



**FACULTEIT ECONOMIE  
EN BEDRIJFSKUNDE**

**TWEEKERKENSTRAAT 2  
B-9000 GENT**

**Tel. : 32 - (0)9 - 264.34.61  
Fax. : 32 - (0)9 - 264.35.92**

## **WORKING PAPER**

### ***Career Lesbians. Getting Hired for Not Having Kids?***

**Stijn Baert**

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# ***Career Lesbians.*** Getting Hired for Not Having Kids?

Stijn Baert<sup>1</sup>

## **Abstract**

Using a field experiment, we investigate whether discrimination based on women's sexual orientation differs by age and family constraints. We find weakly significant evidence of discrimination against young heterosexual women because of their potential to have children. This effect is driven by age rather than by motherhood. We do not find any unequal treatment at older ages. This age effect is consistent with our theoretical expectation that, relative to lesbian women, young heterosexual women are penalised for having children more frequently and taking on, on average, more at-home-caring tasks.

**Keywords:** experiments, labour market discrimination, motherhood, sexual orientation.

**JEL:** C93, J13, J16, J71.

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<sup>1</sup> Faculty of Economics and Business Administration – Sherppa. Tweekerkenstraat 2, B-9000 Ghent, Belgium.  
Stijn.Baert@UGent.be. +32486492752.

# 1 Introduction

In the last decade, several economic studies tested discrimination based on women's sexual orientation. Using comprehensive field experiments, Nick Drydakis (2011, Forthcoming), Doris Weichselbaumer (2003, 2013), Ali M. Ahmed, Lina Andersson and Mats Hammarstedt (2011a) and Eleonora Patacchini, Giuseppe Ragusa and Yves Zenou (2012) identified high levels of discrimination against lesbians in Greece and Cyprus, moderate levels in Austria and Germany, low levels in Sweden and no unequal treatment at all in Italy. This evidence of discrimination is worrisome. Not only is discrimination unacceptable from an ethical perspective, but it also has important economic consequences (Drydakis, 2011).

As argued by Neumark (1999), it is important from a policy perspective to determine the nature of discrimination in order to design adequate policy actions. In the context of discrimination based on sexual orientation, several mechanisms have been proposed in the *theoretical* literature. These mechanisms can be grouped under the well-known models of taste discrimination (Gary Becker 1957) and statistical discrimination (Kenneth Arrow 1971).

On the one hand, there are valid theoretical arguments for taste-based discrimination. Analogous to the general case, taste discrimination against lesbians could be caused by the general distaste that employers, employees and customers may have for sexual minorities and the experienced disutility of interacting with them. As a consequence, employers may be prepared to hire heterosexual candidates even if they are of lower productivity or have higher reservation wages.

On the other hand, there are also reasons to expect statistical discrimination in favour of lesbian workers. Statistical discrimination occurs when employers examine statistics about a group's average performance to predict a particular applicant's productivity. Several factors may lead employers to expect higher average productivity from lesbians relative to straight women. First, lesbians are documented as being, on average, more "masculine", that is, more dominant, autonomous and assertive. This characteristic may match well with some specific jobs and adhere to the ideal of masculinity that is associated with labour market success (Suzanne H. Clain and Karen Leppel 2001; Nathan Berg and Donald Lien 2002; John M. Blandford 2003).<sup>2</sup> Second, lesbians are documented as having on average, a more committed and continuous labour market participation. This characteristic results from two different factors. On the one hand, on average, lesbians have children less frequently than heterosexual women and, due to a less traditional division of labour within the household, lesbians on average engage in less rearing tasks, which are conditional on having children in the first place, than heterosexual women do. On the other hand, this less traditional division of labour also results in the reduction of other household responsibilities. Due to these characteristics, lesbians may be more productive and accumulate more human capital as the return on market-oriented human capital investments will be higher among them (Doris Weichselbaumer 2003; Bruce Elmslie and Edinaldo Tebaldi 2007; Ali M. Ahmed, Lina Andersson and Mats Hammarstedt 2011b; Heather Antecol and Michael D. Steinberger

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<sup>2</sup> Mention that behaving in more manly ways may at the same time underlie taste discrimination.

2011; Nick Drydakis 2011). To date, however, *empirical* studies have not been designed to test the empirical importance of these theoretical channels.<sup>3</sup>

We are the first to investigate whether unequal treatment of heterosexual and lesbian job candidates differs by age and motherhood.<sup>4</sup> To this end, we conducted a field experiment in the Belgian (Flemish) labour market. We sent out pairs of fictitious female job applications to real job openings. Within each pair, the candidates' characteristics were similar except for sexual orientation. We compare the subsequent call-back from employers for candidates aged 25 versus 37 and for candidates indicating one child versus no children. If the aforementioned theoretical mechanisms related to getting and rearing children are important in favour of lesbians, it should lead to better relative hiring chances for lesbians when the candidates reveal their young age (for that is when the probability of maternity is high) and motherhood (compared to their relative hiring chances at older ages and when indicating no children).

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<sup>3</sup> In a recent correspondence test, Nick Drydakis (Forthcoming) attempts to investigate the relative share of taste versus statistical discrimination (without focussing on the underlying theoretical channels) by varying the amount of information included in the job application. As the information premium for sexual orientation minorities does not reduce the discriminatory patterns, he concludes that discrimination against lesbian women is a matter of distaste and not of uncertainty.

<sup>4</sup> Simultaneously with our field experiment, Doris Weichselbaumer (2013) gathered experimental data in Germany. By varying the marital status of the fictitious job candidates, her study aims at testing whether employers interpret registered partnership among sexual minorities as a disciplining device that pushes them into normalised lifestyles. She finds that unequal treatment is quite homogeneous along this aspect.

Readers may take an interest in this study for a number of additional reasons. First, as lesbians hold the middle ground between heterosexual women and men in the obstacles they face in the labour market related to getting and rearing children, our study also contributes to the literature on (the experimental identification of) gender discrimination in general (David Neumark, Roy J. Bank and Kyle D. Van Nort 1996; Claudia Goldin and Cecilia Rouse 2000; Doris Weichselbaumer 2004; Peter A. Riach and Judith Rich 2006; Rocío Albert, Lorenzo Escot and José Andrés Fernández-Cornejo 2011) and penalisation of women for having and rearing children in particular (Shoba V. Arun, Thankom G. Arun and Vani K. Borooah 2004; Lyn Craig and Michael Bittman 2008; Wendy Sigle-Rushton and Jane Waldfogel 2007; Gert Theunissen et al. 2009). In this respect, our results complement those of Pascale Petit (2007), who uses a methodology that is very similar to ours to study the effects of age and family constraints on gender discrimination in France. Referring to statistical discrimination due to the high probability of female career interruption as a principal explanation, she provides evidence for hiring discrimination against young women but no unequal treatment at all at older ages.

Second, we investigate unequal treatment in different occupations that potentially demonstrate a variation in discriminatory behaviour. Therefore, in our experiment, we include both typically female- and male-dominated jobs. We also differentiate between jobs in which personal contact with customers is important and jobs in which it is not important. To the best of our knowledge, we are the first to investigate customer driven sexual orientation discrimination.

Third, this is the first field experimental study of sexual orientation discrimination in Belgium. Belgium presents an interesting case, as its score on the ILGA-Europe Rainbow Map, which reflects the national legal and policy human rights situation of lesbian, gay, bisexual, transsexual and intersex people in Europe, that is higher than all the other countries in which field experimental studies of discrimination based on sexual orientation have been conducted before (ILGA-Europe 2013). This score is consistent with the liberal and tolerant public opinion towards sexual minorities in Belgium, as reflected in Eurobarometer (2006). Belgium has had an openly homosexual Prime Minister since December 2011, and in 2003, it was the second country in the world to legalise same-sex marriage. We use the latter feature to reveal the lesbian sexual orientation in our fictitious job applications in a direct and natural way by indicating the name of the applicant's spouse together with her marital status, thereby overcoming a major concern with previous correspondence studies that revealed lesbian sexual orientation by indicating involvement with a rainbow organisation. This concern is that the lesbian applicant's involvement may potentially conflate activism or radicalism with sexual orientation.

This article is structured as follows. In the next section, we outline our experimental research design. Subsequently, in Section 3, we present and discuss the statistical examination of the resulting dataset. A final section concludes the article.

## 2 Methodology

### 2.1 Measuring Unequal Treatment by a Field Experiment

Most studies of discrimination against (or in favour of) lesbians are based on non-experimental data. These non-experimental studies focus mainly on earnings<sup>5</sup> or employment<sup>6</sup> differentials by sexual orientation based on survey or administrative data. In general, they suffer from two important statistical problems: unobserved heterogeneity and sample selection bias. First, job candidates who appear similar to researchers based on standard non-experimental data may look very different to employers. No conclusive proof of discrimination can be provided, as researchers cannot control all relevant variables taken into account by employers in making their hiring, remuneration and promotion decisions. Second, it is possible that individuals with better economic outcomes – who may be more confident in their interaction both with interviewers and colleagues – are more willing to disclose their lesbian orientation. This leads to an upwards bias of the measured outcomes of lesbians. In addition, the studies focussing on wage differentials may suffer from the non-random selection into employment of heterosexual and lesbian job applicants. Wage regressions may understate the full effects of discrimination based on sexual orientation by

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<sup>5</sup> See Lee Badgett (2006) for a review of early studies and see Dan A. Black et al. (2003), John M. Blandford (2003), Erik Plug and Peter Berkhout (2004), G. Reza Arabsheibani, Alan Marin and Jonathan Wadsworth (2005), Christopher S. Carpenter (2005) and Ali M. Ahmed, Lina Andersson and Mats Hammarstedt (2011b) for more recent studies.

<sup>6</sup> See Karen Leppel (2009).



leaving out the fact that many applicants are barred from even earning a wage (Doris Weichselbaumer 2003; Drydakis 2011).

To overcome the stated methodological problems, this study gathers data through an experimental approach. Specifically, we follow the studies described in the beginning of our introduction by relying on a correspondence test. Correspondence experiments to test for hiring discrimination on grounds such as ethnicity and beauty have been extensively used and refined during the last century (Marianne Bertrand and Sendhil Mullainathan 2004; Dan-Olof Rooth 2009). In these field experiments, pairs of fictitious written job applications are sent to real job openings. The two applications within each pair are similar except for the single characteristic that is to be tested. Unequal treatment based on this characteristic can be identified by monitoring the subsequent call-back.

These field experiments have been widely viewed as providing the most convincing evidence of unequal treatment in hiring decisions (Peter A. Riach and Judith Rich 2002). A correspondence test eliminates selection on the basis of individual unobservable characteristics because all the information the employer receives is controlled by the researcher. Thus, strict equivalence between fictitious applicants is ensured and employer discrimination is disentangled from alternative explanations of differential hiring rates such as differential employee preferences and network effects.

## 2.2 Construction of Fictitious Applications

We generated pairs of template résumés and cover letters for 12 profiles of female job candidates. We call the members of these pairs “Type A” and “Type B” template applications. This allowed us to send two applications, one of each type, alternately assigned to the lesbian sexual orientation (see Section 2.3), to the same vacancy. To maximise comparability, both application types were identical in all job-relevant characteristics. The applications just differed in inessential details, such as the name of her alma mater, favourite sports and other particular personal details as well as in fonts and layout used in her application.

Six profiles featured women 25 years of age and six profiles featured women 37 years of age. We chose these particular ages by analogy with Pascale Petit’s (2007) study. Statistics from the Flemish Agency for Care and Health show that in Flanders, the Northern, Dutch-speaking part of Belgium where we gathered our experimental data, the age-specific fertility rate peaks at the age of 29. Therefore, the probability of (near-)future maternity is high at the age 25. The choice of job candidates aged 37 results in a trade-off. On the one hand, the older a female job candidate is, the lower her probability of taking maternity leave. On the other hand, because in Belgium, older candidates have smaller chances of getting a job, adopting candidates older than 37 in our experiment could reduce the call-back probability substantially. The six profiles per age category allowed us to apply for vacancies with different requirements in both educational level and specialisation. We used three (middle-

)low-educated profiles with a secondary education degree (ISCED<sup>7</sup> 3) in commerce, nursing and mechanical maintenance and three (middle-)high-educated profiles with a Bachelor's degree in office management, ergotherapy and engineering (ISCED 5).

Furthermore, all of the profiles were of married females of Belgian nationality. Their residences were located in one of the suburbs of Ghent, the second largest city of Flanders. The low-educated candidates graduated from a school with a good (and comparable) reputation at the age of 18, whereas the high-educated candidates graduated at the age of 21 (office managers and ergotherapists) or 22 (engineers). None of the candidates experienced grade retention. The 25-year-old candidates within each pair acquired experience from one comparable job and did not experience spells of unemployment prior to sending out their résumés. The 37-year-old candidates acquired experience from two comparable positions and, like their younger counterparts, did not experience any spells of unemployment. In addition, we added the following features to each application: Dutch as a mother tongue, adequate French and English language skills, driver's license, computer skills and student employment experience. Moreover, the cover letters signalled a motivated, structured and capable person. We also included sport club memberships and student leadership positions for the high-educated candidates. Lastly, we added a fictitious postal addresses (based on real streets in middle-class neighbourhoods) and dates of birth to the applications. The template Type A and Type B résumés and cover letters are available upon request.

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<sup>7</sup> ISCED stands for International Standard Classification of Education.

## 2.3 Revelation of Sexual Orientation

As stated above, we sent two applications, one Type A and one Type B, to each selected vacancy. We indicated marital status and the spouse's name for one member within each pair ("Married to Julie Van Damme" for the low-educated ones and "Married to Tineke De Letter" for the high-educated ones).<sup>8</sup> The second member's resume made only mention of marital status ("Married") but did not indicate a partner's name. Our approach contrasts with all the aforementioned studies, whose subjects signal their lesbian sexual orientation by highlighting involvement with a federation for lesbian, gay, bisexual and transgender rights thereby contrasting themselves from heterosexual candidates who instead describe involvement in another organisation (such as an environmental union, a cultural centre or a humanitarian movement).<sup>9</sup> The approach of those studies has two important limitations. First, sexual orientation is not indicated directly: heterosexual individuals may sympathise with sexual minorities and therefore be a member of (or work for) a rainbow organisation. Second, researchers acknowledge that a major concern with this approach is that the lesbian applicant's involvement may potentially conflate activism or radicalism with sexual orientation (Ali M. Ahmed, Lina Andersson and Mats Hammarstedt 2011a; Nick Drydakis

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<sup>8</sup> Several human resource managers confirmed that including one's partner's name in the résumé together with the marital status is not uncommon in Belgium.

<sup>9</sup> In addition, Ali M. Ahmed, Lina Andersson and Mats Hammarstedt (2011a) mention in the application letter that the lesbian candidates "enjoy spending their spare time with their wife". In Doris Weichselbaumer (2013), two signals for sexual orientation are used alternately: mentioning the involvement with a lesbian and gay organisation and mentioning a registered partnership with a person of the same gender.

2011; Doris Weichselbaumer 2013). As this activism could have a negative impact while the generosity signalled by the heterosexual candidate's engagement could have a positive impact on the employer's perception of the candidates, discrimination found by comparing their call-back runs the risk of being overestimated.

To eliminate any possible effect, the application type could have on call-backs, we alternated assignments of heterosexual and lesbian identity in the Type A and Type B applications. Moreover, we alternated the use of pairs of candidates aged 25 and 37. In addition, both pair members indicated they had one son half of the time. Subsequently, we sent the resulting combinations in an alternating order to the employers, with approximately 24 hours in between each time.

## **2.4 Selection of Vacancies**

Between October 2012 and March 2013, we randomly selected 576 vacancies from the database of the Public Employment Service of Flanders (PES), the major job search channel in Flanders, for which our fictitious job candidates were adequately educated and experienced. These 576 vacancies were spread equally across six occupations differing by required skill-level, gender dominance and customer contact: (i) secretary (low-skilled, female-dominated, low level of customer contact), (ii) nanny (low-skilled, female-dominated, high level of customer contact), (iii) manual worker (low-skilled, male-dominated, low level of customer contact), (iv) management assistant (high-skilled, female-dominated, low level of customer contact), (v) ergotherapist (high-skilled, female-

dominated, high level of customer contact) and (iv) engineer (high-skilled, male-dominated, low level of customer contact).<sup>10</sup>

Including several occupations rather than just one is important to avoid the danger inherent in many of the aforementioned correspondence tests of a researcher simply picking an occupation with a high rate of discrimination. Furthermore, by doing this, we are able to contribute to the empirical literature on (sexual orientation) discrimination beyond our primary research focus. First, we are able to investigate whether the general theoretical and empirical evidence for a negative relationship between unequal treatment in hiring and the level of education of the candidate holds in the context of discrimination based on sexual orientation.<sup>11</sup> Second, our results provide additional empirical evidence concerning the theoretical suggestion that discrimination against lesbians is less severe in male-dominated occupations (Bernard F. Reiss, Jeanne Safer and William Yotive 1976). As discussed in the introduction, this suggestion is related to the perception of lesbians as being more masculine and behaving in more “manly” ways. It was previously tested by Ali M. Ahmed, Lina Andersson and Mats Hammarstedt (2011a) and Nick Drydakis (2011). Although the former study indeed reports that discrimination against lesbians apparent in Sweden only in typically female-dominated occupations, the latter study finds no substantial

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<sup>10</sup> In the mentioned occupations dominated by females (males), at least 80% of the employees were of the female (male) gender in 2010 (source: Directorate-general Statistics and Economic Information Belgium).

<sup>11</sup> See for theoretical evidence Paul J. Taubman and Terence Wales (1974) arguing that higher education can act as a prejudices reducing screening device. See Moa Bursell (2007), Magnus Carlsson and Dan-Olof Rooth (2007) and Stijn Baert et al. (2013) for recent empirical evidence.

heterogeneity along this dimension. Third, it is a conscious choice to study both occupations with and without customer contact to test whether customer discrimination, as predicted by Gary Becker's (1957) model of discrimination, is apparent in the context of discrimination based on sexual orientation.

## **2.5 Measurement of Call-back**

All applications were sent to the employer by email.<sup>12</sup> To avoid detection, we applied to no more than one vacancy with the same employer. Call-backs were received by telephone voicemail or email. The content of the responses is available upon request. Because we included postal addresses with a non-existent street number in the applications, we could not measure call-back by regular mail. However, several human resource managers confirmed that currently, employers rarely, if ever, invite job candidates for selection interviews by regular mail. To minimise inconvenience to the employers, we immediately declined invitations to job interviews. We designed the study so that all call-backs received later than 30 days after sending out the application were to be discounted (however, this turned out to be an unnecessary restriction because we hardly received any positive call-

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<sup>12</sup> We chose “Tania Pauwels” and “Ann D’hooghe” as the names of the low- and high-educated candidate, - respectively, with the heterosexual identity and “Sofie Mertens” and “Elke Maes” as the names of the low- and high-educated candidate with the lesbian identity. We checked that these names did not represent a difference in socio-economic background based on a study linking the (suffix of the) name Dutch speaking parents choose for their children with their (own) wage (Jobat, 2013).

backs after 30 days). We define *positive call-back* as the situation in which the applicant is invited for an interview for the job for which she applied.

## **2.6 Research Limitations**

Before reporting and discussing the results of our research, we indicate three limitations in our research design. For an in-depth discussion of the strengths and weaknesses of correspondence tests, see Peter A. Riach and Judith Rich (2002), Marianne Bertrand and Sendhil Mullainathan (2004) and Devah Pager (2007). For elaboration on the ethical aspects of this type of field experiments, see Peter A. Riach and Judith Rich (2004).

First, we follow the literature by giving no direct indication of the “heterosexual” candidate’s sexual orientation. However, as argued by Doris Weichselbaumer (2013), given that heterosexuality is one of main organising principles of Western societies and is considered as the norm to which people typically adhere to, employers are unlikely to infer any deviation from that norm unless a respective indication is provided. Of course, the presumably “heterosexual” applicant could also be a lesbian in disguise who does not want to disclose her lesbian sexual orientation to a potential employer. The “lesbian” candidates we compare to “heterosexual” candidates in our framework are therefore actually “openly lesbian” and the “heterosexual” candidates are actually candidates with an unrevealed sexual orientation. As a result, this comparison also includes the costs associated with disclosing lesbian orientation.



Second, our experiment's design can only demonstrate discrimination, if any, at the initial stage of the selection process. Because we simply measure call-back rates for first interviews, we cannot make any statements about discrimination in the later stages of the selection process, let alone in wages or opportunities for promotion. However, Marianne Bertrand and Sendhil Mullainathan (2004) argue that, to the extent that the selection process has even moderate frictions, one would expect that reduced interview rates would translate into reduced job offers and lower earnings. Moreover because job interviews are costly, firms invite candidates for an interview only if they have a reasonably high chance of getting the job.

It is important to keep in mind that we are especially interested in the heterogeneity of sexual orientation discrimination by age and motherhood. As the aforementioned limitations cause a similar shift in the measures of discrimination for all age and motherhood categories of women, our main research conclusions remain valid. It is more important to note that our research design does not enable us to identify the direct and independent empirical importance of the hiring penalty heterosexual women pay for getting, on average, more children and having more rearing responsibilities. On the one hand, both the revelation of younger age and the revelation of motherhood (especially at the younger age) in the fictitious job applications are positively related both to the probability of getting (more) children and to the amount of rearing responsibilities (in the near future). Therefore, if discrimination relatively favours lesbians when comparing heterosexual and lesbian candidates at the younger age and/or with a revealed child, this may indicate that both characteristics of lesbian women appeal to the employer. Moreover,

there could also be another reason why the applicants' age may have an effect on unequal treatment. If experience acts, by analogy with education (see Section 2.4), as a screening device to reduce prejudice, this should lower unequal treatment at older ages because the number of years of work experience is higher. However, because the young job candidates have between three and seven years of work experience, one could expect that this is not an important driver for heterogeneity in discrimination.

### **3 Results and Discussion**

Table 1 presents our main statistical results based on the experimental dataset. We follow the literature by providing two statistical measures: the net discrimination rate and the positive call-back ratio. Because two applications were sent to each vacancy, there are four possible outcomes: (i) positive call-back for neither candidate, (ii) positive call-back for both candidates, (iii) positive call-back only for the heterosexual candidate and (iv) positive call-back only for the lesbian candidate. Overall, in 134 of the 576 vacancies, at least one candidate received a positive call-back. Twenty-eight cases resulted in a positive call-back for just the heterosexual candidate and 39 for the lesbian candidate only. The *net discrimination rate* is calculated by reducing the number of applications for which the heterosexual candidate was preferred by the number of applications for which the lesbian candidate was preferred. This difference is then divided by the number of applications for which at least one of them received a positive call-back. The result is a net measure of the

number of discriminatory acts a minority applicant can expect to encounter per application. Overall, this net discrimination rate is -0.08. Based on a standard  $\chi^2$  test, we cannot reject the hypothesis that candidates of both sexual orientations were equally often treated (un)favourably.

The *positive call-back ratio* is obtained by dividing the percentage of applications for which heterosexual candidates received a positive call-back by the corresponding percentage for the lesbian candidates. The value for this statistic presented in Table 1 (Panel A) confirms the finding based on the net discrimination rate. Overall, the positive call-back rate is 0.16<sup>13</sup> for heterosexual candidates and 0.18 for lesbian candidates. The resulting positive call-back ratio is 0.90, indicating that the heterosexual candidates received 10% less invitations compared with their lesbian counterparts. This ratio is not significantly different from 1. In conclusion, overall, both the net discrimination rate and the call-back ratio suggest statistically insignificant levels of unequal treatment (in favour) of lesbians in the occupations tested in the Belgian labour market. This result contrasts with the substantial magnitude of discrimination against lesbians in other European countries as highlighted in our introduction. Regression analysis leads to the same statistical conclusions because, by construction, the observable characteristics are equal for both the heterosexual and the lesbian candidates for each vacancy.

#### TABLE 1 ABOUT HERE

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<sup>13</sup> 0.16 = (67 + 28)/576.

If both statistical measures are broken down by the candidate's age (Table 1, Panel B), we see that both measures point in the direction of (weakly) significant evidence for positive discrimination towards lesbians at the younger age. In that case, the positive call-back ratio indicates that the heterosexual job candidates in our experiment had a 20% lower probability of getting invited for a job interview compared with their lesbian counterparts. At the age of 37, however, no unequal treatment at all is identified. These observations are in line with our theoretical expectations: discrimination is more in favour of the lesbian candidates at the age of 25 (compared with discrimination at the age of 37) because at that age heterosexual women are expected to pay the price for their higher probability of maternity relative to older women having, independently of their sexual orientation, a low probability of future fertility.

Analysing our research findings by the resume's revelation of a child (Table 1, Panel C) results, in line with our expectations, in a net discrimination rate and positive call-back ratio that are relatively more in favour of lesbian candidates who reveal their motherhood status. However, the heterogeneity along this dimension is not substantial and the discrimination measures are not significant for both categories in this split-up. Apparently, in the case of heterosexual women, the penalty for taking up more rearing tasks within the household than lesbian women is, on average, less severe than the penalty for having high(er) maternity probabilities at the younger age. Alternatively, because we compare women with one child to women without any indication with respect to motherhood, employers may be unsure about the number of children in the latter case.

Analysing the research observations by age and motherhood simultaneously (Table 1, Panel D) results in discrimination measures completely in line with our expectations. Positive discrimination towards lesbians is highest when testing with candidates who are young and indicate having a child. For this subgroup, the probability of being invited for a job interview is 25% less for heterosexual candidates than for lesbian candidates. Both measures are least favourable for lesbians (and essentially point at zero unequal treatment) when testing with older candidates who do not indicate any children. We obtain intermediate statistics for young candidates not indicating children or older candidates with a child,. Based on the comparison of the measures for the latter two subgroups of candidates, younger age again seems to play a more important role in inducing positive discrimination towards lesbians than does the revelation of a child.

Table A–1 presents our secondary research results. First, we consider the net discrimination rate and the call-back ratio to the occupation level (Table A–1, Panel B). Doing so produces (only) a favourable treatment of an important magnitude for lesbian women in the occupation of manual worker, i.e. the low-skilled male-dominated occupation without customer contact. The fictitious lesbian candidates in our experiment received twice as many invitations to interview as their heterosexual counterparts when applying for this occupation. This finding seems to confirm that unequal treatment is higher among the low-educated and is more in favour of lesbians in male-dominated occupations and in occupations in which customer contact is not important. Indeed, if we aggregate the positive call-back ratio over the low-skilled and high-skilled occupations, we obtain a more favourable ratio for the former occupations (0.84) than for the latter occupations (0.95).

Both ratios, however, are not significantly different from 1. Furthermore, if we aggregate the positive call-back ratio over the occupations without and with customer contact, we obtain a ratio for the former occupations (0.84) that is more favourable for lesbian candidates than the ratio for the latter occupations (0.96). Analogously, if we aggregate the positive call-back ratio over the male-dominated and female-dominated occupations, we obtain ratios of 0.85 and 0.92, respectively.

Second, we inspect whether discrimination differs by the gender of the contact person for the vacancy (Table A–1, Panel C). While we find no overall unequal treatment among female selection contacts, our results reveal that lesbian candidates are treated favourably if the contact person is male. This finding is consistent with that of Magnus Carlsson and Dan-Olof Rooth (2007), providing evidence for higher levels of ethnic discrimination among male recruiters (compared with female recruiters) in Sweden. In addition, two “exotic” explanations for this evidence are found in the literature. On the one hand, female recruiters may be insecure about their own sexual orientation and therefore have a distaste for lesbian workers (Stephen M. Crow, Lillian Y. Fok and Sandra J. Hartman 1998). On the other hand, male recruiters may be positively (sexually) agitated by lesbian candidates (Kenneth L. Nyberg and Jon P. Alston 1977; Stephen M. Crow, Lillian Y. Fok and Sandra J. Hartman 1998). In a last exercise, for which the statistics are available upon request, we also analyse the observations by age and occupation and by age and gender of the recruiter on the other hand. Through this analysis, we find that the discrimination heterogeneity by age is more prevalent in those occupations other than manual worker and among female recruiters.

## 4 Conclusion

In this study, we reported the results of a field experiment designed to identify the effects of age and motherhood on discrimination based on the sexual orientation of women. We find that employers in Belgium discriminate against heterosexual women if these women are young and, to a lesser extent, if they have children. We find no unequal treatment at all at older ages. Our study results complement those by Pascale Petit (2007), finding that male job candidates are preferred over their female counterparts at young ages. In addition, we find that lesbians are somewhat more favourably treated in low-skilled occupations, occupations without customer contact and male-dominated occupations. This finding is driven by the high level of positive discrimination towards lesbians in the manual worker profession. Lastly, we find that female recruiters do not exercise unequal treatment, but male contact people treat lesbian job candidates favourably.

Although our experiment initially aimed at contributing to the literature on discrimination based on sexual orientation, the results mainly suggest that there is a penalty for young (heterosexual) women because of their high probability of maternity. Our findings tally with those of Laura R. Gordo (2009), which indicate that women in Germany tend to consolidate their careers before motherhood to reduce career costs. From a policy perspective, these results suggest that rather than fighting discrimination against sexual minorities in the labour market, Belgian policies should aim at reducing the career penalty of motherhood. This should be done both by detecting and punishing discrimination against women in their fertile ages and by reducing the costs of maternity leave for firms.

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## **Appendix A: Additional Tables**

**TABLE A-1 ABOUT HERE**

Table 1 Main Research Results

| Observations  | Jobs  | Neither candidate positive call-back | Both candidates positive call-back | Only heterosexual candidate positive call-back | Only lesbian candidate positive call-back | Net discrimination rate | $\chi^2$ | Positive call-back ratio | t    |
|---|-------|--------------------------------------|------------------------------------|--|---|-------------------------|----------|--------------------------|------|
|   | (No.) | (No.)                                | (No.)                              | (No.)  | (No.)                                     |                         |          |                          |      |
| <b>A. All observations</b>                                    |       |                                      |                                    |  |   |                         |          |                          |      |
| All observations  | 576   | 442                                  | 67                                 | 28   | 39  | -0.08                   | 1.81     | 0.90                     | 1.34 |
| <b>B. Heterogeneity by the candidate's age</b>                |       |                                      |                                    |  |   |                         |          |                          |      |
| 25 year   | 288   | 220                                  | 31                                 | 13   | 24  | -0.16*                  | 3.27     | 0.80*                    | 1.81 |
| 37 year   | 288   | 222                                  | 36                                 | 15   | 15  | 0.00                    | 0.00     | 1.00                     | 0.00 |
| <b>C. Heterogeneity by the candidate's motherhood</b>         |       |                                      |                                    |  |   |                         |          |                          |      |
| One child   | 288   | 219                                  | 39                                 | 11   | 19  | -0.12                   | 2.13     | 0.86                     | 1.46 |
| No children   | 288   | 223                                  | 28                                 | 17   | 20  | -0.05                   | 0.24     | 0.94                     | 0.49 |
| <b>D. Heterogeneity by the candidate's age and motherhood</b> |       |                                      |                                    |  |   |                         |          |                          |      |
| 25 year * one child   | 144   | 112                                  | 17                                 | 4  | 11  | -0.22*                  | 3.27     | 0.75*                    | 1.82 |
| 25 year * no children   | 144   | 108                                  | 14                                 | 9  | 13  | -0.11                   | 0.73     | 0.85                     | 0.85 |
| 37 year * one child   | 144   | 107                                  | 22                                 | 7  | 8   | -0.03                   | 0.07     | 0.97                     | 0.26 |
| 37 year * no children   | 144   | 115                                  | 14                                 | 8  | 7   | 0.03                    | 0.07     | 1.05                     | 0.26 |

Note: The net discrimination rate is calculated by reducing the number of applications for which the heterosexual candidate was preferred by the number of applications for which the lesbian candidate was preferred and this difference is then divided by the number of application pairs in which at least one received a positive callback. The chi-square test for the net discrimination rate tests the null hypothesis that both candidates are treated unfavourably just as frequently. \*\*\* indicates significance at the 1% significance level, \*\* at the 5% significance level and \* at the 10% significance level.

Note: The positive callback ratio is calculated by dividing the percentage of applications for which heterosexual candidates received a positive callback by the corresponding percentage for lesbian candidates. The t-test for the positive callback ratio tests the null hypothesis that the probability of a positive answer is the same for candidates from both groups. As two applicants contacted the same firm, the probability of the heterosexual applicant receiving an invitation was correlated with the probability of the lesbian applicant receiving one. Therefore, standard errors are corrected for clustering of the observations at the vacancy level. \*\*\* indicates significance at the 1% significance level, \*\* at the 5% significance level and \* at the 10% significance level.

Table A-1 Secondary Research Results

| Observations                                       | Jobs  | Neither candidate positive call-back | Both candidates positive call-back | Only heterosexual candidate positive call-back | Only lesbian candidate positive call-back | Net discrimination rate | $\chi^2$ | Positive call-back ratio | t    |
|--|-------|--------------------------------------|------------------------------------|--|---|-------------------------|----------|--------------------------|------|
|  | (No.) | (No.)                                | (No.)                              | (No.)  | (No.)                                     |                         |          |                          |      |
| <b>A. All observations</b>                         |       |                                      |                                    |  |   |                         |          |                          |      |
| All observations                                   | 576   | 442                                  | 67                                 | 28   | 39  | -0.08                   | 1.81     | 0.90                     | 1.34 |
| <b>B. Heterogeneity by occupation</b>              |       |                                      |                                    |  |   |                         |          |                          |      |
| Secretary  | 96    | 80                                   | 8                                  | 3  | 5   | -0.13                   | 0.50     | 0.85                     | 0.70 |
| Nanny  | 96    | 70                                   | 13                                 | 8  | 5   | 0.12                    | 0.69     | 1.17                     | 0.83 |
| Manual worker                                      | 96    | 75                                   | 6                                  | 3  | 12  | -0.43**                 | 5.40     | 0.50**                   | 2.38 |
| Management assistant                               | 96    | 83                                   | 7                                  | 2  | 4   | -0.15                   | 0.67     | 0.82                     | 0.81 |
| Ergotherapist                                      | 96    | 62                                   | 23                                 | 3  | 8   | -0.15                   | 2.27     | 0.84                     | 1.52 |
| Engineer   | 96    | 72                                   | 10                                 | 9  | 5   | 0.17                    | 1.14     | 1.27                     | 1.07 |
| <b>C. Heterogeneity by gender of the recruiter</b> |       |                                      |                                    |  |   |                         |          |                          |      |
| Female recruiter                                   | 313   | 239                                  | 39                                 | 16   | 19  | -0.04                   | 0.26     | 0.95                     | 0.51 |
| Male recruiter                                     | 215   | 166                                  | 21                                 | 9  | 19  | -0.20*                  | 3.57     | 0.75*                    | 1.90 |

*Note:* The net discrimination rate is calculated by reducing the number of applications for which the heterosexual candidate was preferred by the number of applications for which the lesbian candidate was preferred and this difference is then divided by the number of application pairs in which at least one received a positive call-back. The chi-square test for the net discrimination rate tests the null hypothesis that both candidates are treated unfavourably just as frequently. \*\*\* indicates significance at the 1% significance level, \*\* at the 5% significance level and \* at the 10% significance level.

*Note:* The positive call-back ratio is calculated by dividing the percentage of applications for which heterosexual candidates received a positive call-back by the corresponding percentage for lesbian candidates. The t-test for the positive call-back ratio tests the null hypothesis that the probability of a positive answer is the same for candidates from both groups. Standard errors are corrected for clustering of the observations at the vacancy level. \*\*\* indicates significance at the 1% significance level, \*\* at the 5% significance level and \* at the 10% significance level.

*Note:* The number of jobs with a male or a female recruiter does not equal the total number of jobs as for some vacancies we could not identify the gender of the contact person.