Does it pay to be gay? The sexual orientation wage gap in the Netherlands

An empirical analysis of the sexual orientation wage gap using the LISS Panel

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Abstract

This paper aims to research the sexual orientation wage gap in the Netherlands. A negative wage gap is found for homosexual men and a positive wage gap is found for lesbian women, relative to their straight peers. Several possible explanations are examined: human capital accumulation, occupational sorting, household work and discrimination. Wage development of both gays and lesbians is plotted against heterosexual men and women, to see when and where wage discrepancies might originate. The results show that lesbian women are more likely to have a higher diploma and that gay men and lesbian women are more likely to work in female dominated industries. Household work is more equally divided between homosexual partners compared to heterosexual couples. Examining wage development shows that wage development for gay men is rather in sync with that of straight men. For lesbian women, there appears to be an advantage that starts in their late 30s that lasts until age 60. This could be a potential child penalty, but more data is needed to confirm this finding. No convincing results are presented to prove that discrimination is a large contributor to the sexual orientation wage gap.

Key words: sexual orientation wage gap, discrimination, the Netherlands, LISS Panel
JEL classification: D31, J15, J31

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Introduction

Over the past years, equal pay for equal work has received extensive attention from scholars and politicians. The European Commission put out a proposal in March 2021 to ensure that men and women are paid equally for equal work (European Commission, 2021). This proposal uses increased pay transparency and stronger enforcement mechanisms to battle the pay gap. Companies with more than 250 employees are required to report on the pay gap between male and female workers and if companies show (high) unjustified pay inequalities, actions have to be taken by the employer and workers representatives. Former United States President Barack Obama's first bill signed into law was the *Lily Ledbetter Fair Pay Act of 2009,* which extended the time period in which victims of pay discrimination could bring their claims to court (Stolberg, 2009). These pay gaps are problematic and need to be tackled, because they hinder victims in their economic development. Typically, these victims are minorities: wage gaps for women, ethnic minorities or people with disabilities are widely reported and studied (see: Carneiro, Heckman, & Masterov, 2005; Weichselbaumer & Winter-Ebmer, 2005; Jones, 2009). Because women tend to earn less, they are more likely to depend on government welfare and are not as economically independent as men are (CBS, 2019). The pay gap even persists into their retirement; partly because women tend to earn less during their careers, they also accumulate less pension, meaning that the pay gap still haunts them after they have retired (Eurostat, 2021). Other research has shown that the gender wage gap (and discriminatory practices that might cause it) could potentially explain higher rates of mental health disorders in women (Platt, Prins, Bates, & Keyes, 2015).

Clearly, battling pay inequality is important; pay gaps have a large societal impact. One pay gap which has not received extensive attention is the sexual orientation pay gap, which relates to sexual minorities (those whose sexual identification is different from the majority of society, in practice often Lesbians, Gays, Bisexuals and Transgenders – or LGBT) being compensated differently than their heterosexual peers. This sexual orientation pay gap was first empirically studied by Badgett (1995). Badgett found that gay and bisexual male workers earn substantially less than their heterosexual peers (11% to 27% less, while controlling for education, experience, occupation, marital status and region). Badgett did not find any statistically significant differences in earnings for lesbian women, but other studies which examined the sexual orientation wage gap did. Klawitter (2015) ran a meta-regression on studies examining the sexual orientation wage gap and found that on average, gay men

face a wage penalty of 11% compared to heterosexual men. Lesbian women, on the other hand, experience a 9% wage premium on average compared to heterosexual women.

Studying the sexual minority wage gap is relevant, given the fact that sexual minorities are not as "minor" as they were decades ago. A 2021 poll from Gallup found that more and more Americans are identifying as LGBT: 5.6% in 2020, up from 3.5% in 2012. More interestingly, 15.9% of Generation Z (those born between 1997 and 2002) identify as LGBT – although this seems to be largely driven by higher identification as bisexual. Still, around 2% of Generation Z identifies as gay, up from 1.2% of Baby Boomers (born between 1946-1964). Similarly, 1.4% of Generation Z identifies as lesbian, up from 0.4% of Baby Boomers. It is unclear whether this reflects an actual shift in sexual orientation between generations, or whether people are more willing to come out as LGBT. In the Netherlands, between 2.6% to 3.2% of the male population identifies as gay and 1.4% to 2% of the female population identifies as lesbian – depending on the survey (Kuyper, 2017). No older numbers are readily available on LGBT identification in the Netherlands, but it is likely that a similar trend to the United States is occurring in the Netherlands and other (Western) countries. The OECD found that LGBT identification is on the rise: comparing two different rounds of surveys in 7 OECD countries in the 21st century, it appears that LGBT identification has risen by approximately 50% between the two surveys (with an average of 7 years between the surveys) (OECD, 2019a).

It is likely that it has become easier to come out as LGBT over the last few decades, considering the fact that LGBT acceptance in Western societies has risen substantially (Eurobarometer, 2019). Attitudes towards homosexuality and other sexual minorities are improving in most European Union countries – with some exceptions, especially in Eastern Europe. Acceptance of homosexuality has not always been at the standard that it is today. The first country in the world to legalize marriage between two individuals of the same sex was the Netherlands in 2001, only 20 years ago. Since then, same-sex marriages have become legal in 29 countries (Human Rights Campaign Foundation, 2021). The Netherlands ranks as one of the countries with the highest acceptance levels of LGBT+ rights within the European Union: 97% of the population agrees that LGBT people should have the same rights as heterosexual people. 92% of the population thinks that there is nothing wrong in relations between two persons of the same sex: only Sweden holds more positive views towards homosexuality: 98% and 95% of Swedes agree with the two aforementioned statements, respectively (Eurobarometer, 2019).

Still, many members of the LGBT community feel that they are being discriminated against. 7 out of 10 LGBT people in the Netherlands have faced (verbal and/or physical) discriminatory violence (COC Nederland, 2021). In November 2020, the Dutch minister of Education stated that schools have the right to let their students sign a declaration which rejects homosexuality. Although this incident received a lot of media attention and the minister had to answer questions in parliament about his statements, the fact that this happened does illustrate that homosexuality is still not completely accepted by the entire society in the Netherlands (Remie, 2020). Even though violence against gays and lesbians is reportedly going down, it is still occurring in the Netherlands (Van Beusekom & Kuyper, 2018).

The sexual orientation wage gap has been studied in several countries, most prominently in Anglo-Saxon countries (U.S.A, UK, Canada) and in several European countries (see Klawitter (2015) for an overview). So far, only one paper has examined the sexual orientation wage gap in the Netherlands (Plug & Berkhout, 2004). This paper focused on highly educated (HBO & WO) recent graduates and found that gay men earn about 3% *less* than straight men; lesbian women earn around 3% *more* than straight women. One issue with this paper is that it misses a large part of the Dutch labour force. Close to 40% of the Dutch labour force is highly educated: 24% of the labour force has a HBO-diploma and over 15% has a WO-diploma (Den Ridder, Josten, Boelhouwer, & Van Campen, 2020) and working careers typically last about 40 years. This means that the only study to examine the sexual orientation wage gap misses a substantial part of the Dutch labour force; it could be that the wage gap starts to develop after several years – as sexual minorities may be passed over for promotions, for instance. It is interesting to study the sexuality wage gap in one of the most tolerant nations with respect to sexual orientation: one would expect that discrimination towards sexual minorities would not be prevalent here.

This study uses the LISS Panel, with data from 2008 to 2020. The LISS Panel consists of 5,000 households and around 7,500 individuals, based on a true probability sample of households drawn from the population register of Statistics Netherlands (CentERdata, 2021). This means that it is representative of Dutch society as a whole, and by extent, the entire Dutch labour force. This panel will be used to answer the main research question of this paper: does a sexual orientation wage gap exist in the Netherlands; and if so, how large is it? After the existence of a wage gap has been established, several explanations for the wage gap (human capital accumulation, occupational sorting, household work, discrimination through Oaxaca Blinder decompositions) are tested. Wage development of both heterosexual and

homosexual people is also examined to see where and when any discrepancies may originate.

The structure of this paper is as follows: the next chapter will give an overview of the current literature on the sexuality wage gap and develops hypotheses based on the literature. The following chapters will elaborate on the data and methodology used in order to answer the formed hypotheses. The subsequent chapter will present the results of the analysis and interpret these. The final chapter of this thesis will function as a conclusion, including implications, limitations and avenues for future research.

Literature Review

In this literature review, an overview of the current literature on the sexual orientation wage gap is given. Several explanations for the occurrence of the wage gap are given (human capital accumulation, occupational sorting, housework and discrimination) and hypotheses are formed based on existing literature. Wage development of gay men and women vis-à-vis heterosexual peers will also be plotted.

Sexual Orientation Wage Gap

Multiple articles have found that a sexual orientation wage gap exists (see: Badgett, 1995; Black et al., 2003; Antecol et al., 2008; Waite & Denier, 2015; Klawitter 2015). However, to date, only one article has researched the sexual orientation wage gap in the Netherlands (Plug & Berkhout, 2004). Plug and Berkhout focus on highly educated, recent graduates from the Netherlands, which might not tell the whole story for the entire labor market. They found that gay men earn 3% less than straight men, and lesbian women earn 3% more than straight women. Given the findings of previous studies, which focus on the entire labor market but are set in different countries, the first hypothesis is that a wage gap for sexual orientations exists. It is important to separate men and women, as previous studies have shown that homosexual men tend to earn *less* than heterosexual men, and lesbian women tend to earn *more* than heterosexual woman. Combining these two into one hypothesis could distort the size of the effect or cancel out the effect completely.

H1a: Homosexual men earn less than their heterosexual peers
H1b: Lesbian women earn more than their heterosexual peers

Human Capital

If a wage differential is found, looking for explanations for this phenomenon can be more interesting than finding that it exists. Multiple explanations for a difference in earnings between sexual preferences have been proposed so far: differences in human capital accumulation, occupational sorting, family specialization and discrimination (see: Badgett 1995; Black et al., 2003, Antecol et al., 2008; Waite & Denier 2015; Aksoy et al., 2018; Buser, Geijtenbeek, & Plug, 2018). In order to find out where the wage differential comes from, these explanations will be investigated.

Previous research has shown that homosexual men and lesbian women, on average, are more likely to accumulate more human capital compared to their heterosexual peers - i.e., are more likely to attend higher education (see: Black 2003, Antecol et al. 2008, Aksoy et al. 2018). A possible explanation for this is that members of the LGBT community decide to accumulate more human capital because they anticipate that they will be discriminated against in the labor market. Additionally, sexual minorities might prefer working conditions in occupations that require higher levels of education, as higher educated people often hold more tolerant views towards sexual minorities (Waite & Denier, 2015). However, this does not explain why homosexual men earn *less* than their heterosexual peers, but it might explain why lesbian women tend to earn *more.* Previous studies also find that homosexuals and lesbians have accumulated more human capital than their heterosexual counterparts. Human capital is quantified as highest degree obtained (high school, MBO, HBO, WO).

H2a: Gay men have accumulated more human capital than straight men
H2b: Lesbian women have accumulated more human capital than straight women

Occupational Sorting

Another explanation for discrepancies in earnings might come from the occupations that gay men and women have. Antecol et al. (2008) found that gay men tend to work in industries that are less male dominated (such as health care or education). Lesbian women, on the other hand, are more prevalent in male dominated industries such as finance or engineering. As male dominated industries tend to be better paying than female dominated industries (De Ruijter, Van Doorne-Huiskes, & Schippers, 2003) this helps explain Hypothesis 1a and 1b. A possible explanation for why gay men go into female dominated industries is because the chance of them becoming *the* breadwinner of their household is smaller and because they are less likely to have children, so the need for a high-paying career diminishes. Traditionally, males are the breadwinner for the family, but since there are two males in a gay couple (per definition), the likelihood that they (have to) become *the* breadwinner for the family diminishes. Somewhat similarly, gay women can expect to be more likely to become the breadwinner for their family, so the need for a higher paying career increases (Black et al. 2003). In order to test this explanation, density of men and women relative to each other will be calculated. Important to note is to also check whether female dominated sectors of the economy are paid less than male dominated sectors: this could help (at least partially) explain

why gay men earn less, but lesbian women earn more than their straight peers.

H3a: Gay men tend to work in female dominated sectors of the economy
H3b: Lesbian women tend to work in male dominated sectors of the economy

Household Work

Another often mentioned explanation as to why a sexual orientation wage gap exists, is related to family specialization. The traditional view of the family is that men work and earn a living for the family, whereas women look after the children and take care of the household (cleaning, cooking, etc.) (Becker, 1971). Although total hours spent on household work has decreased over the years (Bianchi, Sayer, Milkie, & Robinson, 2012), partly through improved equipment like dishwashers, washing machines and vacuum cleaners, a substantial amount of household work remains. Especially in the Netherlands, this traditional division of household tasks is still in place; the Netherlands leads the (developed) world in part-time workers. Close to 60% of women in the labour force work part-time; this is roughly three times the OECD average and more than three times the rate for Dutch men (OECD, 2019b).

Conversely, lesbian women can be expected to work less hours in the household compared to straight women. This is because they are less likely to have children in the first place, and because they are sharing the workload of the household with another women, who are traditionally more likely to take up chores in this area (Bianchi, Sayer, Milkie, & Robinson, 2012). All this would lead them to focus more on their paid work. Furthermore, since gay men tend to earn less than heterosexual men, their opportunity cost for (unpaid) household work is lower. Conversely, since lesbian women tend to earn *more* than straight women, their opportunity cost for household work is *higher*. Consequently, gay men might do more in the household compared to straight men (and lesbian women less than straight women). One problem here is that it is unclear whether gay men do more in the household (compared to straight men) because they earn less, or whether they earn less because they (need to) do more in the household. Similarly, it is unclear whether lesbian women perform less household tasks (compared to straight women) because they earn more, or whether they earn more because they do not need to do as much in the household compared to straight women.

Studies have shown that the division of household work is more equal between homosexual couples: in heterosexual couples, women are more likely to take up a larger share of the household work, whereas gay men and lesbian women both take up about the same

amount of household tasks. One notable difference is that gay men tend to specialize in certain tasks, whereas the division of various household tasks is more equal for lesbian couples (e.g. most tasks are performed by both partners) (Goldberg, Smith, & Perry-Jenkins, 2012).

The OECD called unpaid care work a "*missing link in the analysis of gender gaps in labour outcomes*" (OECD Development Center, 2014, p. 1). Several papers have examined the relationship between the gender wage gap and household work. According to Becker's economic model, household work has a negative effect on wages through energy levels: individuals can only exert so much effort. Increasing the amount of energy put into household work, reduces the amount of energy that can be put into market work - and thus results in lower output, and ultimately lower wages (Becker, 1985). The fatigue that is caused by increased amount of household work is also associated with 'emotional burdens' and can lead to a reduction in time spent on extra job-related activities such as training (Baxter, 1992) – which could temper wages. Family responsibilities can also impact wages, as child care can form an obstacle to continuous employment (through parental leave). Family responsibilities might lead individuals to choose for more flexible and less demanding jobs (which often pay lower wages). This logic is not limited to either gender – both males and females can take on household tasks and child care and both face time and energy constraints (Matteazzi & Scherer, 2020). In practice however, are women more likely to take on (more) household tasks and child care, and tend to work fewer hours because of this. This does not only have a negative effect on their own wages, but has a positive effect on the wages of their (male) partners – at least, in heterosexual couples (Matteazzi & Scherer, 2020).

H4a: Gay men do more household work than heterosexual men
H4b: Lesbian women do more household work than heterosexual women

Wage Development

If this is true, this could (partially) explain why lesbian women earn more than heterosexual women and why gay men earn less than heterosexual men. This is because employers might know that in the future, gay employees might want to work less (male) or more (female) in the future due to household demands (i.e. children). In this light, it would be interesting to look at the wage development of homo- and heterosexuals. Is it similar to heterosexual women who face a child penalty, after they bear children (Andresen & Nix, 2019)? Since panel data is available, which means that participants can be followed for multiple years, the

wage development of individuals can be traced. Because gay men are more likely to take on household tasks compared to straight men, and lesbian women are less likely to take on household tasks compared to straight women, the following is hypothesized:

H5a: Wage development of gay men is more similar to wage development for straight women versus straight men

H5b: Wage development of lesbian women is more similar to wage development for straight men versus straight women

The reason for that is as follows: straight men, traditionally, do not care for their children as much as straight women). As such, they are more likely to keep working full time, which is more beneficial for their career progression, potentially leading to upwards wage development.

Discrimination

Finally, another often mentioned explanation for the discrepancy in earnings for gay employees is discrimination. This is difficult to test as it is hard to observe. Evidence from Sweden suggests that sexual minorities face discrimination, although the outcomes for lesbian women and gay men differ; both are affected in their employment, but only the relative wage of gay men appears to be affected by their sexual orientation (Hammarstedt, Ahmed, & Andersson, 2015). Other papers have operationalized this as the portion of difference in wages that cannot be explained by observable factors. Antecol et al. (2008) found that a larger portion of the wage difference is unexplained for gay men compared to lesbian women, possibly indicating that gay men are more discriminated against than lesbian women. This is also in line with the finding of several articles that gay men earn less than heterosexual men, but lesbian women earn more than heterosexual women. However, it remains very difficult to say that gay men are facing more discrimination than gay women. Hence, this finding could only *suggest* that this is the case.

H6: A larger portion of the wage difference is unexplained for gay men compared to lesbian women

Data

In order to research this, the LISS (Longitudinal Internet Studies for the Social Sciences) panel dataset will be used. This dataset follows several thousand participants over multiple years and asks questions on a variety of topics (Scherpenzeel, 2011), such as income, work and schooling, and family and household. The panel is based on a true probability sample of households in the Netherlands; these households are drawn from the population register by Statistics Netherlands. The sample consists of roughly 5000 households and 7500 individuals, although not every household and individual participate every year; the attrition rate of the panel is 12% per year for respondents and 10% per year for individuals. This means that not all participants are tracked over the entire length. Another issue is that not all participants answer all questions each year, making it harder to track all participants during all years in the study.

One of the questions in the panel regards the gender of the participant, and the gender of their partner. This will be used to find out whether a person is hetero- or homosexual. In some years, some participants might not have a partner, but their sexual preference from other years can be used, as this is very unlikely to change. This method is common in examining the sexuality wage gap, although other studies have used sexual attraction as method to identify homosexuals in their sample. In any case, self-reporting by individuals is the most common method to identify homosexuals in a sample. The problem with this is that in some settings, people might not be comfortable with disclosing their true sexual orientation, as it is something rather private. Especially in communities where homosexuality is not widely accepted, willingness to disclose sexual orientation can be low. There are other ways to 'measure' sexual orientation (for a complete overview, see Bailey, et al., 2016) that could overcome this unwillingness to disclose sexual orientation, but those are outside the scope of this study. In this paper, homosexual will refer to an individual being in a relationship with a partner from the same gender: this can refer to both males and females. Homosexual males are also referred to as "gay" and homosexual females are also referred to as "lesbian" – heterosexual males and females are also referred to as "straight".

The definition of homosexuality is not perfect; it is unknown if subjects have come out in their workplace. Similarly, it might be possible that participants are single every time they are asked about their partner. However, this is the best possible proxy. This definition is complemented with a (different) survey from the LISS panel that asks participants about their sexual preference: men are coded as 'homosexual' if they are *only* attracted to other men,

women are coded as 'lesbian' if they are *only* attracted to other women. The same methodological approach was used by Buser et al. (2018). The final sample studied consists of 82,816 observations, of which 45% male and 55% female. There are 4134 (45.5%) male individuals and 4948 (54.5%) female individuals. Participants for whom their sexual orientation is unknown (as they have not stated that they have a partner or have not answered questions about their orientation) are excluded, as the purpose of this study is comparing gays and lesbians with straight men and women. If participants whose sexual orientation is unknown are included in the heterosexual sample, this might skew the results: it could lead to gays and lesbians being included in the heterosexual sample. Similarly, some participants reported having a female partner in one year and a male partner in the other. These participants were removed from the dataset, as it could not be established whether they were straight or gay/lesbian. It could be that they are bisexual, but this is outside the scope of this study.

The percentages are slightly different than the number of homosexual men and lesbian women in the total population in the Netherlands. Of the men in the sample, 3.6% of the observations and 3.5% of the individuals is homosexual; 2.8% of the observations and 2.6% of the individuals is lesbian. According to the LHBT Monitor (2016), around 2.8% of the male population is homosexual, and around 1.8% of the female population is lesbian. This could be due to the focus on participants in the labour market, which excludes elderly people (65+) from the dataset. These are less likely to identify as LGBT and can potentially explain why there are more homosexuals men and women in the sample used.

The focus in this paper will be on those between ages 25 – 65, who are most likely to be working. Students still enrolled in full-time education or pensioners are of less interest in this study about the labour market. However, as most people are followed over several years, when they are between the ages 25 to 65, they will be included in the study.

One problem is that participants have come out as homosexual or lesbian in the survey, but it is unknown whether they have come out in the workplace. If they have not come out as homosexual in their working environment, they might not experience the wage gap that is attributable to their sexual orientation, which could skew the results (as they are treated as heterosexuals in the workplace).

Another potential problem is that the income of participants is self-reported, which may lead to inaccuracies. For some people, it may be unclear what they earn exactly. It is very difficult for a researcher to find out what the correct number is; some very probably outliers were detected and deleted (e.g. participants of 25 years old making €1,000,000+ in one year

and a more modest €40,000 in other years). If participants were making less than €6.50 an hour, those observations were also deleted. For the most part, data was kept in order to maintain enough data for the analysis. However, if hourly wages more than doubled between years, these observations were deleted.

Methodology

Many other papers that have studied the sexuality wage gap have used log (hourly) wages as the dependent variable and use sexual preference (gay or straight) as independent variable. Of course, it is important to control for relevant factors (gender, education, years of experience, industry and sector) (Plug & Berkhout, 2004).

In order to test the first hypothesis, whether a sexual orientation wage gap exists, the following regression equations are used, with the first one for men and the second for women:

$$Log\ Hourly\ Earnings_{it} = \beta_0 + \beta_1 x_{it1} + \beta_2 x_{i2} + \beta_3 G_i + a_i + u_{it}$$

$$Log\ Hourly\ Earnings_{it} = \beta_0 + \beta_1 x_{it1} + \beta_2 x_{i2} + \beta_3 L_i + a_i + u_{it}$$

Log (hourly) earnings is the dependent variable, x_{it1} is a vector for variables that are time variant (age, profession, sector/industry, etc.), x_{i2} is a vector for variables that are time invariant (such as education), and G and L are dummies for gay and lesbian individuals. Standard errors are estimated robust to heteroskedasticity. Log hourly earnings are used, because this allows for easier interpretation of the results: coefficients can be interpreted as percentage difference. Random effects models are used to estimate the wage gaps for sexual minorities. Fixed effects are less useful in this instance, because it would omit time-invariant variables – such as sexual orientation, the main explanatory variable in this study. Other important variables, such as education, would also be omitted – most participants have already completed their education when they enter the labour market, so this variable tends to not change over time. Yearly dummies are included in the random effects model.

Hypotheses 2 and 3 are tested using linear probability models (LPM), where industry and highest diploma received are used as (binary) dependent variable. These equations will look like:

$$\hat{P}(y = 1|x) = \hat{y} = \hat{\beta}_0 + \hat{\beta}_1 x_1$$

In this equation, $\hat{y}$ is the predicted probability of having $y = 1$ for the given values of x_1, which equals '1' for sexual minorities (being gay or lesbian). The dependent variable in this model is a dummy variable for diploma obtained (to test hypothesis 2) or a dummy variable for male/female dominated industries (to test hypothesis 3). There are four different categories for diploma obtained, and five different categories for male/female dominated industries (see Table 3). Similar to Antecol (2008), OLS regressions are used to compute the likelihood of sexual minorities being in male dominated industries or having obtained certain diplomas (vis-à-vis heterosexual peers). One problem with this LPM is that the standard

errors might not be valid, but this can be solved by computing robust standard errors in STATA. Another, bigger issue is that predictions with an outcome that is smaller than 0 or bigger than 1 may occur. Despite these shortcomings, the LPM is still used, as the usual OLS statistics are usually not far off (Wooldridge, 2018). Fortunately, no predictions that fall outside the [0,1] range were computed.

In order to test hypothesis 4, regarding household work, a similar equation as on the top of the previous page will be used. Again, there are different equations for both males and females. There will also be two different types of measurements for household work. The first will be regarding the division of household work (e.g. who thinks they do more, the respondent or their partner). The other measurement is regarding the amount of hours spent doing household tasks. Unfortunately, the latter was only asked in three versions of the survey, thus resulting in less data. The measurement of the latter is relatively straightforward, as participants had to give the number of hours they spend, on average, on each of the household tasks (cleaning, cooking, financial administration, doing groceries, doing laundry and odd jobs). The measurement of division of household tasks is done on a 5-point Likert scale, ranging from (1) I do a lot more than my partner to (5) my partner does a lot more than I. Again, random effects regression models are run with robust standard errors.

Similar to Waite & Denier, sources of the pay differentials are broken down using Oaxaca-Blinder decompositions (Oaxaca, 1973; Blinder, 1973). These separate the differences in mean wages between different groups into a portion that can be attributed to differences in composition in characteristics of groups, and a portion due to differences in returns to these characteristics (Jann 2008). A similar approach to Waite & Denier's (2015) is taken, where first models with standard demographics, human capital, and labor force characteristics are estimated. This is followed by a fully specified model, including controls for industry and occupation. Using this technique will help in explore and distinguish effects of occupational sorting on wage gaps. Finally, two models will be run, including division of household tasks (Model 3) and hours spent on household tasks (Model 4). Similar to the aforementioned regressions equations, different Oaxaca-Blinder decompositions will be used for males and females, as different mechanisms can be at play here. The equation for the Oaxaca-Blinder decomposition is taken from La Nauze (2015):

$$\log(w_{i,g}) = \beta_g X_{i,g} + \varepsilon_{i,g}$$

In this equation, g = h,s denotes each group (homosexual and straight), for both males and females. The Oaxaca Blinder decomposition decomposes the log wage gap into the following equation:

$$\log(W_h) - \log(W_s) = \beta_s(X_h - X_s) + X_h(\beta_h - \beta_s) + (X_h - X_s)(\beta_h - \beta_s)$$

In the decomposition, W_h stands for the wage for the homosexual worker, W_s for the wage of the straight worker, X_h and X_s for the mean characteristics of the homosexual and straight worker. The term $\beta_s(X_h - X_s)$ refers to the part of the decomposition that amounts to the endowment effect – the part of the differential due to differences in group characteristics (Jann, 2008). The term $X_h(\beta_h - \beta_s)$ refers to the (part of the wage) gap attributable to differences in returns to characteristics: this is the part that is 'unexplained' and often explained as discrimination. The final term of the equation, $(X_h - X_s)(\beta_h - \beta_s)$ is the interaction term, which accounts for the fact that the difference in characteristics and the difference in return to characteristics often occur together.

Besides a statistical test of the wage development of gays and lesbians, their wage development will also be studied graphically. In line with (Nix & Andresen, 2019), the wage development of both homo- and heterosexuals is graphed to see if it develops in a similar fashion. In these graphs, age and (hourly) wage will be on the axes; different lines will be shown for different levels of education, as these are the main variables of interest in this study. Average hourly wages are computed per age group (e.g. hourly wage at age 37). One potential problem with this is that it does seriously decrease the group sizes, especially when different lines for diplomas are computed. This may cause erratic graphs, making it more difficult to draw meaningful conclusions.

Results

Table 1 shows descriptive statistics. Looking at annual wages, there clearly is a divide for homosexual workers compared to heterosexual workers. Homosexual males earn about €3660 less than heterosexual males, and about €1.53 less per hour. Heterosexual men tend to work slightly more hours and are a little older, but the differences are not large. Conversely, lesbian women tend to out earn heterosexual women (by almost €8500 annually and €3.30 per hour). Lesbian women work more hours per week (3.7 hours more than heterosexual women); they are also slightly older than straight women.

Table 1 also shows statistics on educational attainment of all four groups. No substantial differences appear for males, but homosexual females appear to be more educated than heterosexual females. Interestingly, despite little difference in educational attainment and working experience, straight men tend to have 'higher' professions (which tend to pay better). Lesbian women, on the other hand, tend to have 'higher' professions compared to straight women – which may be, at least partially, explained by higher educational attainment. Table 1 also shows the sectors and industries the groups are active in. Homosexual males and females are more likely to be working in the public sector compared to heterosexual males and females. Finally, the industries they are active in: homosexual men are more likely to be active in industries where relatively more women work (e.g. retail, education, healthcare), whereas lesbian women are more likely to be working in more male-dominated industries (e.g. industrial production, finance). These findings are checked in Table 3 (those for industries and diplomas obtained).

Table 2 shows regression output, in a similar fashion as Plug & Berkhout (2004). First, logs of annual and hourly wages are used as dependent variable in the regression equation, without controls (Model 1). Model 2 shows results for a similar regression, with controls for education and age. Model 3 controls for education and age, as well as profession, public/private sector and industry.

For men, there appears to be a wage gap in favour of heterosexuals– although only statistically significant at the 10% level. Model 1 shows that homosexual men earn 8.7% less per hour. When controlling for educational attainment and age, this gap drops to 6.6%. When including controls for job characteristics drops to 4%, but the wage gap is no longer statistically significant. Closer examining the wage gap for women, it appears that lesbian women earn *more* than their heterosexual peers. In the Model without any controls, the wage

gap is 15.1% in favour of lesbian women. Adding controls for age & education (Model 2) and extra controls for job characteristics (Model 3), the wage gap remains, albeit slightly lower; between 13.3% and 13.7%. These findings (partially) support hypothesis H1a and H1b; that a wage gap exist for homosexual men and women compared to heterosexual men and women. Gay men earn less per hour, although this does not appear to be statistically significant when controlling for age, education and job characteristics. Lesbian women, on the other hand, earn *more* per hour than straight women; even when including controls for age, education and job characteristics, the wage gap is 13.3% in favour of lesbian women. This effect is substantial; a wage gap of 13.3% amounts to 1.5 months' worth of salary on an annual basis. These findings are in line with previous literature, where a wage gap was found for gay men and lesbian women, with the wage gap being in favour of heterosexual men and lesbian women (Klawitter, 2015). One important thing to note, however, is that the wage premium for lesbian women appears to be substantially larger than the wage penalty for gay men. A possible explanation could be that lesbian women are working more hours per week, which could lead to higher chances of receiving promotions.

Table 3 reports the linear probability models for occupational sorting and educational attainment. Looking at gay men, it appears that they 6.9% more likely than heterosexual men to sort into industries that are 0% to 20% male, i.e. dominated by females. Furthermore, they are 8.2% less likely to sort into industries that are 60% to 80% male, and 4.2% less likely to sort into industries that are 80% to 100% (all compared to heterosexual men). For educational attainment, there are no statistically significant differences between homosexual and heterosexual males.

From Table 3, it also appears that lesbian women are 9.7% more likely to sort into industries that are 0% to 20% male (e.g. 80% to 100% female). Furthermore, lesbian women are 10% less likely to sort into industries that are roughly equally divided into males and females (40% to 60% male). Interestingly, lesbian women are 14.5% less likely to have a high school diploma or below as their highest diploma obtained. They are also 10% more likely to have a HBO diploma as their highest diploma obtained, compared to heterosexual women.

These findings support H2b: that lesbian women, on average, have accumulated more human capital than heterosexual women. H2a is not supported; there are no statistically significant differences in diplomas obtained between gay and straight men. Hypothesis H3a is supported, as gay men are *more* likely to sort into industries that are predominantly female, and *less* likely to sort into industries that are predominantly male. H3b is not supported:

lesbian women are more likely to sort into industries that are predominantly female, and only less likely to sort into industries that are roughly equally divided between men and women.

In order to test whether male or female dominated industries are better industries are better paying, correlations were computed between percentage of males in an industry and hourly wage. The correlations are reported in Table 4, where a distinction is made for different educational levels. None of the correlations are above 0.20, indicating that there is only very weak correlation between hourly wage and % males in industries. This indicates that male dominated industries do not necessarily pay better.

	Male		Female	
	Heterosexual	**Homosexual**	**Heterosexual**	**Homosexual**
Income				
Annual earnings	48210.98	43662.03	27065.83	35818.94
	(25186.52)	(21123.84)	(16268.23)	(19983.33)
Hourly earnings	25.41	23.47	19.74	23.10
	(12.97)	(9.68)	(9.04)	(9.49)
Log hourly earnings	3.14	3.08	2.91	3.07
	(.42)	(.39)	(.38)	(.38)
Hours worked	36.78	34.97	25.53	29.22
	(6.77)	(7.58)	(9.67)	(9.75)
Age	47.10	46.34	45.91	47.01
	(11.09)	(10.53)	(11.04)	(10.48)
Education				
High School or lower	0.340	0.377	0.384	0.229
MBO	0.237	0.188	0.259	0.256
HBO	0.265	0.247	0.255	0.379
WO	0.159	0.188	0.102	0.136
Profession				
Higher academic or independent profession[1]	0.107	0.076	0.053	0.025
Higher supervisory profession[2]	0.143	0.095	0.038	0.116
Intermediate academic or independent profession[3]	0.162	0.301	0.305	0.432
Intermediate supervisory or commercial profession[4]	0.176	0.114	0.097	0.076
Other mental work[5]	0.141	0.208	0.349	0.192
Skilled and supervisory manual work[6]	0.131	0.052	0.013	0.048
Semi-skilled manual work[7]	0.096	0.087	0.042	0.054
Unskilled and trained manual work[8]	0.022	0.068	0.091	0.054
Agrarian	0.023	0	0.011	0.003
Sector				
Public	0.300	0.365	0.449	0.511
Private	0.700	0.635	0.551	0.488
Industry				
Agriculture	0.030	0.022	0.013	0
Mining	0.002	0	0	0
Industrial Production	0.159	0.057	0.036	0.082
Utilities Production	0.017	0.001	0.004	0.004
Construction	0.082	0.038	0.012	0.021
Retail, Trade	0.072	0.114	0.086	0.012
Catering	0.019	0.036	0.025	0.025
Transport, Communication	0.074	0.097	0.023	0.049
Financial	0.055	0.019	0.044	0.068
Business Services	0.084	0.046	0.057	0.021
Government Services	0.113	0.148	0.070	0.068
Education	0.068	0.089	0.115	0.101
Healthcare and Welfare	0.060	0.139	0.324	0.428
Environmental Services, Culture	0.018	0.011	0.029	0.021
Other	0.147	0.173	0.164	0.997
N-size	**11,420**	**515**	**10,142**	**472**

Table 1: *Descriptive Statistics of the sample. Exemplary professions (1) architect, scholar, engineer; (2) manager, director (3) teacher, nurse; (4) department manager, shopkeeper; (5) administrative assistant, family carer; (6) mechanic, electrician; (7) driver, factory worker; (8) cleaner, packer*

	Male			Female		
Dependent variable: log hourly wage	(1)	(2)	(3)	(1)	(2)	(3)
Homosexual	-0.087*	-0.066*	-0.040	0.151***	0.137***	0.133***
	(0.047)	(0.040)	(0.035)	(0.049)	(0.048)	(0.049)
MBO		0.055***	0.043***		0.049***	0.025
		(0.015)	(0.015)		(0.015)	(0.016)
HBO		0.125***	0.107***		0.168**	0.120***
		(0.019)	(0.019)		(0.017)	(0.018)
WO		0.266***	0.227**		0.254***	0.165***
		(0.023)	(0.025)		(0.026)	(0.027)
Age		0.011***	0.012***		0.006***	0.006***
		(0.001)	(0.001)		(0.001)	(0.001)
R-squared	0.002	0.249	0.399	0.033	0.195	0.314
Controls	No	No	Yes	No	No	Yes
Regression	Random Effects	Random Effects	Random Effects	Random Effects	Random Effects	Random Effects
Observations	11,676	10,798	9,180	10,377	9,600	8,314

Table 2*: regression output with log hourly wages as dependent variable. * statistically significant at 10%, ** statistically significant at 5%, *** statistically significant at 1%. Regressions were run using robust standard errors and random effects. Controls include: profession, industry, public/private sector and year dummies. High School & below is the base category for educational attainment.*

	Gay Men	*Lesbian Women*
Education		
High School or below	0.007	-0.145***
	(0.043)	(0.037)
MBO	-0.035	0.012
	(0.036)	(0.039)
HBO	-0.007	0.100**
	(0.037)	(.043)
WO	0.034	0.032
	(0.035)	(0.032)
Occupational Sorting		
0-20% Male density	0.069**	0.097**
	(0.030)	(0.047)
20-40% Male density	-0.010	-0.032
	(0.024)	(0.028)
40-60% Male density	0.066	-0.100**
	(0.044)	(0.042)
60-80% Male density	-0.082**	0.036
	(0.041)	(0.036)
80-100% Male density	-0.042**	-0.001
	(0.020)	(0.010)

Table 3*: OLS regressions with random effects for likelihood of being in male-dominated industries and having certain diplomas. Robust standard errors were computed. Industry with 0-20% male density: Healthcare and Welfare. Industries with 20-40% male density: Education and Environmental Services & Culture. Industries with 40-60% male density: Retail, Trade, Catering, Financial, Business Services, Other. Industries with 60-80% male density: Agriculture, Industrial Production, Utilities Production, Transport, Communication, Government Services. Industries with 80-100% male density: Mining, Construction. * statistically significant at 10%, ** statistically significant at 5%, *** statistically significant at 1%*

	High School or below Hourly Wage	*MBO Hourly Wage*	*HBO Hourly Wage*	*WO Hourly Wage*
Male-Female ratio	*0.1173****	*0.1160****	*0.1863****	*0.1082****
N-size	*5,608*	*5,271*	*6,179*	*3,305*

Table 4: *Correlation Table examining correlations between male-female dense sectors and hourly wage, for each level of education. * statistically significant at 10%, ** statistically significant at 5%, *** statistically significant at 1%.*

One proposed explanation for the sexual orientation wage gap was that gay men do relatively more in the household compared to heterosexual men, and lesbian women doing relatively less in the household compared to heterosexual women.

Table 5 and 6 show regression output in order to test who does more in the household. Again, as for the previous analyses, gay men are compared to straight men and gay women are compared to straight women. Table 5 shows output for the division of household work, measured on a 5-point Likert scale (the dependent variable). The scores range from (1) I do a lot more than my partner to (5) my partner does a lot more than I. The negative coefficients for all but one (financial administration) household tasks show that gay men believe they do more in the household compared to straight men: Table 6 reinforces this image by showing that gay men spend more hours doing household tasks (except financial administration and odd jobs, although both are not statistically significant). The division of household tasks persists, even after controlling for marriage, having children and hours worked. Interestingly, the opposite appears to be true for gay women versus straight women: gay women do *less* in the household compared to straight women (except financial administration). The effect appears to be rather stable in all three models that are presented in Table 5 and 6 (with and without controls) and supports the original hypotheses that gay men do more in the household compared to straight men, and gay women do less in the household compared to straight women. On average, gay men spend almost 3 hours more doing various household tasks than straight men, whereas lesbian women spend over 2.5 hours less per week on household tasks than straight women. This could (partially) be explained by the fact that gay men work less hours per week compared to straight men, whereas lesbian women work more hours per week compared to straight women. It is not clear whether gay men do more in the household because they work less hours or whether they work less hours because they do more in the household: the same applies to lesbian women.

	Male		Female	
Dependent variable: household work division	(1)	(2)	(1)	(2)
Cleaning				
Homosexual	-0.870***	-0.585***	1.064***	0.979***
	(0.110)	(0.124)	(0.099)	(0.106)
Married		0.198***		-0.125***
		(0.036)		(0.033)
Has children		0.157***		-.130**
		(0.035)		(0.034)
Financial administration				
Homosexual	0.067	-0.027	-0.214*	-0.113
	(0.124)	(0.139)	(0.122)	(0.135)
Married		-0.023		0.015
		(0.050)		(0.054)
Has children		-0.011		0.064
		(0.047)		(0.044)
Cooking				
Homosexual	-0.719***	-0.602***	0.780***	0.684***
	(0.128)	(0.146)	(0.127)	(0.143)
Married		0.171***		-0.137***
		(0.046)		(0.046)
Has children		0.235***		-0.186***
		(0.048)		(0.048)
Doing groceries				
Homosexual	-0.485***	-0.333***	0.721***	0.646***
	(0.097)	(0.109)	(0.106)	(0.115)
Married		0.058		-0.058
		(0.040)		(0.041)
Has children		0.124***		-0.175***
		(0.039)		(0.041)
Doing laundry				
Homosexual	-1.320***	-1.069***	1.478***	1.463***
	(0.121)	(0.139)	(0.137)	(0.154)
Married		0.246***		-0.166***
		(0.042)		(0.033)
Has children		0.227***		-0.137***
		(0.040)		(0.034)
Odd jobs				
Homosexual	0.693***	0.643***	-0.673***	-0.682***
	(0.114)	(0.125)	(0.100)	(0.109)
Married		-0.031		-0.101***
		(0.035)		(0.033)
Has children		-.119***		0.047
		(0.032)		(0.036)
Year Dummies	Yes	Yes	Yes	Yes
Regression	Random effects	Random effects	Random effects	Random effects

Table 5*: regression output with division of different household tasks as dependent variables. * statistically significant at 10%, ** statistically significant at 5%, *** statistically significant at 1%. Regressions were run using robust standard errors and random effects. Controls include year dummies and hours worked*

	Male			Female		
Dependent variable: weekly hours spent on task	(1)	(2)	(3)	(1)	(2)	(3)
Cleaning						
Homosexual	1.125***	1.007***	1.023***	-1.967***	-1.142***	-1.158***
	(0.310)	(0.345)	(0.344)	(0.375)	(0.278)	(0.271)
Married		-0.409***	-0.454***		0.780***	0.810***
		(0.101)	(0.110)		(0.174)	(0.148)
Has children		0.267***	0.312***		0.725***	0.500***
		(0.098)	(0.101)		(0.168)	(0.165)
Financial administration						
Homosexual	0.036	0.185	0.137	0.067	0.132	0.148
	(0.204)	(0.241)	(0.208)	(0.150)	(0.169)	(0.167)
Married		-0.076	-0.068		-0.131**	-0.104*
		(0.072)	(0.074)		(0.064)	(0.062)
Has children		0.275***	0.275***		0.086	0.059
		(0.071)	(0.073)		(0.077)	(0.079)
Cooking						
Homosexual	1.652***	1.165***	1.196***	-1.683***	-1.016***	-1.083***
	(0.347)	(0.361)	(0.360)	(0.332)	(0.336)	(0.340)
Married		-1.052***	-1.049***		0.311**	0.248*
		(0.199)	(0.208)		(0.139)	(0.147)
Has children		-0.069	-0.073		0.642***	0.572***
		(0.185)	(0.190)		(0.164)	(0.171)
Doing groceries						
Homosexual	0.607**	0.630**	0.609**	-0.653***	-0.486***	-0.486**
	(0.256)	(0.296)	(0.291)	(0.180)	(0.193)	(0.193)
Married		-0.260***	-0.263***		-0.018	-0.018
		(0.079)	(0.084)		(0.109)	(0.109)
Has children		0.244***	0.254***		-0.270**	-0.270**
		(0.079)	(0.081)		(0.126)	(0.126)
Doing laundry						
Homosexual	1.056***	0.580***	0.580***	-1.271***	-1.101***	-1.009***
	(0.189)	(0.214)	(0.214)	(0.290)	(0.227)	(0.238)
Married		-0.730***	-0.730***		0.543**	0.695***
		(0.100)	(0.100)		(0.221)	(0.108)
Has children		-0.037	-0.037		0.851***	0.674***
		(0.095)	(0.095)		(0.122)	(0.119)
Odd jobs						
Homosexual	-0.809**	-0.356	-0.339	0.540*	0.993***	0.961**
	(0.366)	(0.430)	(0.406)	(0.316)	(0.388)	(0.379)
Married		0.422**	0.415**		-0.045	-0.044
		(0.165)	(0.177)		(0.113)	(0.119)
Has children		0.336*	0.432**		0.352***	0.278**
		(0.193)	(0.187)		(0.130)	(0.136)
Year Dummies	Yes	Yes	Yes	Yes	Yes	Yes
Regression	Random effects	Random effects	OLS	Random effects	Random effects	OLS

Table 6*: regression output with hours spent on different household tasks as dependent variables. * statistically significant at 10%, ** statistically significant at 5%, *** statistically significant at 1%. Regressions were run using robust standard errors. Controls include year dummies and hours worked*

The next hypothesis concerns wage development for sexual minorities. It was hypothesized that wage development of gay men is more similar to straight women than to straight men, and that wage development of lesbian women is more similar to wage development for straight men than for straight women. On the next pages are 10 Figures, with Figure 1 depicting hourly wage development for straight men versus gay men and Figure 6 depicting hourly wage development for straight women versus lesbian women: Figures 2 up to and including 5 and 7 up to and including 10 picture wage development for each of the human capital categories (High School and below, MBO, HBO and WO). One caveat is that splitting the groups into different diploma categories drastically reduces the N-size of the groups, especially for the sexual minorities; this explains why those lines appear to be moving rather erratic.

Studying Figure 1, it appears that wage development for both gay and straight men is rather in sync. Wage gaps are apparent from roughly the mid 30s to mid 40s, reappearing in the late 40s to the late 50s. Overall, heterosexual men appear to be making more per hour, although there are also ages where gay men are doing better. When splitting the wage development in categories for diplomas obtained, it appears that some observations have a large impact on the line showcasing wage development, especially at the beginning or end of the age-axis. One curious incident appears in Figure 5, where university-schooled gay men appear to earn only roughly €15 per hour, which is unlikely (but not impossible). Overall, wages appear to be higher for heterosexual males in all human capital categories. There is no clear age where heterosexual men are starting to substantially out-earn their gay peers.

Looking at Figure 6, it is again clear that the line for wage development for sexual minorities is rather volatile; it is likely that this is due to the relatively small N-size. However, for the most part, lesbian women are out earning their straight peers with similar ages. Earnings for lesbian women start exceeding earnings of straight women at the end of their 30s; hourly wages for lesbian women are generally increasing after this age, whereas wage development for straight women seems to stall. For women with a MBO diploma, wage development is remarkably similar – up until the end of the graph, where earnings spike for homosexual women: possibly an outlier, although earnings of €55 per hour are not *that* extreme. For women with HBO and WO diplomas, discrepancies in earnings are most apparent after age 40, possibly due to child penalties. These would be more common for straight women, as these it is easier for them to have children (at least biologically). One striking finding is that hourly earnings are dropping substantially after (highly educated)

lesbian women hit their mid-50s, although it is unclear where this is coming from. Earnings for straight women in that age category are rather stable (between €25 to €30 an hour).

Hypothesis H5a, which stated that wage development for gay men was more similar to wage development of straight women than to straight men, is not supported: wage development for gay men appears to be (generally) increasing, whereas wage development for straight women increases at the beginning of their working careers, but stalls in their 30s and keeps hovering around €20 for the remainder of their working careers. Hypothesis H5b, which stated that wage development of lesbian women is more similar to that of straight men compared to straight women, is (partially) supported; hourly wages of lesbian women are generally increasing, although there is an early peak in Figure 6 and hourly wages start dropping at the end of their working careers. This could be due to the relatively small sample size of lesbian women in the study; more research would be needed.

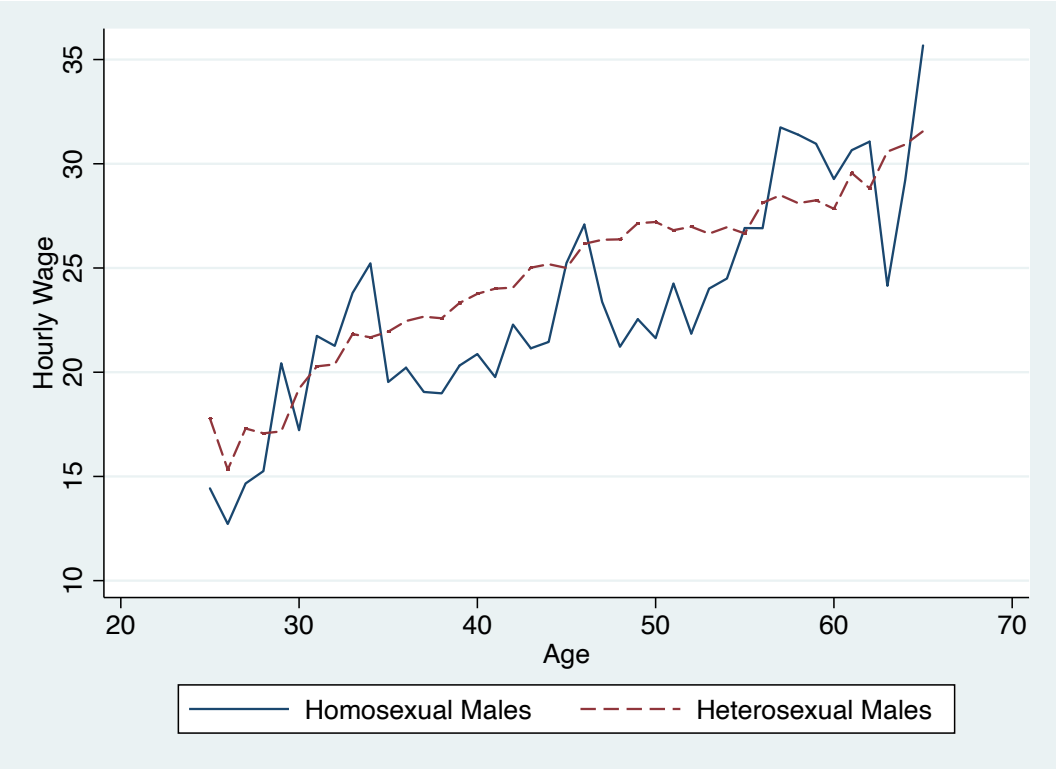

Figure 1: *This figure graphs average wage per age, for all homosexual and heterosexual males in the sample.*

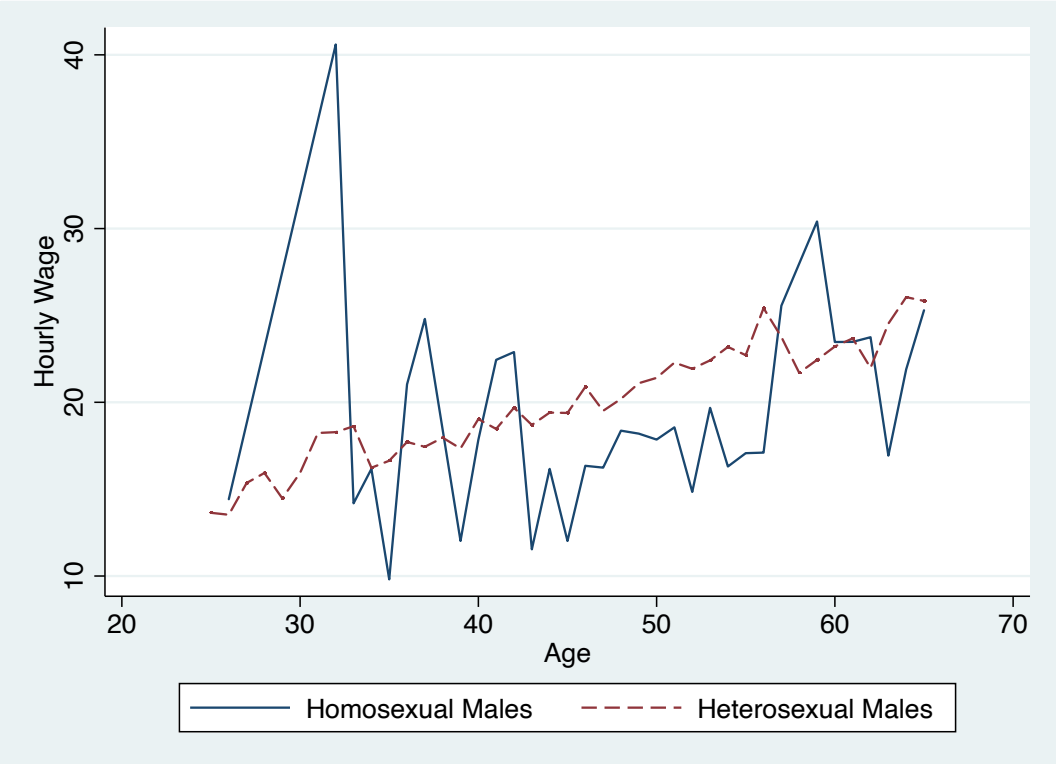

Figure 2: *This figure graphs average wage per age, for all homosexual and heterosexual males in the sample with a High School or below diploma.*

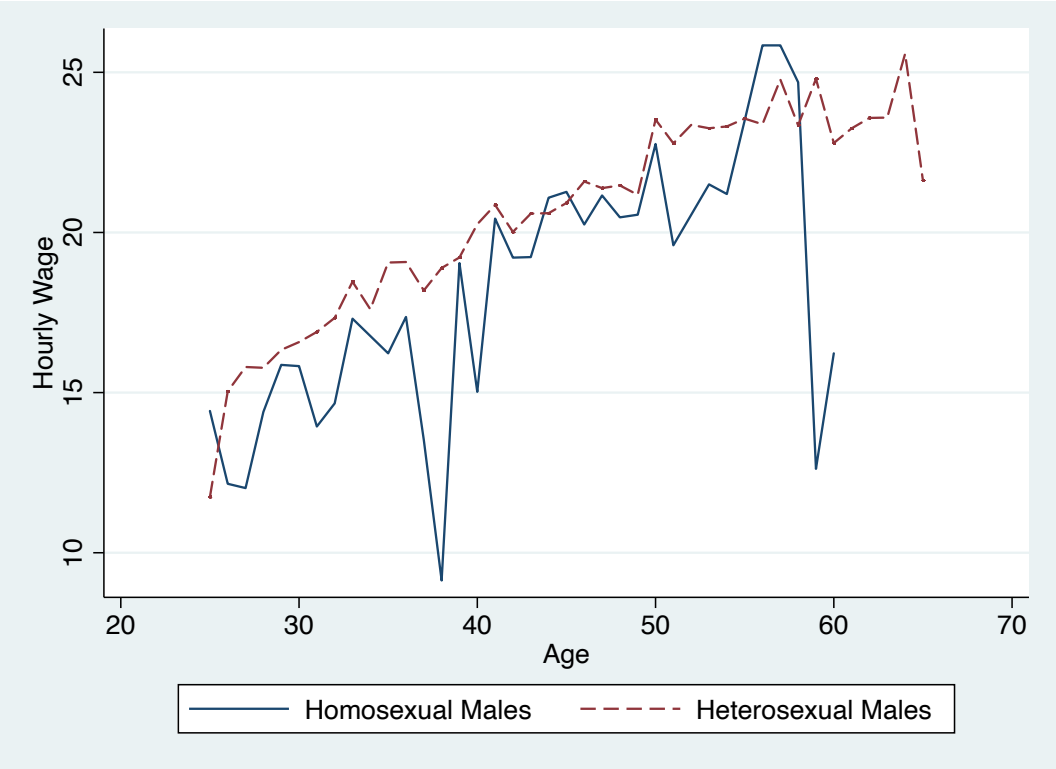

Figure 3: *This figure graphs average wage per age, for all homosexual and heterosexual males in the sample with a MBO diploma.*

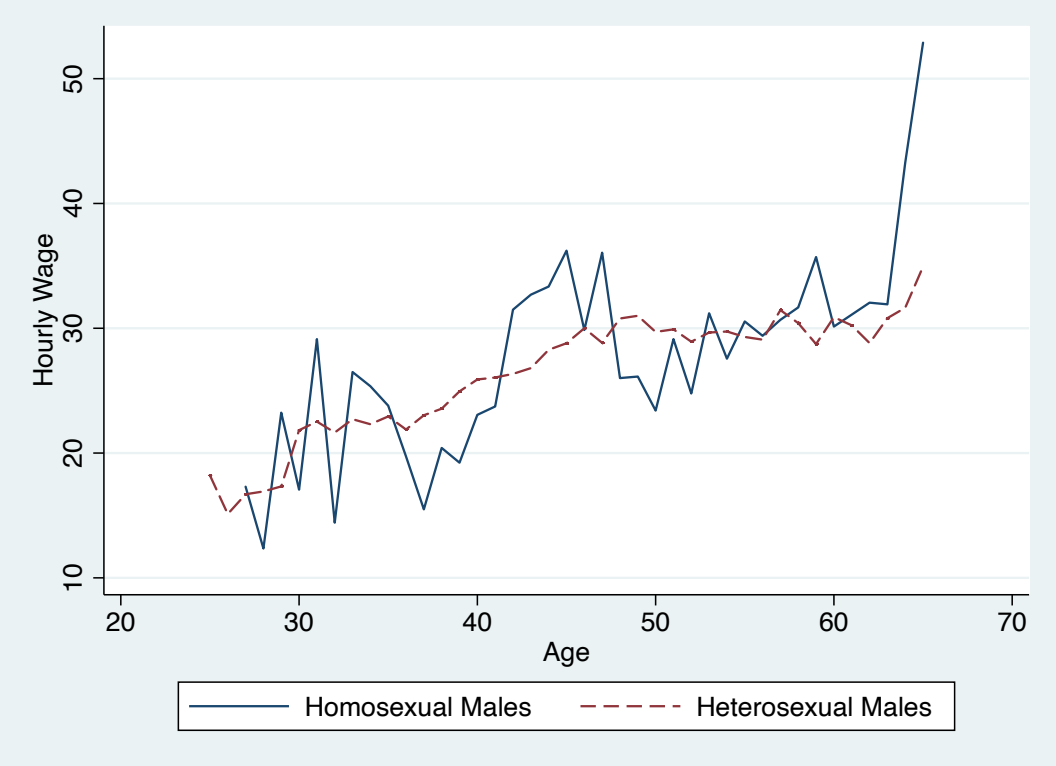

Figure 4: *This figure graphs average wage per age, for all homosexual and heterosexual males in the sample with a HBO diploma.*

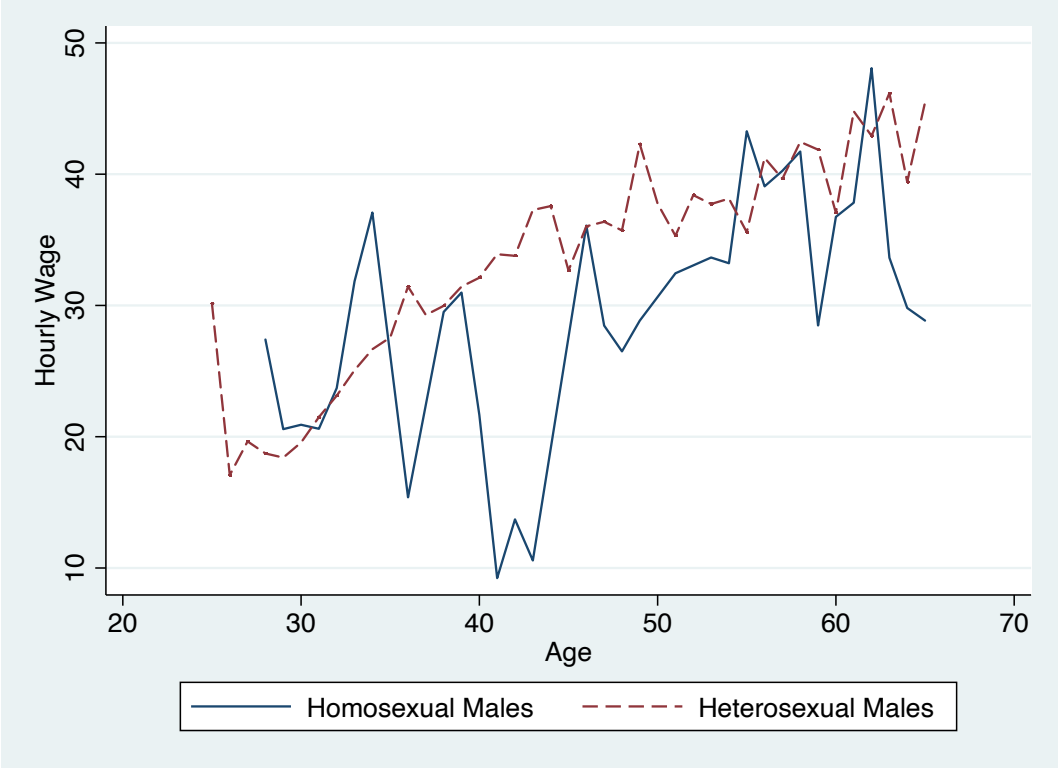

Figure 5: *This figure graphs average wage per age, for all homosexual and heterosexual males in the sample with a WO diploma.*

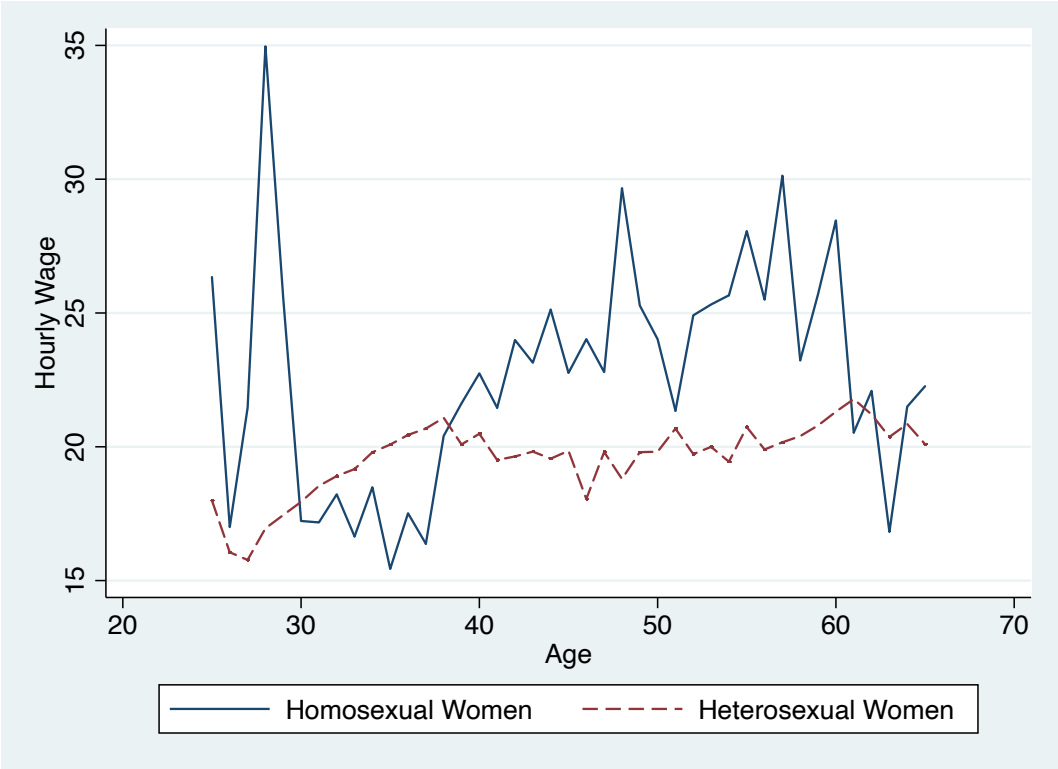

Figure 6: *This figure graphs average wage per age, for all homosexual and heterosexual females in the sample.*

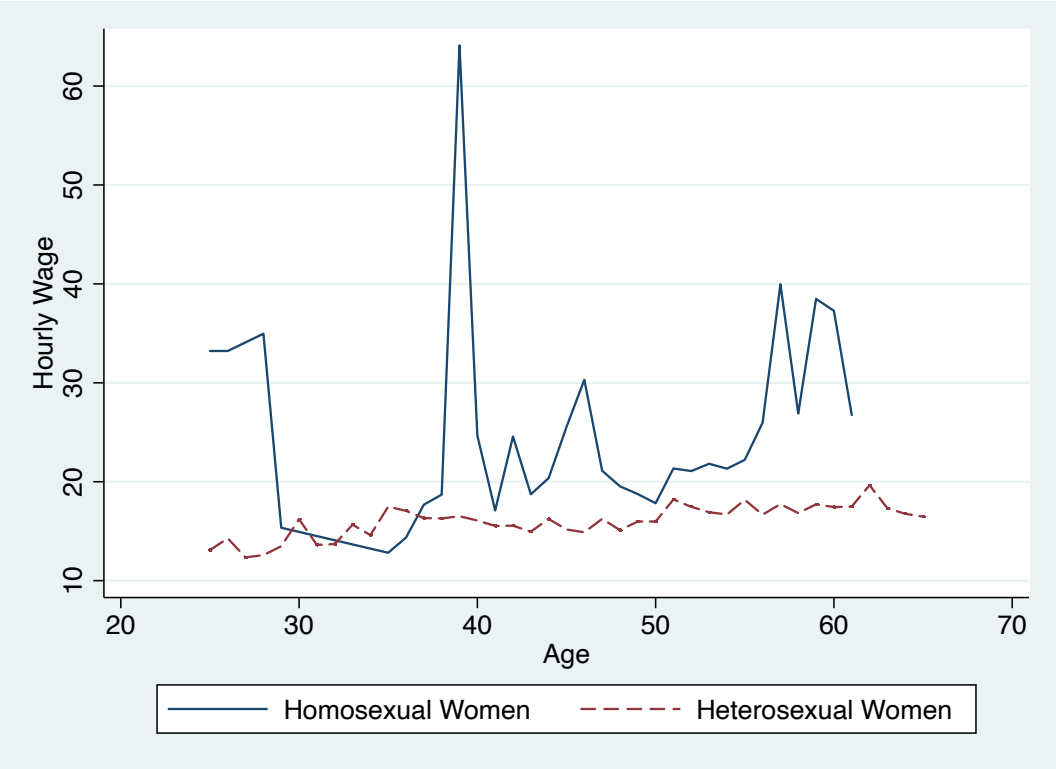

Figure 7: *This figure graphs average wage per age, for all homosexual and heterosexual females in the sample with a High School diploma or below.*

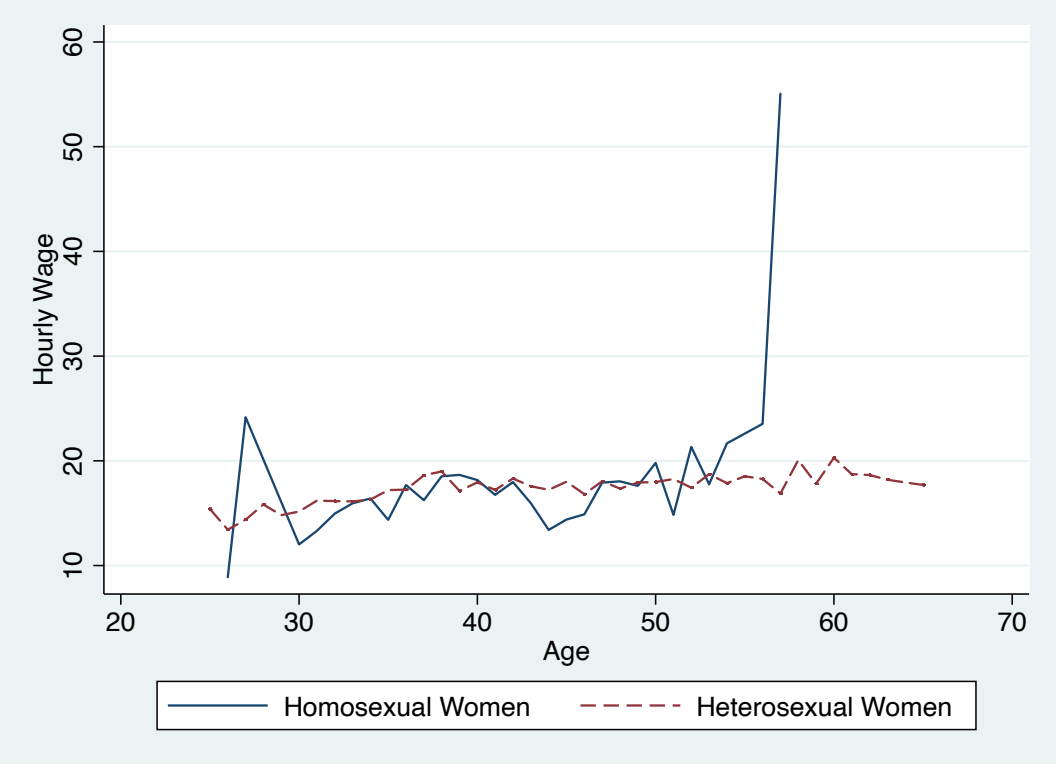

Figure 8: *This figure graphs average wage per age, for all homosexual and heterosexual females in the sample with a MBO diploma.*

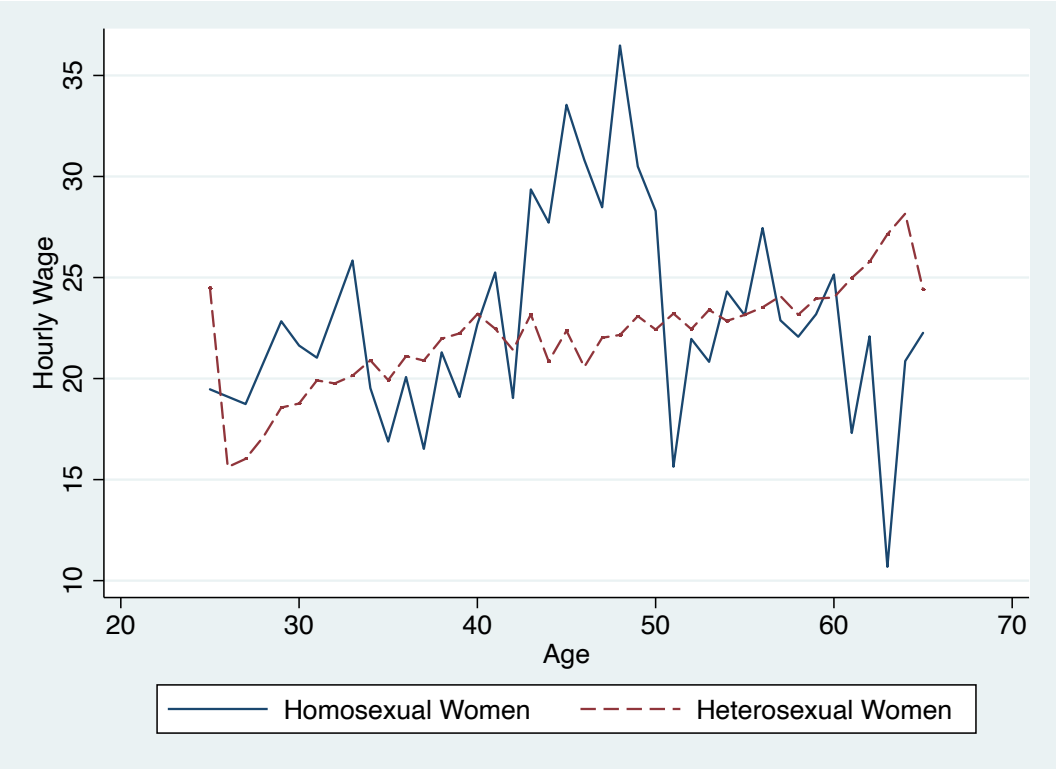

Figure 9: *This figure graphs average wage per age, for all homosexual and heterosexual females in the sample with a HBO diploma.*

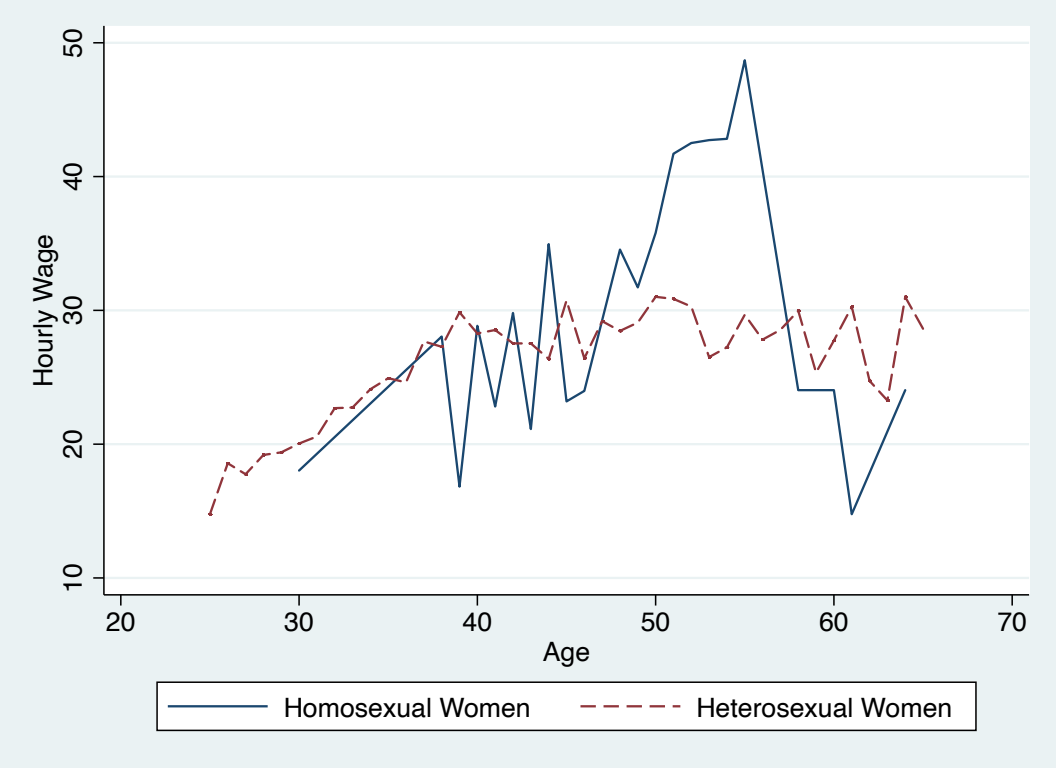

Figure 10: *This figure graphs average wage per age, for all homosexual and heterosexual females in the sample with a WO diploma.*

	(1)	(2)	(3)	(4)
Male log hourly wage decompositions				
Heterosexual	3.137***	3.123***	3.137***	3.092***
	(0.010)	(0.010)	(0.011)	(0.012)
Homosexual	3.077***	3.050***	3.054***	3.075***
	(0.052)	(0.053)	(0.069)	(0.056)
Difference	0.060	0.073	0.083	0.017
	(0.053)	(0.054)	(0.070)	(0.057)
Endowments	0.010	0.004	0.02	-0.031
	(0.035)	(0.041)	(0.072)	(0.051)
Coefficients	0.053	0.067*	0.038	-0.014
	(0.041)	(0.038)	(0.048)	(0.045)
Interaction	-0.004	0.002	0.023	0.063*
	(0.009)	(0.015)	(0.052)	(0.038)
N	10,798	9,180	7,535	2,323
Female log hourly wage decompositions				
Heterosexual	2.902***	2.896***	2.887***	2.869***
	(0.009)	(0.009)	(0.010)	
Homosexual	3.080***	3.071***	3.121***	3.065***
	(0.051)	(0.052)	(0.064)	(0.072)
Difference	-0.178***	-0.175***	-0.235***	-0.196***
	(0.051)	(0.053)	(0.065)	(0.072)
Endowments	-0.030	-0.056	-0.278***	-0.381***
	(0.028)	(0.040)	(0.090)	(0.100)
Coefficients	-0.123**	-0.115**	-0.121**	-0.102
	(0.049)	(0.046)	(0.062)	(0.068)
Interaction	-0.025	-0.004	0.164*	0.286***
	(0.025)	(0.032)	(0.088)	(0.097)
N	9,600	8,314	6,756	2,216

Table 5: Oaxaca-Blinder decompositions with log hourly wages as dependent variable. Model 1 is the base model (age & education), Model 2 includes controls for sector, industry and profession, Model 3 adds division of household tasks as extra control to Model 2 and Model 4 adds hours spent on household tasks (instead of division of household tasks between partners). ** statistically significant at 10%, ** statistically significant at 5%, *** statistically significant at 1%. Oaxaca-Blinder decompositions were run using standard errors clustered on the individual*

Results of Oaxaca-Blinder decompositions are shown in Table 5. These are threefold Oaxaca-Blinder decompositions, with the log hourly earnings for both males and females as dependent variables. In the upper half of the table are the findings for gay and straight men, in the lower half the findings for the gay and straight women. The first rows show the log hourly wage for heterosexual men and women and the second row shows the log hourly wage for homosexual men and women. For men, only the first two rows are statistically significant, although the coefficient in Model 2 and the interaction in Model 4 are statistically significant at the 10% level. The difference between log hourly wage for hetero- and homosexual men is not statistically significant in any of the Models for men. These differences are comprised of three different parts: the endowments, the coefficients and the interaction. The endowment effect is often referred to as the 'explained' part of the wage differences, as this is due to difference in mean group characteristics. The coefficient effect is often referred to as the

'unexplained' part of the wage differences, as these are due to differences in returns to characteristics. Finally, the third part is the interaction effect, which accounts for the fact that differences in characteristics and returns to these characteristics can exist simultaneously between the two groups (Jann, 2008).

For men, the statistically significant coefficient in Model 2 means that (0.067/0.073) = 91.8% of the wage gap cannot be explained; however, since the difference between hourly wages of homosexual and heterosexual men is not statistically significant, this is difficult to interpret. Similarly, the interaction effect in Model 4 is somewhat difficult to interpret, as it is only barely statistically significant (at the 10% level). Furthermore, the difference in hourly wages is smaller than the interaction effect, but the difference is reduced by negative endowment and coefficient effects – although these are not statistically significant. The finding that no statistically significant difference is found in the models are not completely in line with the regression output in Table 2, where a statistically significant wage gap was found in a model without any controls and when controlling for education and age – although this wage gap was only barely statistically significant at the 10% level.

Closer examining the Oaxaca-Blinder decompositions for women gives more statistically significant results. For all four Models, a statistically significant difference is found (ranging from 0.175 in Model 2 to 0.235 in Model 3), indicating that there is a statistically significant difference in hourly wage of 17.5% to 23.5% between straight and lesbian women (with lesbian women earning more). For Model 1 and 2, only the Coefficient is statistically significant – indicating that this part of the wage difference is 'unexplained', or cannot be explained by the variables included in the decomposition. In Model 1, (0.123/0.178) = 69.1% is unexplained by the variables included (age and education). In Model 2, where there are also controls for profession, sector and industry, the part that is unexplained is (0.115/0.175) = 65.7%, slightly lower than in Model 1. In Model 3, all the components of the decomposition are statistically significant, although the interaction effect reduces the difference in hourly wage. The same holds for Model 4, where the interaction effect reduces the difference in hourly wage. What is striking, however, is that the endowment effect becomes statistically significant in Model 3 and 4, and there is a large difference between the endowment effect in Model 1 & 2 versus the endowment effects in Model 3 & 4 – much more so than for the male part of the population. This indicates that there are large differences in group characteristics when including measures of household tasks, which might help explain the difference in hourly wages.

The findings in the bottom half are consistent with the regression output in Table 2, as a (hourly) wage gap is found between lesbian and heterosexual women. In the Oaxaca-Blinder decomposition, the wage gap appears to be larger: 17.5%-17.8% when controlling for age and education and age, education and job characteristics, respectively.

The fact that a substantial part of the wage gap is unexplained is sometimes attributed to discrimination. However, one must be very careful in doing so; the fact that a part of the wage gap is unexplained means that variables that *can* explain this wage gap are not included. It could be that there are some unobservable characteristics (or characteristics that are excluded) that would be able to explain why a wage gap exists. Furthermore, discrimination would likely only play a role for gay men; it would be hard to argue that lesbian women are discriminated against, since they are earning more (on average) than their heterosexual peers. When including controls for age, education, industry, occupation and sector, the wage gap is no longer statistically significant – which would support the statement that there is *no* wage discrimination against homosexual men. However, to conclude this, more research is needed.

Conclusion

This paper set out to explore the sexual orientation wage gap in the Netherlands, a topic that has not received extensive attention by politicians and scientists – at least not in the Netherlands. Besides looking for the existence of such a wage gap and its size, possible explanations for this wage gap have been studied and tested. These explanations were human capital accumulation, occupational sorting, housework division and discrimination. Furthermore, wage development was also studied.

A statistically significant wage gap was found for homosexual men versus heterosexual men, although only at the 10% level and in the baseline model without controls and when controlling for age and educational levels. Adding controls for job characteristics (sector, industry and profession) not only diminished the wage gap, but also lead to an insignificant coefficient. The wage gap that was found in the first two models ranged between 6.6% and 8.7%, in favour of heterosexual men. This indicates that heterosexual men earn more per hour: annually, this difference is about one monthly salary. A more substantial and statistically significant result was found when examining the wage gap for women. In all three models, lesbian women earn more per hour than their straight peers, with the gap ranging from 13.3% to 15.5%, thus (partially) confirming hypothesis H1a and H1b.

To further examine where this wage gap originates from, several explanations were examined. It turns out that educational attainment is not very different for homosexual and heterosexual men, but differences appear for women: lesbian women appear to have attained higher levels of education, compared to heterosexual women. For occupational sorting, it turns out that gay men are less likely to work in industries dominated by men, and more likely to work in female dominated industries. For lesbian women, no clear effect appeared: they are more likely to work in female dominated industries (more so than straight females), and less likely to work in sectors that are roughly equally divided.

Gay men do relatively more in the household compared to heterosexual men, whereas lesbian women do *less* in the household compared to heterosexual women. This pattern is also visible in hours spent on household tasks, as gay men spend more hours doing various household tasks compared to straight men; lesbian women spend less hours doing various household tasks compared to straight women, thus confirming H4a and H4b.

Regarding the wage development of gay men and lesbian women vis-à-vis the wage development of their heterosexual peers, a stark difference appears for women. Whereas the wage development of (both gay and straight) men appears to be relatively similar, wage development for straight women is rather flat, with wage development for lesbian women

showing an inverse U-shape. This does not support the hypotheses that were formulated with regards to wage development. It must be noted that fewer observations were available for both the gay and lesbian subsets of the population, which creates more uncertainty around their wage development.

The final hypothesis concerned the Oaxaca-Blinder decomposition: it was hypothesized that a larger share of the wage gap would be unexplained for gay men compared to lesbian women. However, this is difficult to conclude given the fact that most of the predictors in the Oaxaca-Blinder decomposition were not statistically significant for the gay wage gap. As such, hypothesis 6 cannot be fully accepted as comparisons cannot be made easily.

After having studied the sexuality wage gap and several possible explanations, it is clear that the sexual wage gap exists in the Netherlands. None of the studied explanations give a clear answer as to why it exists. This is not to say that the wage gap then is attributable to discrimination; there might be other, unobservable factors that were not included in this study but that are able to explain why such a wage gap exists. For example, it could be that lesbian women are more productive than straight women, which can explain why they are paid more.

Limitations of this study are that the number of gay men and lesbian women included in the study are not that large so that accurate comparable groups (e.g. for age *and* education level) can be made. Furthermore, the measure of homosexuality might not be perfect, as it is not clear whether employers know if the respondent is homosexual or not. If they do not know, it can be difficult to use discrimination as an explanation for the wage gap. All answers given in the survey are self-reported, which might lead some respondents to over-estimate their earnings. In order to test the hypotheses related to household work, respondents were asked to estimate how many hours they spent each week on various tasks and how the division of household tasks is; these estimates are purely subjective and might not be completely true.

Avenues for further research include having a larger sample of homosexuals and better data on income of respondents, as not everyone is willing (or able) to give this information. Other researchers have used (U.S.) Census data or tax returns; it would be interesting to see if the findings of this study hold when making use of different datasets. Furthermore, it would be interesting to study the effect of children on heterosexual and homosexual parents, as other researchers have found that a wage penalty exists, but less so for lesbian parents (Nix & Andresen, 2019). Findings like these can also help battle the (gender) wage gap in the Netherlands and help shape policy in order to effectively battle the pay gap.

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