered heterosexual women were the HRP in their household. We are skeptical that this proportion accurately describes the conceptual construct we are interested in, and the HRP also has the problem that it defines household head status using earnings explicitly (and our outcome of interest is earnings). For these reasons, we choose to define an alternative version of household head in the following way: First, if one member of the partnership is a full-time worker and the other member is not a full-time worker, the full-time worker is coded as the household head. Second, if both members of the household are full-time workers, we code as household head the person in the couple who is older. Third, if both members of the couple are full-time workers and are the same age, we use the first person listed in the record as the household head. This approach returned 28.3% of partnered heterosexual women as household heads.

Table 5B. Sexual Orientation and Log Earnings, by Demographics, Females

	(1) Baseline: full-time workers (Table 3, column (4))	*(2) 25–45 year olds, full-time workers*	*(3) 46–65 year olds, full-time workers*	*(4) Education greater than A-levels, full-time workers*	*(5) Education A-levels or less, full-time workers*
All females					
Lesbian	0.054***	0.030	0.079*	0.028	0.100***
	(0.021)	(0.022)	(0.048)	(0.026)	(0.034)
Bisexual	–0.036	–0.030	–0.045	–0.075**	0.004
	(0.032)	(0.036)	(0.065)	(0.037)	(0.058)
R-squared	0.231	0.227	0.250	0.125	0.046
N	59,221	31,775	27,446	29,779	27,158
Non-partnered females					
Lesbian	0.029	–0.024	0.136**	0.016	0.062
	(0.037)	(0.045)	(0.066)	(0.050)	(0.053)
Bisexual	–0.097*	–0.073	–0.142	–0.155**	0.049
	(0.050)	(0.050)	(0.128)	(0.066)	(0.062)
R-squared	0.247	0.249	0.260	0.131	0.073
N	22,385	11,160	11,225	10,663	10,642
Partnered females					
Lesbian	0.067***	0.057**	0.056	0.037	0.119***
	(0.025)	(0.025)	(0.062)	(0.031)	(0.044)
Bisexual	–0.009	–0.013	0.000	–0.027	–0.004
	(0.040)	(0.048)	(0.073)	(0.042)	(0.072)
R-squared	0.224	0.217	0.248	0.125	0.035
N	36,836	20,615	16,221	19,116	16,516

Source: U.K. IHS 2012–2014.

Notes: Adults age 25+. Specification is Table 3, column (4). For details on control variables, see notes to Table 3. Models in the top panel also include a control for being in any kind of partnership.
*Significant at 10%; ** at 5%; *** at 1%.

men and lesbians in partnerships specialize less than similarly situated heterosexuals in partnerships, we would expect that the gay male penalty and the lesbian premium would be relatively evenly distributed between sexual minorities who are household heads and sexual minorities who are not household heads.

We test this hypothesis with the following model estimated separately by sex:

$$\text{LOG EARNINGS}_i = \alpha + \beta_1 X_i + \beta_2(\text{Gay/Lesbian and Household Head})_i + \beta_3(\text{Gay/Lesbian and Not Household Head})_i + \varepsilon_i \quad (3)$$

where the sample consists of all partnered individuals in full-time work. Note that we also include dummies for the other sexual orientation categories (bisexual, "other," and "don't know"), but we do not report their coefficients. The main comparison group is all partnered heterosexual individuals, as we did not want to compare primary earner lesbians to primary earner heterosexuals for the concern that partnered heterosexual women who are household heads are likely to be extremely positively selected, and

Table 6. Sexual Orientation and Log Earnings, by Household Head Status for Sexual Minorities

	(1) *Men*	*(2)* *Women*
Gay/Lesbian & Household Head	0.002	0.071**
	(0.034)	(0.031)
Gay/Lesbian & Not Household Head	–0.141***	0.057
	(0.045)	(0.039)
R-squared	0.187	0.225
N	48,688	32,862

Source: U.K. IHS 2012–2014.

Notes: Adults age 25+. Sample is partnered full-time workers. Specification is Table 3, columns (2) and (4). Controls include a dummy variable for being interviewed face-to-face; age and its square; dummy variables for degree levels, higher education (HE qualification below degree level), A-levels, O-levels; race/ethnicity dummies (white, black, Asian, mixed race, other race); location dummies (London, England, Scotland, and Northern Ireland); the presence of children (any child < 5 and any child ≥ 5) in the household; and year dummies.

*Significant at 10%; ** at 5%; *** at 1%.

thus the comparison between household head heterosexual women and household head lesbians would be difficult to interpret. Thus, we compare lesbian household heads and lesbians who are not household heads to all partnered heterosexual women, the large majority of whom are secondary earners (and recall the entire sample is conditioned on full-time work). Similarly, we compare gay male household heads and gay males who are not household heads to all partnered heterosexual men.

The results are presented in Table 6 and provide some notable support in favor of household specialization underlying the lesbian premium relative to heterosexual women in the sample of partnered individuals.[17] To see this, note that in column (2) of Table 6 we estimate that partnered lesbians who are household heads earn significantly more than similarly situated partnered heterosexual women by about 7%. Partnered lesbians who are not household heads do not earn significantly more than similarly situated partnered heterosexual women, though the point estimate also indicates a sizable premium. We cannot reject that the coefficients on "lesbian, household head" and "lesbian, not household head" are equal. This finding is consistent with the idea that lesbian households specialize less than heterosexual households.

For gay men, we observe a pattern that is quite different from what we saw for lesbians. Specifically, the results in column (1) of Table 6 indicate that the earnings penalty experienced by partnered gay men compared to partnered heterosexual men accrues exclusively to the person in the

[17]The sample sizes in Table 6 are smaller than those for the earnings analyses presented in the main paper by approximately 10,000 observations (approximately 6,000 men and 4,000 women). This smaller size is because many observations in the IHS depict earnings and work information for one member of the partnership but not the other member. Since our household head definition requires us to observe this information for both members of the couple, we necessarily drop these observations.

Table 7. Oaxaca Decompositions

	(1) *Wage gap*	*(2)* *Characteristics*	*(3)* *Coefficients*	*(4)* *Interaction*
Partnered gay men vs. partnered heterosexual men	–0.124	–0.254	0.010	0.120
	(0.061)	(0.104)	(0.053)	(0.100)
Non-partnered gay men vs. non-partnered heterosexual men	–0.064	–0.125	0.038	0.023
	(0.045)	(0.034)	(0.040)	(0.028)
Bisexual men vs. heterosexual men	0.181	0.048	0.232	–0.099
	(0.089)	(0.083)	(0.078)	(0.071)
Partnered lesbians vs. partnered heterosexual women	–0.128	–0.057	–0.048	–0.023
	(0.044)	(0.050)	(0.039)	(0.046)
Non-partnered lesbians vs. non-partnered heterosexual women	–0.085	–0.091	–0.043	0.049
	(0.081)	(0.074)	(0.061)	(0.053)
Bisexual women vs. heterosexual women	0.052	–0.006	0.081	–0.023
	(0.057)	(0.045)	(0.046)	(0.031)

Source: U.K. IHS 2012–2014.
Notes: Adults age 25+. Baseline specification, with demographic controls. For details on control variables, see notes to Table 3.

partnership who is *not* the household head. Unlike the results for lesbians, we can reject equality of the coefficients between "gay, household head" and "gay, not household head." This result provides support for the hypothesis that gay male households have significant levels of specialization. Since specialization in heterosexual households is often ascribed in large part to child-raising responsibilities, this result is surprising given the small percentage of gay male households with young children.

Oaxaca Blinder Decompositions

Finally, we investigate Oaxaca Blinder decompositions following Arabsheibani et al. (2005). Table 7 reports the mean predictions by group differences for the baseline specification.[18] We estimate models separately by partnership status for comparisons of lesbian and gay men to their associated heterosexual counterparts, though for space considerations (and because partnership differences were not that important for the earlier results on the bisexual wage gap) we do not present results separately by partnership status for comparisons of bisexuals to heterosexuals. The top row shows differences between partnered gay men and partnered heterosexual men; the second row shows differences between non-partnered gay men and non-partnered heterosexual men; the third row shows differences

[18]We implement the decompositions in STATA using the method described in Jann (2008).

between bisexual men and heterosexual men; the fourth row shows differences between partnered lesbians and partnered heterosexual women; the fifth row shows differences between non-partnered lesbians and non-partnered heterosexual women; and the bottom row shows differences between bisexual women and heterosexual women. Within each row we show the raw (unadjusted) wage gap between the two groups in column (1); the amount of the gap that can be accounted for by different endowments or characteristics in column (2); the amount of the gap that can be accounted for by different returns to characteristics or "coefficients" in column (3); and the interaction in column (4).

For gay men compared to heterosexual men, recall that we did not find strong evidence of differences in average wages, with a limited negative effect comparing partnered men. In any case, the estimates in the top two rows of Table 7 indicate that the majority of any wage difference between gay men and heterosexual men—both in comparisons of partnered people and non-partnered people—can be attributed to different endowments, not different returns. Turning to comparisons between bisexual men and heterosexual men in the third row—where we found much larger earnings differences—the decomposition indicates that the vast majority of the earnings advantage experienced by heterosexual men can be attributed to their higher returns to characteristics, not their differential endowment of skills.[19]

Turning to the comparison of partnered lesbians to partnered heterosexual women in the fourth row of Table 7, we find that the lesbian earnings advantage documented in the sample of partnered people is approximately equally attributable to different endowments and different returns. The same is true but to a lesser extent for comparisons of non-partnered lesbians to non-partnered heterosexual women in the fifth row of Table 7 where we find a somewhat greater explanatory role for characteristics relative to returns.[20] Both of these cases are in contrast to the decomposition results for partnered and non-partnered gay men compared to partnered

[19]Note that the wage gap in column (1) reports the mean predictions by groups without covariates, and a negative sign indicates that the non-heterosexual group experiences a premium in the raw unadjusted means compared to the heterosexual group. This explains the negative signs on the wage gap in rows 1 and 2: partnered and non-partnered gay men earn *more* than partnered and non-partnered heterosexual men, respectively. Comparisons of their characteristics would predict that the partnered and non-partnered gay men would earn even more than the partnered and non-partnered heterosexual men based solely on characteristics since, for example, the gay men have higher education levels than the heterosexual men. This finding is why the coefficients on the characteristics in rows 1 and 2 are both negative and even larger than the raw wage gap. For the bisexual men the raw wage gap in column (1) is positive, meaning that the bisexual men earn much less than the heterosexual men in unadjusted comparisons.

[20]Again, note that for partnered and non-partnered lesbians compared to partnered and non-partnered heterosexual women, both raw wage gap estimates are negative, indicating that the lesbians earn more than the heterosexual women in unadjusted comparisons. As with the gay men, the coefficient on the characteristics is negative, suggesting that the partnered and non-partnered lesbians would earn even more than the partnered and non-partnered heterosexual women based solely on characteristics since, for example, lesbians have higher education levels than heterosexual women.

and non-partnered heterosexual men where we find that the mean gap is attributable much more to differential endowments compared with very little role for differential returns to endowments. Finally, for the comparison of bisexual women and heterosexual women in the bottom row of Table 7, we find that all the earnings advantage for heterosexual women is attributable to differential returns to endowments as opposed to differential endowments, similar to the findings for bisexual men compared to heterosexual men in the third row.

Discussion and Conclusion

The main objective in this article is to shed light on the somewhat contrasting results in the literature on sexual orientation and earnings for full population samples and those that include only partnered individuals. The latter studies have had the advantage of being much larger samples drawn from census data and other sources. But how representative are partnered individuals over the whole lesbian and gay population? We have used what is to our knowledge the first countrywide data set with both partnership status and self-identified sexual orientation combined with high-quality data on labor market earnings.

Over the population in full-time work (adopted as our main sample to be consistent with the bulk of the existing literature), we find a significant negative sexual orientation–based earnings coefficient for partnered gay men compared to partnered heterosexual men and a significant positive coefficient for partnered lesbians compared to partnered heterosexual women. No significant effect is observed for non-partnered gay men or lesbians compared to non-partnered heterosexual men and women. The positive partnered lesbian effect is sufficiently strong that the lesbian coefficient on earnings remains significantly positive over the whole population sample. This result does not hold for the negative earnings coefficient for gay men. Our results therefore are consistent with the literature: using partnered sexual minorities tends to show stronger effects than those shown in studies using the whole population of partnered and non-partnered individuals.

We argue that these basic results are consistent with specialization. Traditional heterosexual partners typically involve gendered specialization, with the man more engaged in market activities than the woman, particularly given the higher prevalence of children among heterosexual couples. Other things equal, the average partnered heterosexual man will be more focused on market activities than the average gay man will be. By the same argument, the average partnered lesbian will be more focused on market activities than the average partnered heterosexual woman will be. And these differences should not accrue to non-partnered individuals. All of these specialization-based predictions hold in our data. Our findings that the lesbian premium among partnered individuals accrues approximately equally

to lesbians who are household heads and lesbians who are not household heads also supports the idea that less specialization occurs in a lesbian household.

An alternative hypothesis for why partnered lesbians may have an observed earnings premium not shared by non-partnered lesbians is the presence of a high partnership selectivity effect. Partnered individuals may be selected as the more productive individuals, and the unobserved heterogeneity that facilitates forming a partnership may also be useful in the workplace. Moreover, this may vary by sexual orientation. We see from the descriptive data in Table 1, however, that lesbians are just as likely to be in a partnership as are heterosexual women. In addition, they are more likely to be in full-time work. In this case, if the underlying selectivity effect is the same for both heterosexual and lesbian women, then the lesbian earnings differential among partnered women in full-time work should be less than the associated differential among non-partnered women in full-time work, since the average partnered lesbian in full-time work will have less favorable unobserved heterogeneity than the average partnered heterosexual woman. Since this premise is contrary to what we find, it casts doubt on the selectivity explanation for the lesbian premium for partnered women.[21]

Although comparative specialization within the household is our preferred explanation for most of our results, some limited evidence supports the presence of discrimination as an explanatory factor. Our results show that it is older gay men and partnered gay men who earn less than comparable heterosexual men. It is likely that the lack of a heterosexual marriage becomes more of a signal of sexual minority status as an individual gets older (Carpenter 2007b; Frank 2007).[22] Partnered gay men may also be more observable as being gay than non-partnered counterparts. They may have photos of a same-sex partner or list their same-sex partner as a beneficiary, for example. If discrimination does take place against gay men, these more observable individuals may bear a greater penalty. Further, the gay male penalty occurs only outside London, where discrimination is more likely. Finally, the bisexual male penalty occurs only in the private sector

[21]In results not reported but available upon request, we also find very little evidence of positive selection into partnership on the basis of education for gay men and lesbians, in contrast to prior results for gay men and lesbians in the United States (Carpenter and Gates 2008).

[22]Notably, other nondiscrimination-based causes may explain the gay male earnings penalty accruing to older men. For example, there could be wealth effects for gay men associated with their much lower likelihood of raising children. In results not reported but available upon request, we find that the significantly lower likelihood of full-time employment experienced by gay men in Table 2 is driven primarily by significantly lower full-time employment rates of older (i.e., 45–64 year old) gay men compared to similarly situated older heterosexual men. By contrast, employment rates for 25–44 year old gay men were not significantly different from those for similar heterosexual men. That the employment gap for gay men is observed only for the older sample suggests that wealth effects on earnings may be important even in the absence of any labor market discrimination.

and not in the public sector, where greater protections against discrimination are in place.[23]

Nonetheless, evidence also goes against the discrimination hypothesis in both the male and the female comparisons. Among the full sample of partnered and non-partnered men, the presence of a large bisexual male penalty coupled with the absence of a gay male penalty is difficult to square with simple theories of taste-based discrimination. Similarly, among the full sample of women we observed that lesbians earn more than heterosexual women and that the premium occurs in samples of lower-educated women and women outside of London—both circumstances for which we would normally expect greater discrimination, if it existed. Also, the premium occurs among partnered more than non-partnered lesbians, and the same argument as with gay men suggests that these individuals will be more observable and therefore more subject to any discrimination.

Taken together, then, our unique samples of partnered and non-partnered sexual minorities and high-quality data on earnings provide novel evidence supporting a role for specialization in explaining sexual orientation–based differences in labor market earnings, with less evidence for selectivity and at best limited and mixed support for discrimination. As more large-scale social science data sets add individual-level information on sexual orientation, future work in other countries and contexts can continue to inform our understanding of how a minority sexual orientation shapes economic outcomes.

[23]We also note that for both bisexual men and bisexual women, Table 7 indicates that the raw earnings penalty arises due to lower returns to bisexual individuals' characteristics rather than lower endowments for bisexual individuals. This pattern is quite consistent with discrimination against bisexual individuals, and indeed it is possible that different levels and patterns of discrimination occur against bisexual individuals compared to gay men and lesbians.

Appendix

Table A.1. Descriptive Characteristics: Demographics

Variable	*DK/Refuse/Other response to sexual orientation question, males*	*DK/Refuse/Other response to sexual orientation question, females*
Age	44.05 (10.40)	43.70 (10.36)
Degree level	0.319 (0.466)	0.317 (0.465)
Higher education	0.114 (0.318)	0.127 (0.333)
A-level	0.231 (0.421)	0.181 (0.385)
O-level	0.215 (0.411)	0.271 (0.444)
White	0.892 (0.310)	0.904 (0.294)
Partnered	0.721 (0.449)	0.647 (0.478)
Any child < 16	0.296 (0.456)	0.305 (0.461)
England	0.749 (0.434)	0.747 (0.435)
London	0.111 (0.314)	0.111 (0.314)
N. Ireland, Wales, and Scotland	0.251 (0.434)	0.253 (0.435)
Average weekly earnings	662.70 (806.20)	422.20 (312.70)
Full-time worker	0.925 (0.264)	0.640 (0.480)
Sample size	7,020	7,469

Source: U.K. Integrated Household Surveys (IHS) 2012–2014.
Notes: Demographics from among those with earnings information. Weighted means (standard deviations). DK, don't know.

Table A.2. Sexual Orientation and Any Employment

	Males		*Females*	
Controls for →	*(1) Sexual orientation + year dummies*	*(2) + demographic characteristics (age, race, education, any kids, residence) + year dummies*	*(3) Sexual orientation + year dummies*	*(4) + demographic characteristics (age, race, education, any kids, residence) + year dummies*
All				
Gay/Lesbian	0.026***	–0.026**	0.085***	–0.028*
	(0.012)	(0.011)	(0.015)	(0.015)
Bisexual	–0.103***	–0.114***	–0.071***	–0.078***
	(0.032)	(0.030)	(0.022)	(0.020)
R-squared	0.001	0.153	0.001	0.155
N	121,206	121,206	175,285	175,285
Non-partnered				
Gay/Lesbian	0.107***	0.014	0.013	–0.098***
	(0.017)	(0.016)	(0.031)	(0.030)
Bisexual	–0.078*	–0.124***	–0.125***	–0.180***
	(0.045)	(0.042)	(0.040)	(0.035)
R-squared	0.003	0.171	0.002	0.169
N	39,508	39,508	62,650	62,650
Partnered				
Gay/Lesbian	0.022	–0.043***	0.122***	0.005
	(0.016)	(0.015)	(0.016)	(0.015)
Bisexual	–0.003	–0.010	–0.047*	–0.032
	(0.040)	(0.037)	(0.026)	(0.024)
R-squared	0.001	0.157	0.001	0.156
N	81,698	81,698	112,635	112,635

Source: U.K. IHS 2012–2014.
Notes: Adults age 25+. See notes to Table 3.

Table A.3. Expanded Set of Coefficient Estimates

	(1) *Non-partnered males*	*(2)* *Partnered males*	*(3)* *Non-partnered females*	*(4)* *Partnered females*
Gay	–0.006	–0.050*	0.029	0.067***
	(0.025)	(0.028)	(0.037)	(0.025)
Bisexual	–0.110	–0.189***	–0.097*	–0.009
	(0.068)	(0.057)	(0.050)	(0.040)
Other	–0.049	–0.015	–0.053	0.015
	(0.063)	(0.049)	(0.063)	(0.060)
Refused	0.043**	0.033**	0.026	0.017
	(0.020)	(0.016)	(0.017)	(0.018)
S.O. nonresponse	–0.155***	–0.010	–0.090***	0.006
	(0.045)	(0.012)	(0.031)	(0.018)
Age	0.069***	0.068***	0.051***	0.059***
	(0.004)	(0.002)	(0.003)	(0.003)
Age-squared	–0.001***	–0.001***	–0.001***	–0.001***
	(0.000)	(0.000)	(0.000)	(0.000)
Degree level	0.561***	0.606***	0.708***	0.665***
	(0.016)	(0.010)	(0.020)	(0.017)
Higher education	0.391***	0.403***	0.454***	0.366***
	(0.019)	(0.012)	(0.021)	(0.018)
A-level	0.250***	0.283***	0.291***	0.209***
	(0.016)	(0.010)	(0.021)	(0.017)
O-level	0.099***	0.144***	0.170***	0.114***
	(0.016)	(0.011)	(0.020)	(0.017)
Face to face	–0.010	–0.035***	–0.009	–0.028***
	(0.010)	(0.006)	(0.009)	(0.007)
Ethnicity	Yes	Yes	Yes	Yes
Location	Yes	Yes	Yes	Yes
Family	Yes	Yes	Yes	Yes
Year	Yes	Yes	Yes	Yes
Observations	19,905	55,112	22,385	36,836
R^2	0.189	0.191	0.247	0.224

Source: U.K. IHS 2012–2014.
Notes: Fully saturated model, i.e., columns (2) and (4) of Table 3. See notes to Table 3.

Table A.4. Sexual Orientation and Log Earnings, Sensitivity to Job Controls, Males

Controls for →	*(1) Sexual orientation only + basic + family (i.e., baseline specification)*	*(2) Sexual orientation only + basic + family + only private-sector controls*	*(3) Sexual orientation only + basic + family + only establishment size controls*	*(4) Sexual orientation only + basic + family + only industry controls*	*(5) Sexual orientation only + basic + family + only occupation controls*	*(6) (all but occupation controls) Sexual orientation only + basic + family + private sector + establishment size + industry controls*
All males						
Gay	–0.027	–0.024	–0.028	–0.009	–0.017	–0.008
	(0.019)	(0.019)	(0.018)	(0.018)	(0.018)	(0.018)
Bisexual	–0.149***	–0.150***	–0.145***	–0.141***	–0.147***	–0.138***
	(0.032)	(0.044)	(0.044)	(0.043)	(0.041)	(0.043)
R-squared	0.198	0.199	0.217	0.220	0.257	0.238
N	75,017	75,017	75,017	75,017	75,017	75,017
Non-partnered males						
Gay	–0.006	–0.004	–0.010	0.011	–0.000	0.009
	(0.025)	(0.025)	(0.025)	(0.024)	(0.023)	(0.024)
Bisexual	–0.110	–0.112*	–0.099	–0.096	–0.117*	–0.089
	(0.068)	(0.068)	(0.067)	(0.065)	(0.063)	(0.065)
R-squared	0.189	0.189	0.207	0.215	0.254	0.230
N	19,905	19,905	19,905	19,905	19,905	19,905
Partnered males						
Gay	–0.050*	–0.047*	–0.047*	–0.031	–0.038	–0.026
	(0.028)	(0.028)	(0.027)	(0.028)	(0.027)	(0.027)
Bisexual	–0.189***	–0.186***	–0.191***	–0.184***	–0.176***	–0.184***
	(0.057)	(0.058)	(0.057)	(0.057)	(0.053)	(0.057)
R-squared	0.191	0.192	0.212	0.212	0.249	0.232
N	55,112	55,112	55,112	55,112	55,112	55,112

Source: U.K. IHS 2012–2014.

Notes: Adults age 25+ with full-time employment. Specific controls in column (1) include a dummy variable for being interviewed face-to-face; age and its square; dummy variables for degree levels, higher education (HE qualification below degree level), A-levels, O-levels; race/ethnicity dummies (white, black, Asian, mixed race, other race); and year dummies; location dummies (London, England, Scotland, and Northern Ireland) and the presence of children (any child < 5 and any child ≥ 5) in the household. Specific controls in column (2) include a private-sector dummy. Specific controls in column (3) include 7 establishment size dummies (1–10, 11–19, 20–24, 25–49, 50–249, 250–499, > 500). Specific controls in column (4) include 8 industry dummies (energy/water, manufacturing, construction, hotels/restaurants, transportation/communication, banking/finance, education/health, other services). Specific controls in column (5) include 8 occupation dummies (manager/director/senior officials, professional occupations, associate professional/technical occupations, administrative and secretarial occupations, skilled trades occupations, caring/leisure/other service occupations, customer service and sales occupations, elementary occupations). Models in the top panel also include a control for being in any kind of partnership.
*Significant at 10%; ** at 5%; *** at 1%.

Table A.5. Sexual Orientation and Log Earnings, Sensitivity to Job Controls, Females

Controls for →	*(1) Sexual orientation only + basic + family (i.e., baseline specification)*	*(2) Sexual orientation only + basic + family + only private-sector controls*	*(3) Sexual orientation only + basic + family + only establishment size controls*	*(4) Sexual orientation only + basic + family + only industry controls*	*(5) Sexual orientation only + basic + family + only occupation controls*	*(6) (all but occupation controls) Sexual orientation only + basic + family + private sector + establishment size + industry controls*
All females						
Lesbian	0.054***	0.053**	0.048**	0.056***	0.079***	0.050**
	(0.021)	(0.021)	(0.020)	(0.020)	(0.019)	(0.020)
Bisexual	–0.036	–0.035	–0.030	–0.033	–0.028	–0.026
	(0.032)	(0.032)	(0.032)	(0.032)	(0.029)	(0.032)
R-squared	0.231	0.232	0.259	0.259	0.369	0.285
N	59,221	59,221	59,221	59,221	59,221	59,221
Non-partnered females						
Lesbian	0.028	0.028	0.029	0.038	0.074**	0.038
	(0.037)	(0.037)	(0.036)	(0.036)	(0.033)	(0.035)
Bisexual	–0.096*	–0.092*	–0.077	–0.112**	–0.078*	–0.086*
	(0.050)	(0.050)	(0.051)	(0.047)	(0.045)	(0.049)
R-squared	0.247	0.248	0.275	0.280	0.383	0.306
N	22,385	22,385	22,385	22,385	22,385	22,385
Partnered females						
Lesbian	0.068***	0.066***	0.058**	0.068***	0.083***	0.058**
	(0.025)	(0.025)	(0.025)	(0.025)	(0.023)	(0.025)
Bisexual	–0.009	–0.010	–0.010	0.000	–0.008	–0.001
	(0.041)	(0.041)	(0.041)	(0.040)	(0.037)	(0.040)
R-squared	0.223	0.224	0.251	0.248	0.362	0.274
N	36,836	36,836	36,836	36,836	36,836	36,836

Source: U.K. IHS 2012–2014.

Notes: Adults age 25+ with full-time employment. See notes to Table A.4.

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