Sexual Orientation and Wage Discrimination in France: the Hidden Side of the Rainbow

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Summary

This article is the first study to present an econometric evaluation of wage discrimination based on sexual orientation in the French labor market. Having identified same-sex couples using the French Employment Survey, we estimate the wage gap related to sexual orientation in the private and public sectors, in order to analyze whether or not lesbians and gays suffer a wage penalty. The results obtained show the existence of a wage penalty for homosexual male workers, as compared with their heterosexual counterparts, in both the private and public sectors; the magnitude of this discrimination varies from about -6.5% in the private sector, to -5.5% in the public sector. In the private sector, the wage penalty suffered by gay employees is higher for skilled workers than for the unskilled, and – in both sectors – the wage penalty is higher for older workers than for younger ones. As with many other countries, we do not find any evidence of the existence of a wage discrimination against lesbians.

0. – Introduction

Theoretical and applied studies, have long emphasized the possible existence in the labor market of wage discrimination against specific population subgroups (women, foreign workers, ethnic groups *etc*.); nevertheless, one had to wait until the late nineties, to see the gradual emergence, following the seminal paper by BADGETT [1995], *The Wage Effects of Sexual Orientation Discrimination*, of a literature specifically devoted to wage discrimination based on sexual orientation[1].

This body of work, initially developed in the US – KLAWITTER [1997], [1998], KLAWITTER & FLATT [1998], BLANDFORD [1999], [2000], ALLEGRETTO & ARTHUR [2001], CLAIN & LEPPEL [2001] – and in the UK– CALANDRINO [1999], ARABSHEIBANI & *al.* [2002] – led to further studies overseas and to a limited amount of research in other countries : Netherlands (PLUG & BERKHOUT [2004], [2008]), Sweden (AHMED & HAMMARSTEDT [2009]), Australia and Canada (CARPENTER [2008a], [2008b]). The main results highlight the existence of significant wage discrimination against gay men, usually between –7% and –15%, but – in most of the cases – fail to find any significant wage discrimination against lesbians (some results even indicate the existence of a positive wage premium for lesbians).

Despite the legislation in France prohibiting any wage discrimination based on sexual orientation, until now no empirical work has been conducted in this country to investigate the question of the existence and extent of this type of discrimination. The main obstacle to the development of such

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[1] See BADGETT [2006] for a survey of this literature.

research is obviously the lack of reliable statistical sources which would permit identifying precisely the homosexual populations (gay and lesbian) and their individual and economic characteristics.

The aim of this paper is to evaluate in the French labor market, for both the private sector and the public sector, the extent of wage discrimination based on sexual orientation, using data from the INSEE employment survey. The first section summarizes the theoretical and empirical literature on the subject; the second is devoted to the construction of the database and to the presentation of the main statistical characteristics of homosexual and heterosexual populations. The third section presents the main results for the private and public sectors, while the last section is devoted to measuring the impact of different variables (age, seniority, qualifications, *etc.*) on the magnitude of discrimination.

1. – Literature

1.1. – Theory

The theory of *statistical discrimination*, originally developed by PHELPS [1972] and ARROW [1973], provides a first argument to understand wage discrimination based on sexual orientation. It relies on the existence of informational imperfections preventing the employer from precisely assessing the individual productivity of workers. In such a context, the employer then uses the average productivity of the group to which a worker belongs (or is believed to belong), as an indicator of his individual skills. Wage discrimination against gay employees may thus arise if the employer uses sexual orientation as the signal of a greater likelihood of HIV infection itself associated with extra costs for the firm. Symmetrical arguments that point out the important role played by certain kinds of stereotypes are used to explain the absence of wage discrimination against lesbians, or the existence of a lesbian wage premium, as found in some studies. Compared with heterosexual women, lesbians are often perceived as being stronger and more attentive to their careers, characteristics associated by employers with a higher average productivity.

A second argument can be found in the so-called *taste for discrimination*. Originally developed by BECKER [1957], this approach relies directly on the fact that employers exhibit discriminative preferences. Homophobia and/or heterosexism may indeed be the source, for some employers, of a "disaffection" with the gay identity and/or the homosexual "lifestyle", leading to a strict preference for discrimination based on sexual orientation. It must be noticed that such a *taste for discrimination* may be indirect and "imposed" on the employer, either by consumers or other employees. For example, if consumers experience a disutility from being in contact with gay employees, hiring such employees may result in a partial loss of customers to the company. In such a case the employer, will express *indirectly* a preference for discrimination that merely reflects that of its customers. Similarly, the taste for discrimination expressed by an employer may be the consequence of the homophobia of some company employees[2].

The wage penalty associated with the taste for discrimination is usually not identical for gays and lesbians because of the different public perceptions of male and female homosexuality; public attitudes towards gays being generally more negative and hostile than they are towards lesbians (see BERILL [1992], KITE & WHITLEY [1996]), the wage penalty induced is also higher.

Considering the different theoretical elements presented above, the wage discriminations experienced by gays and lesbians should not be of the same magnitude:

- Compared to heterosexual men, gay men suffer a double wage penalty, associated with both a strong taste for discrimination and a statistical discrimination effect;
- Compared to heterosexual women, lesbians suffer a taste for discrimination *(i)* smaller that for gays and *(ii)* probably partially balanced by a positive wage premium linked to the statistical discrimination effect.

The combination of the two effects, should then lead to an estimate of a higher wage penalty for gays than for lesbians (the wage penalty for lesbians could even be strictly negative corresponding, in such a case, to a lesbian wage premium).

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[2] If a significant proportion of heterosexual employees is homophobic, hiring homosexual workers can lead to a decrease in individual productivity of both homosexuals (harassment, depression, lack of motivation, *etc.*) and heterosexuals (lack of concentration, lost time, *etc.*).

1.2. – Problems

The identification of wage discrimination based on sexual orientation poses specific problems, potentially leading to difficulties in the econometric estimation of the extent of discrimination and the interpretation of results. From a methodological point of view, one of the main difficulties is that, unlike gender or ethnic origin, sexual orientation is not perfectly and directly observable by the employer. However, as pointed out by Badgett [1995], sexual orientation must be – in one way or another – known to the employer, before one may speak of wage discrimination against homosexual workers. Several points arise from this situation.

First, as some homosexual employees are not identified as such by their employers, wage discrimination measured in a sample of all homosexual employees, represents an underestimate of the actual discrimination experienced by workers whose sexual orientation is known to the employer (*cf.* BLACK & *al.* [2003]).

Second, even if sexual orientation is not always immediately and fully observable, the employer may progressively acquire such information through a learning process: inference from other observable variables (marital status, existence of children, neighborhood of residence *etc.*), rumors reported by other employees, lower participation in the social life of the firm, *etc.* As the learning process takes time, observed wage discrimination should then increase with the number of years in the company. Moreover, as the observation of a specific state – such as for example "being single" or "not having children" – conveys more information about the sexual orientation of an individual employee when the employee is older than when he is younger, one can also expect an increasing level of discrimination with age. These considerations underscore the importance of including in the wage equation, as control variables, all the variables that influence the information acquisition process of the employer.

Sexual orientation may also influence the choice of occupation, which becomes at least partly endogenous (*cf.* BLACK & *al.* [2003]). It is probably the same for some other variables that may be partially endogenous: industry, geographic location, degrees, *etc.* One should then be cautious when interpreting the estimated coefficients of a wage equation which includes these variables as control variables.

The foregoing remarks refer to a more general and well known problem, when working on wage discrimination: the number and kind of control variables used in the wage equation. It is known from Oaxaca [1973] that a more or less wide integration of these control variables has a direct and strong impact on the measurement of wage discrimination[3]. One thus faces a dilemma:

– either one introduces many control variables in order to achieve a precise measurement of "pure" wage discrimination, *i.e.* with all things being equal, but at the risk of underestimating the actual discrimination if some of these control variables are themselves the result of discriminatory practices; or

– one excludes *a priori* any control variable that can itself, at least partially, results from discriminatory practices, but at the risk of excluding many important controls and thus overestimating wage discrimination.

This point is of particular importance here, since part of the discrimination against gays and lesbians finds its origin in the process of internal promotion which works differently – *i.e.* with heterogeneous probabilities of success – for heterosexual and homosexual employees (see FRANK [2006]). Controlling too precisely for the "type" of position can thus lead to an underestimation of wage discrimination based on sexual orientation[4].

Another question is whether to include marital status (married *vs.* not married) as a control variable in the wage equation. Indeed, numerous articles point out the existence of a marriage premium that positively affects the income of married workers only. All these studies emphasize the central role

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[3] OAXACA [1973], in his seminal study on gender wage discrimination, shows that the share of the gender wage gap due to discrimination, decreases from 77% to 58% when controlling for industry and occupation.

[4] If the probability of accessing executive positions is lower for homosexuals than for heterosexuals with identical characteristics, but once gays and lesbians become executives they are paid the same, *(i)* the proportion of gay or lesbian employees among executives will be low (*gay glass ceiling*) and thus the average wage will be lower for homosexual employees than for heterosexual ones, but *(ii)* a wage discrimination based on sexual orientation will appear, only if the variable "Executive position *vs.* non-executive position" is not used as a control variable in the wage equation.

played by such a premium when estimating wage discrimination against homosexual employees. ELMSLIE & TEBALDI [2007] show that the marriage premium explains more than half of the wage gap between gays and married heterosexual employees[5]. The question is thus to know if one must compare the earnings of gay employees to those of all heterosexuals or only to those of unmarried heterosexuals. As noted by FRANK [2007], the main difficulty arises from the fact that the marriage premium has a double meaning: *(i)* on one hand it can be explained by the intrinsic properties of marriage (long term commitment valued by employers) or those of married individuals (positive valuation of specific personal characteristics on the "marriage market", that are also valued in the workplace), or *(ii)* on the other hand, in an homophobic environment, it can simply be a premium to heterosexuality, with marriage taken as the signal of the latter[6]. In such a situation, not introducing the marriage premium as a control variable leads to overestimating wage discrimination based on sexual orientation (by considering as a result of discriminatory practices against gays and lesbians wage differentials which, at least partly, also penalize unmarried heterosexual employees), while introducing it leads to underestimating the level of discrimination (since part of the marriage premium is the result of discrimination against gays and lesbians, rather than discrimination in favor of marriage as such).

Regarding this set of issues concerning which control variables to take into account, a solution increasingly adopted in the literature consists of being rather "generous" with the number of control variables – to avoid artificially increasing the observed magnitude of discrimination – although knowing that one then estimates a lower bound of the actual discrimination. This is the choice made in this paper.

1.3. – Statistical sources and results

The identification of homosexual and heterosexual employees, and the availability of reliable economic data on these two populations, constitute the two main challenges involved in building a database permitting the measurement of discrimination against gays and lesbians (which probably explains the low number of empirical studies on this issue). Two different methods are used in the literature to build such a database.

(i) Indirect identification of homosexual employees through same-sex cohabitation

This method consists of identifying the same-sex couples in available public surveys (national censuses, population surveys, data from the Centers for Disease Control, *etc.*). All members of same-sex female pairs are considered as a population sample of lesbians and all members of same-sex male pairs are considered as a population sample of gay men. Of course, the identification of the homosexual populations through same-sex cohabitation, is characterized by certain limits inherent in the method: *(i)* it leads to measurement error, by identifying wrongly as homosexuals some individuals who are in fact heterosexuals[7], *(ii)* it does not allow identify homosexuals who do not live with partners *i.e.* a significant proportion of the populations concerned, and *(iii)* it does not indicate whether the individuals identified as homosexuals are identified as such by their employers.

(ii) Direct identification of homosexual employees

Direct identification of homosexual populations is possible only if specific surveys asking respondents about their sexual behavior or their sexual orientation, are available : US *General Social Survey* or US *National Health and Social Life Survey* (BADGETT [1995], [2001], BERG & LIEN [2002], BLACK & *al.* [2003], BLANDFORD [2003]), *National Health and Nutrition Examination Surveys* (CARPENTER [2007a]), *International Social Survey Programme* (HEINECK [2009]), *Survey on recent graduates in Netherlands* (PLUG & BERKHOUT [2004], [2008]), *California Health Interview Survey* (CARPENTER [2005a]), *Canadian Community Health Surveys* (CARPENTER [2008b]).

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[5] This point is also emphasized by CARPENTER [2004]

[6] In a discrimination and signaling framework, it can be profitable for heterosexual workers, in order to obtain higher wages, to use marriage as a signal of heterosexuality (CARPENTER [2005b], [2007b], FRANK [2006]).

[7] This measurement error can however be reduced by filtering populations of cohabitants on the basis of various criteria: age (to eliminate juvenile cohabitation), family links, income (economic cohabitation), nationality (to exclude migrant workers), *etc.* Several articles show, that identifying homosexual populations via a cohabitation criterion is precise and efficient (see BLACK & *al.* [2000], CARPENTER [2004]) and that the bias associated with this method is less than 0.4%.

Compared to the indirect identification method, this approach allows a more precise measure of homosexual populations, by integrating homosexual people not living with partners and avoiding measurement errors attributable to the presence of heterosexual individuals among same-sex cohabitants. This method is, however, characterized by specific problems that contribute to weakening the results obtained. For example, the identification of homosexual populations on the basis of their self-reported sexual orientation (or sexual behavior) must face *(i)* the imperfect nature of the link between "homosexuality" and "sexual behavior" and *(ii)* the well known and inherent limits of self-identification. Several studies point out that the estimate of wage discrimination varies greatly, depending on the chosen definition of homosexuality: from −13% to −18% for men according to BLACK & *al.* [2003], and from −20% to −30% according to CARPENTER [2007a].

Whatever the method used, the main characteristics of the homosexual populations that are identified are relatively similar. Gays and lesbians are much more highly educated than their heterosexual counterparts[8]; they are significantly younger and more urban[9] and they are fewer to have children[10]. In the same studies, the proportion of women working part time is two to four times higher among heterosexual women (between 40% and 50% depending on the studies) than among lesbians (10% to 25%). In contrast one generally observes the opposite, although with a much smaller difference, when comparing gays and heterosexual men. Finally, compared to their heterosexual counterparts, gays have lower wages (about -5%), while lesbians have a wage premium (+5%).

The different results obtained concerning the nature of wage discrimination are *homogeneous*. Among the twenty empirical studies surveyed by AHMED & HAMMARSTEDT [2009], only two conclude to an absence of negative discrimination against gays. Symmetrically, almost all available studies point to the absence of negative discrimination against lesbians (two-thirds of these studies even concluding that there is a positive wage premium).

Despite this "agreement" on the nature of wage discrimination, quantitative results on the extent of the discrimination are quite *heterogeneous*. For gays, observed wage discrimination varies from a limited level of about −5% (ARABSHEIBANI & *al.* [2002], PLUG & BERKHOUT [2004], [2008]), to higher levels of −10% (ELMSLIE & TEBALDI [2007], ARABSHEIBANI & *al.* [2007], CARPENTER [2008], AHMED & HAMMARSTEDT [2009], HEINECK [2009]), −20% and more (BERG & LIEN [2002], BLACK & *al.* [2003], CARPENTER [2007a]) and even −30% (BADGETT [1995], BLANDFORD [2003]); for lesbians, the discrimination varies from +4% (PLUG & BERKHOUT [2004]), to +10% (ARABSHEIBANI & *al.* [2004], [2007]), about +15% (BLANDFORD [2003], CARPENTER [2008]) and +20% (ARABSHEIBANI & *al.* [2002], BLACK & *al.* [2003]).

Even if the purpose of this article is not to explain the large gaps existing in the empirical literature concerning the estimated magnitude of wage discrimination against homosexual employees, it is interesting to shed some light on their possible source. In a primary approach it makes sense to presume that these differences in findings are due to a combination of differences in *(i)* the method adopted for the identification of homosexual populations, *(ii)* the definition used for homosexuality (in the case of direct identification), *(iii)* the filters used to identify homosexuals couples among same-sex cohabitants (in the case of indirect identification), *(iv)* the control variables used in the wage equation (and especially the use or not of marital status) and finally *(v)* the econometric method used to estimate the wage equation[11]. It is clear for example that the estimated extent of wage discrimination decreases when one increases the number of, wisely chosen, control variables.

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[8] see ARABSHEIBANI & *al.* [2004], [2005], [2007], BLACK & *al.* [2003], ELMSLIE & TEBALDI [2007], AHMED & HAMMARSTEDT [2009], CARPENTER [2004], [2007a], [2008b] and, for France, DIGOIX & *al.* [2004], TOULEMON & *al.* [2005]. On average, in these various studies, about 27% of heterosexual men and women have college education, as compared with 43% of gays and over 48% of lesbians

[9] Same references as the previous footnote

[10] On average, in the various studies, about 40% of heterosexual men and women have children as compared with 4.5% of gays and 18% of lesbians (same references that *supra*; see also FRANK [2006])

[11] Especially the correction, or not, of the selection bias by estimating first a probit model of participation (Heckman two-step estimation).

2. – France

2.1. – Law

Despite the decriminalization of homosexual conducts in 1982, the term *sexual orientation* is unknown of the French law until the very beginning of the 2000's. It is mainly under the constant pressure of EU laws over the late 90's that discrimination based on sexual orientation is gradually prohibited by French laws. In 1997 the European Community Treaty (article 13) empowers the EU to create legislation to combat discrimination on the grounds of sexual orientation. In 2000 the EU Charter of Fundamental Rights establishes a general non-discrimination principle:

> " *Any discrimination based on any ground such as sex, race, color, ethnic or social origin, genetic features, language, religion or belief, political or any other opinion, membership of a national minority, property, birth, disability, age or sexual orientation shall be prohibited.*" (article 21)

The article contains a general prohibition on discrimination on a broad list of grounds including sexual orientation and does not create a 'hierarchy of grounds'. Individuals have an equal right to equal treatment. This means that the prohibition on sexual orientation discrimination can be extended to offer protection outside the area of employment in the same way as those discriminated against on racial or ethnic grounds.

In 2001, taking into account EU legislation, the French criminal code included sexual orientation in the list of prohibited grounds for discrimination[12]. Discrimination, committed against a natural or legal person, is punished by three years' imprisonment and a fine of €45 000. In the same line, the labor code contains several provisions on discrimination, especially a provision that lists all grounds of prohibited discrimination:

> " *No one can be excluded from a procedure of recruitment or from access to a training course or a period of training in a company, no employee can be sanctioned, dismissed or be the subject of a discriminatory, direct or indirect measure, in particular as regards to remuneration, to profit-sharing or distribution of actions, to training, reclassification, assignment, qualification, classification, professional promotion, change or renewal of contract because of its origin, its sex, its manners, its sexual orientation, (...).*" (article L1132-1)

Approximately all types of decisions are covered by this provision: hiring, training period, trial period, dismissal, disciplinary measures, retirement and all measures relative to the life of the contract of employment.

On the side of family law, despite the adoption in November 1999 of a law setting up a *civil partnership* ("PACS") opened to homosexuals, the conjugal status open to lesbian or gay couples is characterized in France by an unequal legal treatment since lesbians and gays have only access to the PACS, whereas heterosexuals have the choice between the civil marriage and the PACS. This constitutes a discrimination since the PACS offers fewer rights than marriage: for example, being married is a condition to get a reversion pension after the death of a partner (a PACS is not enough).

2.2. – Homophobia

Homophobia leads to a vulnerability of homosexuals in the workplace[13]. Negative attitudes toward homosexuality, although less prevalent in France than in the US, do remain significant: 21% of French respondents in 2002 believe that homosexuality is a lifestyle that should not be accepted by society (PRCPP [2002]). In a 2004 poll[14], 20% of respondents stated "homosexuals should not have the same rights as heterosexuals"; 31% stated "homosexuals have an abnormal sexuality"; 23% said "homosexuals should be banned from certain occupations involving constant contact with children"; 20% believed that "they are not really people like others" and finally 7% stated that "violence against homosexuals is sometimes understandable". In 2008, 16% of the French said they were uncomfortable or not fully comfortable with "the idea of having a gay neighbor"[15].

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[12] Articles 225-1, 225-2, 132-77, 222-18-1. English translation of the Code available at: http://www.legifrance.gouv.fr/content/download/1957/13715/version/4/file/Code_33.pdf

[13] For a complete investigation of the various types of discrimination faced by gays and lesbians in the workplace, one can usefully refer to BADGETT & *al.* [2007] for the United States, or IRWIN [1999] for Australia.

[14] IPSOS survey conducted in 2004 for the newspaper *Têtu*, on a national sample of 1002 persons, representative of the French population over 15 years of age.

[15] European Commission [2008], *Discrimination in the European Union: 2008*, Eurobarometer Special survey n°296.

If one looks now at the consequences of homophobia, the 2009 *Report on Homophobia* in France[16] underlines that homophobia in the workplace is – with 16% of the phone calls – the main reason for calling the association *SOS Homophobia;* 6% of these calls resulting from sanctions or discrimination in the workplace; 85% of the people reporting suffering of homophobic events in the workplace are men, a finding which is consistent with the evidence observed in the US of a more negative public attitude towards gays than towards lesbians.

The extent of homophobia in the workplace is shown by the recent report of the French *Equal Opportunities and Anti-Discrimination Commission* (HALDE), which highlights that 40% of the gays and lesbians surveyed, have been, at least once throughout their careers, victims of homophobia: 12% of the people involved report having been passed over for an internal promotion, 8% report discrimination during a hiring process, 4.5% claim they were fired, and 4.5% say they are underpaid compare to straight employees with identical levels of skills and responsibilities. In another survey, conducted in 2009, for the French *Equal Opportunities and Anti-Discrimination Commission* and the *International Labour Organization*[17], 17% of private sector employees (*vs.* 8% in the public sector) consider that being gay is an impediment to career advancement.

2.3. – Database

Measuring wage discrimination based on sexual orientation from French data is a difficult exercise, since there are no surveys identifying the sexual orientation of employees and providing sufficient economic and individual information on the employees. In particular, sexual orientation is not an observable variable in the *Employment Survey* conducted by the French National Institute of Statistics and Economic Studies (INSEE) or the *Annual Declaration of Social Data* (DADS) completed by the employers. As we saw in the preceding section, an indirect identification of sexual orientation may, however, be achieved by considering same-sex couples (see, for example TOULEMON & *al.* [2005]).

The French Labor Survey

In this paper we use the Employment Survey that provides much more information than the DADS about the characteristics of the household members, their situation on the labor market and for the employees about their firm. The Employment Survey is the French equivalent of the US Current Population Survey (CPS). This survey provides a report on the Employment situation. In 2003 the Employment Survey has been changed:

- Before 2003, the survey was done every year, with a sampling rate of 1/200 and the third of the sample was renewed each year. This implies that a household was interviewed during three consecutive years.
- Since 2003, the survey is conduct every quarter with a sampling rate of 1/600 and the 1/6 of the sample is renewed each quarter. A household is then present during 6 consecutive quarters in the survey.

Like the March supplement of CPS, the Employment survey reports the wages earned by employees. However, unlike the March supplement, the Employment survey does not reports any information about non-wage incomes. We do not observe non-wage incomes, neither the after-tax money incomes, nor unemployment benefits. For self-employed we do not observe any incomes.

Identification of gays and lesbians

The Employment Survey collects for each household, the relationships between each household member and the reference person, who is defined as the oldest person in the household. The available response options for each member are the following:

1. The reference person herself or himself
2. The spouse (wife or husband), married or not
3. The child of the reference person or of his or her spouse
4. The grandchild of the reference person or of his or her spouse
5. The ancestor of the reference person or of his or her spouse

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[16] 2009 *Report on Homophobia*, Association *SOS Homophobia* ed.

[17] CSA Institute, poll n° 0900383: *Perception of discriminations in the workplace: viewpoints of private sector employees and of public servants*, conducted in March 2009 on national representative samples of private and public sector employees.

6. The other parents of the reference person or of his or her spouse (brother, sister, cousin, brother in law, sister in law *etc*.)
7. Friend
8. Subtenant, lodger, child kept at nurse without relationship to reference person or spouse
9. Servant or employee housed

The two last responses involve only strictly roommate relations, whilst the options 3, 4, 5 or 6 are strict relatives. The identification of same-sex couples in the Employment Survey is performed by considering the households composed by two adults of the same sex without direct family relationships. This leaves only two possible types of links in the Employment Survey, "spouse" or "friend". The identification of homosexual couples depends highly on the selected link. Moreover, in 2003 the introduction of the new Continuous Employment Survey has heavily modified the requirements for identification of the homosexual population.

Before 2003, the interviewers of the Employment Survey were instructed to use the spouse response only if the person has a sex different from the reference person. In other words, it was forbidden to use the spouse option for gay or lesbian couples. So, only the response "friend" can be considered in order to identify gays or lesbian couples. It is worth noting that despite this prohibition, the Employment Survey contains some same-sex spouses. This is most likely a consequence of a coding error on the sex of one of the spouses.

From 2003, this ban was lifted, without clearly indicating to interviewers that members of a gay or lesbian couple could be considered as spouses. In first analysis, this modification implies a clear identification of gay or lesbian couples. However, the Employment Survey does not provide any information about the sexual orientations. It is not excluded that the same-sex couples identified as "spouse" are contaminated by a measurement error on the sex of one member of the couple.

A way to measure the magnitude of the measurement error on the sex is to compare the characteristics of the same sex couples identified with first using spouse relations and second using friend relation to the ones of heterosexual couples. For the sample of same-sex couple with spouse relations, we get results at odds with all the empirical literature. The proportions of married couples or the proportion of couples with children is by far closer to heterosexual couples than homosexual couples. At the opposite, for the same-sex couples with friend relations we came up to conclusions in line with empirical finding on homosexual couples characteristics.

Those results are coherent if we consider that the same-sex couples with a spouse relation are probably heterosexual couples with an error on the sex of one member of the couple. Even with a very low proportion of errors on the sex coding (0.22%), the huge amount of heterosexual couples (120 000 for the period 2003-2009) can involve a significant number of "false gay" (564 = 0.22% × 120 000 × 2). Thus sample containing same sex-couples with a spouse relation could be contaminated by heterosexual couples.

This conjecture has been tested using a special extraction of the Employment Survey kindly provides by the INSEE and containing the first names, the sex and the relationships between household members. Considering several filters, the proportion of heterosexual couples wrongly considered as homosexual because of a measurement error on the sex of one member, ranges from 0.8% to 1.2% for couples declaring a "friendship" relationship, but reaches 31% to 34% with the link "spouse". In other words, the identification with a spouse link is heavily contaminated by a measurement error on the sex. At the opposite, from 0.8% to 1.2% of couples with friend relation are in fact fake same-sex couples.

As a consequence, we define as homosexual couples all households of two same-sex adults reporting a friend relationship. Among these same-sex households only 3% of men and 10% of women have children. This finding is consistent with the available French statistics on homosexual parenting.

However, this identification of homosexuals based on same-sex cohabitation reporting friend relationship may of course lead to wrongly considering some individuals sharing the same dwelling as gays or lesbians when in fact they are not. The most frequent case is that of cohabitation for economic reasons or linked to some characteristics of their occupations: students, migrant workers, seniors, farmers, *etc*. To minimize the probability of wrongly classifying some heterosexual employees as gays or lesbians, we first identified all households constituted only of two adults of the

same gender (with or without children) who report sharing a friendship, and we then imposed the following filters:

- − Exclude couples where one member is a student, apprentice, farmer or retired person;
- − Require that the younger member of the couple be over 27 years of age and that the older be over 30 years of age;
- − Require that neither member of the couple be over sixty years of age;
- − Require that both members of the couple be French; and
- − Select only households with an income higher than 1000 € /month[18]

Even if these filters eliminate the greater part of heterosexual same-sex cohabitation, the resulting database can, however, still contain outliers in wages due to completion mistakes of the interviewer or a misunderstanding of some questions in the survey (for example confusion between *euros* and *French francs*); we therefore excluded all individuals whose monthly wage, in real terms, is below 50€ or above 20 000 €.

After applying these filters, and given the restrictive measure of the number of homosexual couples we adopted, the resulting database contains only a small number of gay and lesbian couples for each year. We then built an aggregated database covering the period 1996-2007 by stacking the data. The final database that we used in our econometric analysis includes 904 individuals belonging to same-sex couples, whom 788 are salaried employees.

2.4. – Characteristics of populations

The sample of heterosexual was subjected to exactly the same selection constraints as those described above for same-sex couples. The main characteristics of the four populations ("men" *vs.* "women" × "heterosexuals" *vs.* "homosexuals") constituting our samples are presented in table 1. These statistics are expressed as a % of the total of all employees (*i.e.* private sector employees + civil servants) except for *(i)* characteristics denoted by * which are expressed as values and *(ii)* characteristics indicated by # which are expressed as a % of all individuals constituting the relevant population. The standard deviations appear in parentheses in each table cell. For example, 28.5% of heterosexual male employees did complete high school, while this is true for only 22.2% of the lesbians[19]; 11.6% of all gays are unemployed or inactive, *etc.*

Same-sex couples represent 0.33% of all the couples of our sample, *i.e.*, more or less the middle of the range corresponding to the studies of Digoix & *al.* [2004] – who estimate at 0.56% the ratio of same-sex couples in France – and Toulemon & *al.* [2005] who evaluates this ratio at about 0.08%. Among all identified same-sex couples, one finds that 58.5% are male couples and 41.5% are female couples, which corresponds to the distribution found in the two studies cited above. Given the weights applied, we finally obtained an estimate of about 45 000 gay couples in France (including 26 000 gay couples and 19 000 lesbian couples) – to be compared to 10 500 in Toulemon & *al.* [2005] and 76 000 in Digoix & *al.* [2004]; our estimate is very similar to what we find in the ACSF[20] survey, where 0.3% of men surveyed reported they "*live in a couple with a same-sex partner*", leading to an estimate of about 30 000 gay couples in France.

With an average age of 38.8 years, the members of homosexual couples are younger than those of heterosexual couples, whose average age is 42.4 years. They are also better educated (40% have college degrees, against only 25% of heterosexuals) and more urban (40% live in the Paris metropolitan area, compared with 16% for straight men and women). One recognizes here the main "features" of homosexual populations, observed not only in most foreign studies (see above) but also in France (see Digoix & *al.* [2004] and Toulemon & *al.* [2005]).

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[18] The threshold value of 1000€ has been indexed in accordance with the evolution of the average wage. A lump-sum income of 300 €/month, corresponding to a reservation income, has been attributed to inactive members of the couples. Similarly, a lump-sum income of 1000€/month has been attributed to independent workers. This value, equal to the first quartile of the distribution of independent workers (Rouault [2001]), was selected to be sure that all potential economic cohabitation has been eliminated.

[19] Throughout this article, we use the terms "male homosexuals" or gays – and "female homosexuals" or lesbians – to denote the members of our samples of same-sex couples.

[20] *Survey on Sexual Behavior in France* (ACSF), conducted in 1992 (*cf. Les comportements sexuels en France*, Spira A., Bajos N. and the ACSF team, La Documentation Française, Paris, 1993).

Table 1. – Descriptive statistics

			MALE				FEMALE			
			Heterosexual		**Homosexual**		**Heterosexual**		**Homosexual**	
		Population size / Ratio (%)	119645 99.62%		461	0.38%	115875 99.72%		327	0.28%
		Sample								
INDIVIDUAL CHARACTERISTICS	**Age**	< 35	18.37	(0.11)	41.20	(2.30)	25.90	(0.13)	34.12	(2.63)
		35 - 45	36.93	(0.14)	38.38	(2.27)	37.34	(0.14)	37.87	(2.69)
		> 45	44.89	(0.14)	20.42	(1.88)	36.76	(0.14)	28.02	(2.49)
		Average age* (years)	43.42	(0.02)	38.04	(0.37)	41.39	(0.02)	39.87	(0.44)
	Degrees	No degree	28.54	(0.13)	18.14	(1.80)	32.55	(0.14)	22.23	(2.30)
		High School	47.67	(0.14)	42.71	(2.31)	42.03	(0.15)	35.54	(2.65)
		College	10.28	(0.09)	16.12	(1.72)	14.53	(0.10)	21.31	(2.27)
		Master's, PhD	13.51	(0.10)	23.03	(1.97)	10.88	(0.09)	20.88	(2.25)
	Family situation	One child or more *(vs. No child)*	76.21	(0.12)	2.86	(0.78)	76.29	(0.13)	10.31	(1.68)
		Average number of children *	1.46	(0.003)	0.06	(0.015)	1.46	(0.003)	0.180	(0.03)
		Married *(vs. Unmarried)*	80.84	(0.11)	1.59	(0.58)	80.68	(0.12)	1.80	(0.74)
	Location	Town < 200 000 pop.	63.02	(0.14)	31.60	(2.17)	62.94	(0.14)	43.97	(2.75)
		Town ≥ 200 000 pop.	20.86	(0.12)	24.18	(2.00)	20.91	(0.12)	20.00	(2.21)
		Paris metropolitan area	16.12	(0.11)	44.22	(2.32)	16.15	(0.11)	36.07	(2.66)
JOB CHARACTERISTICS	**Sector of activity**	Industry *(vs. Services)*	41.81	(0.15)	15.74	(1.92)	17.49	(0.14)	13.08	(2.06)
		Employees private sector [#]	61.74	(0.14)	56.53	(2.31)	41.43	(0.14)	47.68	(2.77)
		Employees public sector [#]	21.74	(0.12)	23.61	(1.98)	29.02	(0.13)	37.47	(2.68)
		Non employees private sector [#]	12.23	(0.10)	8.28	(1.29)	5.32	(0.07)	6.59	(1.37)
		Inactive, unemployed [#]	4.30	(0.06)	11.58	(1.49)	24.23	(0.13)	8.27	(1.53)
	Firm size	< 50 employees	40.29	(0.14)	39.12	(2.28)	33.29	(0.14)	37.34	(2.68)
		50 - 500	20.45	(0.12)	14.49	(1.64)	15.53	(0.11)	14.26	(1.94)
		> 500	22.05	(0.12)	17.57	(1.78)	16.26	(0.11)	18.72	(2.16)
		na	17.21	(0.11)	28.82	(2.11)	34.92	(0.14)	26.68	(2.53)
	Working hours	Full time, > 30 h /week	96.44	(0.11)	92,86	(2.12)	76.47	(0.15)	85.33	(2.47)
		Part-time, 15-30 h /week	3.32	(0.04)	7.13	(1.06)	20.04	(0.10)	13.23	(1.75)
		Part-time, <15 h /week	0.24	(0.01)	0.00	(0.00)	3.50	(0.04)	1.430	(0.60)
		Special work schedule *(vs. Normal)*	15.00	(0.10)	19.49	(1.85)	9.68	(0.09)	12.93	(1.86)
	Qualifications	Highly skilled	41.45	(0.14)	45.42	(2.32)	27.02	(0.13)	48.15	(2.77)
		Skilled	36.41	(0.14)	34.43	(2.22)	30.45	(0.14)	35.60	(2.65)
		Unskilled	7.98	(0.08)	6.63	(1.16)	19.19	(0.12)	4.76	(1.18)
		Other	14.17	(0.10)	13.53	(1.60)	23.33	(0.12)	11.50	(1.77)
	Type of job	Blue collar *(vs. White collar)*	38.82	(0.14)	21.94	(1.93)	13.55	(0.10)	11.25	(1.75)
		Short term labor contract *(vs. Fixed-term, Long term)*	1.24	(0.03)	1.82	(0.62)	0.71	(0.02)	0.190	(0.24)
	Time with the firm	< 1year	12.18	(0.09)	27.47	(2.08)	31.81	(0.14)	21.08	(2.26)
		1 to 5 years	18.80	(0.11)	31.42	(2.17)	16.95	(0.11)	22.66	(2.32)
		> 5 years	69.02	(0.13)	41.12	(2.30)	51.25	(0.15)	56.25	(2.75)
		Average time* (months)	159	(0.36)	82.51	(4.36)	139	(0.39)	121	(6.65)
	Wage (€₂₀₀₈)	< 1250	30.71	(0.13)	40.00	(2.29)	62.04	(0.14)	35.54	(2.65)
		1250 - 2500	51.35	(0.14)	43.59	(2.31)	33.09	(0.13)	55.06	(2.76)
		> 2500	17.93	(0.11)	16.41	(1.73)	4.87	(0.06)	9.40	(1.62)
		Average wage* (€)	2029	(3.66)	1874	(71.09)	1405	(2.84)	1708	(66.81)

Although only few homosexuals have children, the percentages are not negligible: 3% of gays and over 10% of lesbians are parents, which shows the importance of same-sex parenting. We find here, again, a typical characteristic of homosexual populations: parenthood is more prevalent among women than men: 18% *vs.* 4% (ELMSLIE & TEBALDI [2007]), 23% *vs.* 0.5% (AHMED & HAMMARSTEDT [2009]), 28% *vs.* 8% (CARPENTER [2004]) ; measured by "*presence of children in the household*", TOULEMON & *al.* [2005] also note that this fact characterizes about 6% of lesbians but nearly 0% of gays.

If we focus on job characteristics rather than individual characteristics, 84% of gays have a job in the service sector, while only 58% of male heterosexual workers have jobs of this type. Gays are also more likely to work part time or to be "inactive or unemployed", but less likely to be blue collar workers or to work in the private sector. Concerning the earnings, the average wage of gay employees is –8% lower than that of male heterosexuals. It is interesting to note that we find here, although attenuated, some features commonly attributed to females in the labor market, and often explained by the role played by women in the domestic sphere (see the so-called specialization theory : BECKER [1965], [1981]). Finally, the average job stability within the firm is twice as low among gay employees as among heterosexuals: only 41% of the former have had the same employer for more than five years, against nearly 70% of the latter[21].

Lesbians are more qualified than other women: nearly 84% of them are "highly skilled" or "skilled", against less than 58% of heterosexual women. Of course different levels of investment in human capital and/or in the workplace may explain this significant difference. Unlike what has been found for gays, lesbians are less likely than other women to be "inactive or unemployed" (about 8% against more than 24%), to work part time (14.7% against 23.5%) and the average wage of lesbians is +20% higher than that of heterosexual females. Such differences can be explained by a less pronounced specialization in domestic tasks for lesbians than for heterosexual women[22]. As we found for gays, female homosexual employees are more likely to work in the public sector than heterosexual women (44% against 41%) and have, on average, lower job stability.

Table 2 below summarizes the main differences between gays and lesbians, on one hand, and their heterosexual counterparts, on the other.

Table 2. – Main characteristics of gays and lesbians employees
(Compared to their heterosexual counterparts)

	Age	Level of education	Urban	Service sector	Public sector	Skills	Job stability	Inactive, unemployed	Part time jobs	Blue collar	Wage
Gays	−	+	+	+	+	(+)	−	+	+	−	−
Lesbians	−	+	+	+	+	+	−	−	−	+	+

Some differences (white cells) are common to gays and lesbians − they are younger, have higher levels of education, are more urban, tend to work in the service sector and the public sector, and have lower job stability − while other differences (grey cells) display opposite signs. These oppositions are associated with differences generally observed between men and women in the labor market. According to the *specialization theory*, gays work in more part time jobs than their heterosexual counterparts and are more often inactive or unemployed, while the reverse is true for lesbians.

3. – Results

3.1. – Econometric method

To assess the impact of sexual orientation on the wages of individuals living in couples, we estimate earnings equations where the logarithm of the monthly wage[23], $\ln(w_i)$, is explained both by job

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[21] In an imperfect information framework such a difference could be explained by a strategic behavior of gay employees, to prevent their employers from accumulating over time a sufficient amount of information, leading to the revelation of their sexual orientation.

[22] See for example ANTECOL & STEINBERGER [2009], for an econometric study of the central role played by sexual orientation on labor supply in the US.

[23] The wage w_i is a net monthly salary including all monetary compensation.

characteristics Z_i (qualifications, years with the firm, type of job, working hours, firm size, sector of activity, *etc.*), employee personal characteristics X_i (age, degrees, family situation, location), and a specific sexual orientation variable, gay_i (which takes the value 1 for same-sex couples and 0 for other couples):

$$\ln\left(w_i\right) = Z_i\alpha + X_i\beta + gay_i\gamma + u_i \quad [1]$$

Of course, estimates of equation [1] suffer from sample selection bias because wages of unemployed or inactive individuals are not observed. We thus introduce a selection equation, where the difference U_i between the wage and the reservation wage of individual i, is explained by his or her personal characteristics,

$$U_i = X_i\delta + v_i \quad [2]$$

The disturbance terms u_i and v_i follow a bivariate normal distribution. It must be noted here that U_i is an unobservable variable. What one observes is a dummy variable Emp_i taking the value 1 if individual i is employed ($U_i > 0$) and 0 in the other cases. The selection bias arises because some unobservable characteristics (or characteristics omitted in the selection equation) can play a role in access to employment and determination of wage levels. Therefore, the sample of employed individuals may include people with personal characteristics X_i rather unfavorable for access to employment and wage level, but whose unobservable (or omitted) characteristics are favorable to employability and wage level. Such individuals are characterized by a significant disturbance term v_i, incorporating these omitted or unobservable variables. The direct consequence of such a situation is similar to the problem caused by the existence of omitted variables in the wage equation: the impact of (observed) personal characteristics X_i is underestimated[24]; HECKMAN [1979] shows that, given the selection, the expected value of the error term in the wage equation is no longer zero:

$$E\left[\ln(w_i)|U_i > 0, X_i, Z_i, gay_i\right] = E\left[\ln(w_i)|v_i > -X_i\delta, X_i, Z_i, gay_i\right]$$

$$= Z_i\alpha + X_i\beta + gay_i\gamma + \theta\frac{\phi\left(X_i\delta\right)}{\Phi\left(X_i\delta\right)}$$

where $\phi(X_i\delta)/\Phi(X_i\delta)$ is the so-called Inverse Mills Ratio (IMR). This term, corresponding to the selection, can be interpreted as a missing explanatory variable in the wage equation [1]. The two-step Heckman procedure (*Heckit*) makes it possible to deal with this problem[25]. In the first step, the probability of being employed is estimated, using a Probit model taking into account the personal characteristics X_i, which allows us to generate the inverse Mills ratio. In the second step, the wage equation, including the inverse Mills ratio as an explanatory variable, is then estimated.

This procedure for estimating selection and wage equations calls for several comments. Insofar as the error terms of the selection equation and the wage equation are correlated, the introduction of the Mills ratio generates an heteroskedasticity of the disturbance term of the wage equation[26]. To correct for heteroskedasticity – during the second step – one either corrects the variance-covariance matrix, or one estimates the wage equation using the generalized least squares procedure.

The identification of the effect of individual characteristics in the wage equation is based on the nonlinearity of the Mills ratio. If the magnitude of fluctuations in individual characteristics is low, the Mills ratio can be approximated properly by a linear relationship in X_i. In such a case, the wage equation is characterized by a strong collinearity, resulting in imprecise estimates. To circumvent these two problems, the selection equation must include one or several additional explanatory variables, which do not appear in the wage equation[27]. In our model, three new variables are thus introduced in the selection equation:

- The situation one year ago in the labor market, which captures the degradation of human capital after a long period of unemployment;

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[24] Note that the cause of the selection bias is not the consequence of having a non-random sample, but arises merely because individuals whose observable characteristics are unfavorable have a large error term in the selection equation

[25] HECKMAN [1976], [1979].

[26] The residual variance of the earning equation also depends on the Mills ratio and, therefore, on individual characteristics.

[27] The addition of these new variables can be viewed as the introduction of specific constraints necessary for identification.

- The occupation/qualifications of the partner, a proxy variable for partner income, which has a negative effect on the labor supply of the individual;
- The home-ownership situation of the individual. Ownership in contrast to rental can reduce the mobility of job seekers and thus affect the probability of finding a job in the labor market.

The wage gap observed between homosexual and heterosexual employees, which is −7.06% for males and +21.56% for women, can originate from three components:

- The gap induced by the difference in observable characteristics between homosexuals and heterosexuals: $\left(\overline{Z}^{Homo} - \overline{Z}^{Hetero}\right)\hat{\alpha} + \left(\overline{X}^{Homo} - \overline{X}^{Hetero}\right)\hat{\beta}$;
- The gap resulting from a difference between homosexuals and heterosexuals in the probability of being employed;
- The gap resulting only from sexual orientation $\hat{\gamma}$.

It is this last component that will allow us to measure the extent of wage discrimination against homosexual employees. Table 11 (see annex) summarizes all the variables used in the selection and wage equations[28] and presents the characteristics of the base case.

3.2. – Private sector

We first estimate, for the private sector, the magnitude of wage discrimination against gay and lesbian employees living in couples[29]. As shown by previous empirical works, evaluations of wage discrimination are significantly different for gays and lesbians. Thus we estimate the model separately for men and women.

The results[30] obtained with *(i)* the direct estimation of a single wage equation, and *(ii)* the estimation of a selection equation and a wage equation following the two-step Heckman procedure (*Heckit*), are presented in Table 3. Most estimated coefficients have the expected signs. One finding is a significant wage discrimination against gay employees. Gay men suffer on average a wage penalty equal[31] to −6.3%, whereas lesbians benefit from a wage premium of +2.1%. This difference between male and female homosexuals is similar to that obtained by Arabsheibani & al. [2007] on US and UK data (−14% for gays and +6,5% for lesbians in the US; no significant penalty for gays and +6% for lesbians in the UK), Clain & Leppel [2001] on US data (from −16% to −22% for gays and −2.2% for lesbians) and Klawitter & Flatt [1998] on US data (−30% for gays and +16% for lesbians).

The unconditional wage gap, of almost +20%, observed between lesbians and heterosexual women, is thus mainly due to specific characteristics of lesbians, who are on average better educated, hold jobs requiring higher levels of skills, are less often part-time workers, live in urban areas and are less likely to raise children. The positive wage discrimination is very weak and contributes little to explain the unconditional initial wage gap[32].

In contrast, the wage gap between gay and heterosexual employees, originates partly from differences in observable characteristics – which affect the salaries both positively and negatively and have thus a global limited impact – but mainly from wage discrimination. Gays, on average, are better educated, have jobs requiring higher levels of skills and live in urban areas, which contributes to a higher wage than for heterosexual men; but they are also younger, are employed by smaller firms and have a lower job stability, which tends to reduce their average wage. It is thus wage discrimination, measured by the estimation of our model, which mainly explains the initial wage gap.

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[28] Sexual orientation is not introduced in the selection equation. Nevertheless, to be cautious, we decided to re-estimate the model with a selection equation including sexual orientation as an explanatory variable. All the estimated parameters of the wage equation and, in particular, the estimates of the wage discrimination remained the same. The results are available upon request.

[29] The definition of the private sector used here includes the large national public companies.

[30] As we use pool data on the period 1996-2007, we include in all regressions time dummies variables to control for structural breaks other the estimation period.

[31] With the semi-logarithmic specification we used, the net impact on wage of the sexual orientation is given by $e^{\beta_i} - 1$ where β_i is the estimated coefficient associated with the explanatory variable *Gay* or *Lesbian*.

[32] As in the US, the higher level of wages earned by lesbians, compared to heterosexual females, is mainly due to a higher level of investment in human capital, particularly in education (*see* for example Antecol & al. [2007]).

Table 3. – Private sector: Selection and wage equations for males and females

PRIVATE SECTOR ESTIMATES			MALES			FEMALES		
			One step estimate of the wage equation	Heckit		One step estimate of the wage equation	Heckit	
				Selection equation	Wage equation		Selection equation	Wage equation
INDIVIDUAL CHARACTERISTICS	Sexual orientation	Gay	-0.065 (.018)***		-0.065 (.005)***	0.019 (.029)		0.021 (.006)***
	Age	Age	0.008 (.0002)***	-0.024 (.0007)***	0.008 (.005)**	0.005 (.0002)***	-0.009 (.0007)***	0.004 (.004)*
		Age squared	-0.002 (.0002)***	-0.002 (.0008)***	-0.002 (.003)	-0.003 (.0003)***	-0.014 (.0008)***	-0.003 (.029)*
	Degrees	Master's, PhD	0.410 (.004)***	-0.518 (.016)***	0.417 (.001)***	0.316 (.007)***	-0.110 (.019)***	0.306 (.006)***
		College	0.136 (.004)***	-0.360 (.017)***	0.140 (.003)***	0.099 (.005)***	-0.263 (.014)***	0.088 (.004)***
		No degree	-0.057 (.003)***	-0.003 (.013)	-0.057 (.020)***	-0.081 (.004)***	-0.089 (.019)***	-0.085 (.002)***
	Family situation	Number of children	0.006 (.001)***	-0.005 (.005)	-0.005 (.0002)***	-0.019 (.0019)***	-0.166 (.005)***	-0.026 (.0002)***
		Married	0.039 (.003)***	0.109 (.014)***	0.038 (.0002)***	-0.018 (.004)***	-0.002 (.013)	-0.017 (.0003)***
	Location	Town < 200 000 pop.	-0.009 (.003)***		-0.009 (.003)***	-0.027 (.004)***		-0.026 (.004)***
		Paris metropolitan area	0.143 (.004)***		0.144 (.004)***	0.178 (.006)***		0.176 (.006)***
	Real estate capital	Home owner		0.134 (.012)***			0.204 (.011)***	
	Partner income *Occupation / qualifications of the partner*	Craftsman, merchant, entrepreneur, independent		-0.082 (.0368)***			-0.521 (.032)***	
		Middle or top managers		-0.257 (.015)***			-0.363 (.014)***	
		Employee or worker, unskilled, inactive, unemployed		0.340 (.013)***			0.621 (.013)***	
	One year ago on the labor market	Unemployed		-2.449 (.045)***			-2.481 (.043)***	
		Inactive		-0.510 (.020)***			-1.541 (.014)***	
JOB CHARACTERISTICS	Sector of activity	Industry	0.034 (.003)***		0.034 (.003)***	0.064 (.004)***		0.064 (.004)***
	Firm size	< 50 employees	-0.048 (.003)***		-0.048 (.003)***	0.071 (.004)***		0.072 (.004)***
		> 500 employees	0.045 (.003)***		0.045 (.003)***	0.136 (.005)***		0.136 (.005)***
	Working hours	Part-time, 15-30 h /week	-0.487 (.009)***		-0.486 (.009)***	-0.483 (.005)***		-0.483 (.005)***
		Part-time, < 15 h /week	-1.270 (.036)***		-1.270 (.035)***	-1.365 (.010)***		-1.366 (.01)***
		Flextime	0.091 (.004)***		0.091 (.004)***	-0.246 (.008)***		-0.248 (.009)***
		Special work schedule	0.049 (.003)***		0.049 (.003)***	0.057 (.006)***		0.057 (.006)***
	Qualifications	Highly skilled	0.295 (.003)***		0.295 (.003)***	0.257 (.005)***		0.254 (.005)***
		Unskilled	-0.120 (.004)***		-0.120 (.004)***	-0.231 (.004)***		-0.213 (.005)***
	Type of job	Blue collar	-0.096 (.003)***		-0.096 (.003)***	-0.075 (.005)***		-0.074 (.005)***
		Short term labor contract	0.003 (.010)		0.004 (.010)	0.074 (.017)***		0.076 (.016)***
	Time with the firm	< 1 year	-0.038 (.005)***		-0.037 (.005)***	-0.038 (.007)***		-0.044 (.007)***
		> 5 years	0.072 (.003)***		0.072 (.003)***	0.131 (.004)***		0.130 (.004)***
	Inverse of Mill's ratio			-0.030 (.012)***			0.074 (.009)***	
	Intercept		7,301 (.006)***	0.960 (.021)***	7.309 (.007)***	7.096 (.008)***	0.582 (.019)***	7.066 (.009)***
	Size of the sample		72 322	88 204	72 322	45 816	91 054	45 816

***=coefficients statistically significant at 1% level of confidence, **=coefficients statistically significant at 5%-1% level of confidence, *= coefficients statistically significant at 10%-5% level of confidence, no star= coefficient not significant at 10% level

<u>*Note*</u>: *To avoid rounding problems, especially for the quadratic terms, the age variable was centered and divided by 10; this is also the case in all following tables.*

Recalling that the individuals in our samples live in couples and keeping in mind that the so-called marriage premium *(i)* is not available to homosexual employees because same-sex marriage is forbidden in France, *(ii)* can be a premium to a "signaled heterosexuality" in an homophobic environment (*see* section 1.2 above), it becomes clear that another (upper bound) estimation of wage discrimination against gay and lesbian employees can be obtained, by simply adding the *marriage premium* to the amount of discrimination calculated above.

The marriage premium, calculated from the estimated coefficient associated to the variable *Married* in the wage equation, is equal to +3.9% for men and is negative (−1.7%) for women. By integrating this premium, as compared with their heterosexual married counterparts, gay employees suffer a wage penalty of −10.2%, while lesbians now have a premium of +3.8%.

The selection equation requires some comments. As we consider a wage equation for the private sector alone, and a selection equation on the set of individuals that can potentially get a job in the private sector, the selection equation measures the probability of having a job in the private sector. It can thus be analyzed as a reduced form, summarizing the probability of being employed and the conditional probability, for an employed individual, of belonging to the private sector. Therefore, the negative coefficient associated − for example − with the variable *Master's/ PhD*, in the selection equation, means that an individual with a Master's/PhD has a lower probability of getting a job *in the private sector* (and of course not "a lower probability of getting a job") than people with less education.

The magnitude of the wage gap between men and women resulting from the selection equation is low, which is not surprising since the rates of participation in the labor market are similar between men and women (this finding is consistent with MEURS & PONTHIEUX [2006], where the wage gap between men and women resulting from selection is very low and rather in favor of women). We have therefore re-estimated the earnings equations without taking into account the selection (one step estimate of the wage equation). The results reported in table 3 are close to those obtained with the Heckit even if the difference, as regards the amount of discrimination, between gays and lesbians is slightly attenuated: −6.3% against gays and no wage discrimination against lesbians.

3.3. – The public sector: a shelter against wage discrimination?

We noticed earlier that lesbians and gays are in France more likely to work in the public sector than heterosexuals. This could be explained by the common idea that public governance rules could lead to more homogeneous compensation policies in the public sector than in the private one, thus leaving smaller space for wage discrimination. To examine, whether the public sector constitutes a shelter against discrimination based on sexual orientation, we thus estimated the model for the public sector only. Results are clear and given in table 4 below. Unlike the results obtained for the private sector, lesbian employees do not receive a premium, which is consistent with what was expected. However, wage discrimination strongly affects gay employees in the public sector, although with a magnitude slightly smaller than in the private sector, but far from negligible: −5.6% in the public sector against −6.3% in the private sector[33]. Since wages in the French public sector are based on a common and publicly known salary scale, the presence of such discrimination may at first be viewed as a surprise. However, this result is not surprising:

- – First, even though hiring is, for the most part but not always, anonymous for national civil servants, this is not always the case for promotions which are generally based on the candidate's file and one or more interviews. Therefore the estimated discrimination could be explained by the presence of a *glass ceiling* which would result in slower promotions for gays.

- – Second, compensation policies and governance rules are not uniform throughout the public sector and some public administrations, such as local administrations for example, have degrees of freedom in wage setting that are similar to what exists in the private sector.

- – Finally, employers in the public sector are less subject to pressures from competition than those in the private sector. The so-called *taste for discrimination* can thus play out more freely in the public sector, because this sector is less "punished" by the market in case of deviation from an efficient wage policy.

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[33] A lower, but not negligible, wage discrimination in the public sector compared to the private sector, is a result that has already been obtained in several articles: ZWEIMULLER & WINTER-EBMER [1993], HOFFNAR & GREENE [1996], BERSON [2009].

Table 4. – Public sector: Selection and wage equations for males and females

PUBLIC SECTOR ESTIMATES			MALES			FEMALES		
			One step estimate of the wage equation	Heckit		One step estimate of the wage equation	Heckit	
				Selection equation	Wage equation		Selection equation	Wage equation
INDIVIDUAL CHARACTERISTICS	**Sexual orientation**	Gay	-0.058 (.034)**		-0.058 (.013)***	0.0014 (.036)		0.003 (.01)
	Age	Age	0.012 (.0004)***	0.022 (.0008)***	0.012 (.011)	0.009 (.0003)***	0.019 (.0007)***	0.009 (.009)
		Age squared	0.0001 (.0004)	-0.004 (.0009)***	0.0001 (.008)	-0.0003 (.0004)	-0.004 (.0008)***	-0.0001 (.007)
	Degrees	Master, PhD	0.325 (.008)***	0.624 (.017)***	0.326 (.0027)***	0.294 (.008)***	0.406 (.019)***	0.276 (.0026)***
		College	0.115 (.009)***	0.438 (.018)***	0.115 (.007)***	0.107 (.007)***	0.474 (.014)***	0.089 (.0061)***
		No diploma	-0.079 (.008)***	-0.066 (.015)***	-0.079 (.039)**	-0.085 (.007)***	-0.104 (.014)***	-0.080 (.036)*
	Family situation	Number of children	0.024 (.003)***	0.012 (.006)**	0.024 (.0004)***	-0.006 (.0025)***	0.038 (.006)***	-0.007 (.0004)***
		Married	0.024 (.007)***	-0.032 (.015)**	0.024 (.0004)***	-0.0056 (.0060)	-0.011 (.014)	-0.005 (.0004)***
	Location	Town < 200 000 pop.	-0.025 (.006)***		-0.025 (.006)***	-0.007 (.006)		-0.007 (.006)
		Paris metropolitan area	0.058 (.009)***		0.058 (.009)***	0.073 (.007)***		0.073 (.008)***
	Real estate capital	Home owner		-0.057 (.013)***			0.007 (.012)	
	Partner income *Occupation / qualification of the partner*	Craftsman, merchant, entrepreneur, independent		-0. 544 (.055)***			-0.695 (.043)***	
		Middle or top managers		0.260 (.016)***			0.128 (.015)***	
		Unskilled employee or worker, inactive, unemployed		-0.281 (.014)***			-0.803 (.017)***	
	One year ago on the labor market	Unemployed		-1.553 (.114)***			-2.002 (.076)***	
		Inactive		-0.094 (.021)***			-0.932 (.015)***	
JOB CHARACTERISTICS	**Sector of activity**	Industry	0.109 (.015)***		0.109 (.015)***	0.014 (.029)		0.015 (.029)
	Firm size	< 50 employees	-0.034 (.007)***		-0.034 (.007)***	-0.037 (.006)***		-0.036 (.0056)***
		> 500 employees	0.061 (.007)***		0.061 (.007)***	0.032 (.006)***		0.033 (.0058)***
	Working hours	Part-time, 15-30 h /week	-0.145 (.008)***		-0.145 (.008)***	-0.314 (.006)***		-0.314 (.0055)***
		Part-time, < 15 h /week	-0.705 (.030)***		-0.705 (.030)***	-1.031 (.015)***		-1.033 (.015)***
		Flextime	0.102 (.011)***		0.102 (.011)***	-0.105 (.012)***		-0.104 (.012)***
		Special work schedule	0.014 (.007)**		0.014 (.006)**	0.067 (.006)***		0.067 (.006)***
	Qualifications	Highly skilled	0.261 (.008)***		0.261 (.008)***	0.272 (.007)***		0.270 (.007)***
		Unskilled	-0.097 (.017)***		-0.097 (.017)***	-0.273 (.011)***		-0.246 (.013)***
	Type of job	Blue collar	-0.072 (.008)***		-0.073 (.008)***	-0.134 (.008)***		-0.133 (.008)***
		Short term labor contract	0.061 (.052)		0.061 (.052)	-0.028 (.057)		-0.029 (.055)
	Time with the firm	< 1year	-0.024 (.015)		-0.025 (.015)	-0.041 (.012)***		-0.039 (.012)***
		> 5 years	0.143 (.008)***		0.143 (.008)***	0.187 (.007)***		0.187 (.007)***
Inverse of Mill's ratio				0.0015 (.018)			-0.052 (.012)***	
Intercept			7,171 (.015)***	-1.235 (.023)***	7.169 (.034)***	7.063 (.012)***	-0.759 (.021)***	7.131 (.020)***
Size of the sample			10 980	88 204	10 980	18 762	91 054	18 762

***=coefficients statistically significant at 1% level of confidence, **=coefficients statistically significant at 5%-1% level of confidence, *= coefficients statistically significant at 10%-5% level of confidence, no star= coefficient not significant at 10% level

3.4. –Summary of the main results

Table 5 summarizes the evaluations of wage discrimination based on sexual orientation, obtained by estimating the model following the two-step Heckman procedure. Because the marriage premium may be the consequence of discriminatory practices, two measures of discrimination are useful: a *lower bound*, corresponding to the coefficient of sexual orientation in the wage equation and an *upper bound*, corresponding to the lower bound increased by the marriage premium. The first evaluation compares – all things being equal – the incomes of gays and lesbians to those of their unmarried heterosexual counterparts, while the second one compares their incomes with those of their married heterosexual counterparts.

The results of the various estimates are consistent. Even if we consider the lower bounds of wage discrimination, gays suffer a high wage penalty in both sectors: about –6.3% in the private sector and –5.6% in the public sector. The magnitude of wage discrimination based on sexual orientation is thus close to the gender wage gap estimated at around –6.0% in the French labor market (–5.4% in MEURS & PONTHIEUX [2000], –6.3% in [2006]). This result highlights the extent of discrimination against gay employees. As compared with their heterosexual counterparts, French lesbians enjoy a limited wage premium of about +2.1% in the private sector *vs.* no wage premium in the public sector.

Table 5. – Wage discrimination based on sexual orientation

TWO-STEP HECKMAN PROCEDURE (HECKIT)		Lower bound of discrimination	Marriage premium	Upper bound of discrimination
Private sector	Males	−6.3%	+3.9%	−10.2%
	Females	+2.1%	−1.7%	+3.8%
Public sector	Males	−5.6%	+2.4%	−8.1%
	Females	0.0%	−0.5%	+0.5%

4. – Developments

In the French labor market, wage discrimination based on sexual orientation seems primarily to affect gay men. This result is consistent with the theoretical insights, the nature of homophobia and the empirical results obtained for other countries (see section *Literature* above). This section deals with the impact of individual variables (skills, age, *etc*.) on the extent of the discrimination faced by gay employees.

4.1. – Do skills protect gays against discrimination?

We study in this section whether jobs requiring higher levels of skills, which are therefore better paid, are characterized by a lower level of wage discrimination against gay employees. To address this question, we present in table 6, the men's earnings equations for two polar qualification levels: the high-skill jobs on the one hand, corresponding to *Executives and Intellectual occupations*, and the low-skill jobs on the other hand, consisting of *Employees and Workers*.

To simplify the analysis we estimated the model directly for the overall economy by aggregating the public and private sectors. The column "Overall economy" displays the coefficient associated with each particular characteristic Z, while the column "xPublic sector" displays the estimated coefficient associated with the explanatory crossed variable "Z x Public sector"; therefore, when the return associated with a particular characteristic is different between the public sector and the private sector, the coefficient in the "Overall economy" column corresponds *de facto* to the private sector, while the one appearing in the "Public sector" column describes the spread between the public and the private sectors[34].

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[34] For example, for high-skill jobs, the explanatory variable "Number of children" is statistically significant and plays negatively, while the variable "Number of children x Public sector" is statistically significant and plays positively. This means that the return associated to the number of children in the private sector is equal to $e^{-0.004}-1= -0.4\%$ while it is equal to $e^{-0.004+0.015}-1= +1.11\%$ in the public sector.

The results are quite clear. For low-skill jobs, wage discrimination is not significant in either the private sector or the public sector[35]. In contrast, for high-skill jobs the magnitude of this discrimination is very high (–9.4%), with no obvious distinction between the two sectors. Whatever the sector, gay employees with high-skill occupations are the most affected by discriminatory practices. This result, after all, makes perfect sense. First, employers do not care about the sexual orientation of low-skill workers who have a very limited internal and external visibility; second, opportunities for wage discrimination against unskilled workers are few (career progressions are weak or even nonexistent, wages are set around the minimum wage, mandatory wage scales exist, *etc*).

Table 6. – Wage equations for men by qualification levels

EARNINGS EQUATIONS FOR THE OVERALL ECONOMY			LOW-SKILL JOBS		HIGH-SKILL JOBS	
			Overall economy	x Public sector	Overall economy	x Public sector
INDIVIDUAL CHARACTERISTICS	Sexual orientation	Gay	-0.022 (0.020)	-0.034 (0.058)	-0,099 (.040)***	0.011 (.083)
	Age	Age	0.002 (.0002)***	0.002 (.0006)***	0.014 (.0004)***	0.004 (.0009)***
		Age squared	-0.002 (.0002)***	0.002 (.0007)***	-0.004 (.0005)***	0.003 (.0011)***
	Degrees	Master's, PhD	0.074 (.017)***	0.048 (.055)	0.263 (.008)***	-0.035 (.021)
		College	0.091 (.030)***	0.021 (.030)	0.096 (.011)***	-0.026 (.025)
		No degree	-0.063 (.0027)***	0.010 (.009)	-0.033 (.011)***	-0.026 (.038)
	Family situation	Number of children	-0.004 (.0013)***	0.015 (.0043)***	0.014 (.003)***	0.024 (.007)***
		Married	0.031 (.0034)***	-0.008 (.011)	0.065 (.008)***	-0.035 (.019)*
	Location	Town < 200 000 pop.	-0.013 (.003)***	0.004 (.011)	-0.009 (.007)	-0.026 (.016)*
		Paris metropolitan area	0.093 (.005)***	-0.066 (.015)***	0.145 (.007)***	-0.077 (.019)***
JOB CHARACTERISTICS	Sector of activity	Industry	0.028 (.003)***		0.033 (.006)***	
		Public	0.117 (.019)***		-0.192 (.033)***	
	Firm size	< 50 employees	-0.042 (.003)***		-0.067 (.006)***	
		> 500 employees	0.070 (.003)***		0.034 (.007)***	
	Working hours	Part-time, 15-30 h /week	-0.485 (.010)***	0.036 (.029)	-0.537 (.008)***	0.361 (.027)***
		Part-time, < 15 h /week	-1.362 (.042)***	0.357 (.129)***	-1.450 (.074)***	0.787 (.089)***
		Flextime	0.047 (.006)***		0.038 (.007)***	
		Special work schedule	0.055 (.003)***	0.005 (.012)	0.062 (.011)***	-0.080 (.018)***
	Type of job	Blue collar	-0.049 (.004)***		-0.055 (.010)***	
		Short term labor contract	-0.023 (.009)***		0.069 (.096)	
	Time with the firm	< 1year	-0.035 (.005)***		-0.042 (.011)***	
		> 5 years	0.089 (.003)***	0.076 (.012)***	0.025 (.007)***	0.051 (.019)***
	Intercept		7,265 (0.007)***		7.819 (.015)***	
	Size of the sample		42 755		17 699	

***=coefficients statistically significant at 1% level of confidence, **=coefficients statistically significant at 5%-1% level of confidence, *= coefficients statistically significant at 10%-5% level of confidence, no star= coefficient not significant at 10% level

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[35] We focus in this article on wage discrimination only but of course discrimination in low wage jobs can take many other forms than wage differences: barriers to entry for gay men, characteristics that discourage gay men from applying *etc.*

Conversely, a *glass ceiling* effect can play for highly skilled jobs, particularly jobs of senior managers, which are the most "visible" and often include a representation component. The gay employees can see their careers hampered compared to their heterosexual counterparts, through less frequent promotions. Such situations can be the consequence of heterosexism in the workplace and/or linked to the endogenization, by the employer, of a homophobia attributed to the clients of the firm or to other employees within the firm. Thus, contrary to what one might think at first, high-skill occupations do not protect gay employees, but instead expose them more frequently to discriminatory practices.

4.2. – Age and seniority: discrimination and the information disclosure

Unlike other forms of wage discrimination (gender, ethnicity, age), discrimination based on sexual orientation does not rely on a directly observable individual characteristic. Valuable information about sexual orientation may, however, be acquired indirectly by the employer, through careful observation and a suitable analysis of some individual characteristics of the employee. These characteristics include marital status, number of children, neighborhood of residence, presence or absence of the partner at public events organized by the company, *etc.*

Table 7. – Wage equations for men by age

EARNINGS EQUATIONS FOR THE OVERALL ECONOMY			< 35 YEARS		≥45 YEARS	
			Overall economy	x Public sector	Overall economy	x Public sector
INDIVIDUAL CHARACTERISTICS	Sexual orientation	Gay	-0.060 (.029) ***	0.045 (.073)	-0.130 (.047) ***	.011 (.093)
	Degrees	Master's, PhD	0.361 (.009) ***	-0.111 (.009) ***	0.463 (.008) ***	-0.080 (.015) ***
		College	0.110 (.008) ***	-0.002 (.026)	0.180 (.008) ***	-0.042 (.015) ***
		No degree	-0.036 (.027) ***	-0.011 (.027)	-0.050 (.004) ***	-0.002 (.013) ***
	Family situation	Number of children	0.012 (.003) ***	0.024 (.009) ***	-0.010 (.002) ***	0.0025 (.0045)
		Married	0.05 (.005) ***	-0.014 (.017)	0.037 (.006) ***	-0.007 (.015)
	Location	Town < 200 000 pop.	-0.003 (.006)	0.004 (.024)	-0.019 (.005) ***	-0.010 (.011)
		Paris metropolitan area	0.161 (.008)	-0.123 (.024) ***	0.138 (.006) ***	-0.063 (.016) ***
JOB CHARACTERISTICS	Sector of activity	Industry	0.031 (.005)***		0.035 (.004) ***	
		Public	-0.073 (.026) ***		-0.089 (.025) ***	
	Firm size	< 50 employees	-0.041 (.005) ***		-0.057 (.004) ***	
		> 500 employees	0.034 (.006) ***		0.057 (.0044) ***	
	Working hours	Part-time, 15-30 h /week	-0.436 (.022) ***	0.391 (.030) ***	-0.509 (.012) ***	0.365 (.018) ***
		Part-time, < 15 h /week	-1.001 (.096) ***	0.015 (.14)	-1.300 (.049) ***	0.759 (.065) ***
		Flextime	0.077 (.009) ***		0.080 (.0063) ***	
		Special work schedule	0.048 (.007) ***	-0.032 (.018)*	0.039 (.006) ***	-0.032 (.013) ***
	Qualifications	Highly skilled	0.212 (.007) ***	-0.079 (.024) ***	0.344 (.005) ***	-0.026 (.013)**
		Unskilled	-0.105 (.008) ***	-0.035 (.048)	-0.135 (.007) ***	0.101 (.032) ***
	Type of job	Blue collar	-0.115 (.0063) ***		-0.111 (.005) ***	
		Short term labor contract	-0.017 (.016)		0.036 (.020)*	
	Time with the firm	< 1year	-0.022 (.008) ***		-0.061 (.010) ***	
		> 5 years	0.060 (.005) ***	0.040 (.016) ***	0.098 (.006) ***	0.066 (.017) ***
	Intercept		7.188 (.011) ***		7.327 (.011) ***	
	Size of the sample		16 031		35 501	

***=coefficients statistically significant at 1% level of confidence, **=coefficients statistically significant at 5%-1% level of confidence, *= coefficients statistically significant at 10%-5% level of confidence, no star= coefficient not significant at 10% level

Although the observation of these characteristics does not allow an employer to make a perfect assessment of the sexual orientation of a worker, it allows him – at least – to revise, upward or downward, the likelihood that the employee is gay. In this context, the acquisition of new information and the belief revision process will allow the employer to evaluate the sexual orientation of an employee with an increasing degree of accuracy over time. The observed wage discrimination should then increase with age (since being unmarried and childless for a junior does not convey the same information than for a senior) and the employee's time of service with the company (since the accumulation of information takes time).

In this subsection we study whether the mechanism described above – continued acquisition of new information and the belief revision process – is at work. To do this we estimate wage equations for two age groups: less than 35 years of age and more than 45. Because only gays seem to suffer from wage discrimination, we limit our investigations to the male population. The results in Table 7 above show unambiguously that the magnitude of wage discrimination increases with age. For gay employees under 35, the wage penalty is estimated to be –5.8% both in the private and the public sectors; beyond 45 years, it shifts to –12.2% in the private sector and is not significantly different from this value in the public sector.

This difference between the two age groups, as regards the extent of wage discrimination, has been statistically tested and is significantly different from zero: all other things being equal, the older the gay employees, the higher the wage penalty. As previously stated, at least two effects may combine to achieve this result. First, as the age of an employee increases, more information on his sexual orientation can be extrapolated from specific variables such as marital status and the number of children; second, if a *glass ceiling* effect is at work, older workers are those for whom wage discrimination had time to appear, through the slowdown of the career.

The results of wage equations by time of service (Table 8) make it possible to make the diagnosis presented above more precise and complete. For time of service of less than one year, no significant wage discrimination can be detected. Significant wage discrimination (–6.6%) seems to prevail only for time of service spanning between one and five years. Beyond five years of service in the firm, one obtains no significant wage discrimination, either in the public sector or in the private sector. These results suggest a fast learning process about sexual orientation: beyond five years of seniority some gay employees, conscious of the progressively increasing awareness of their sexual orientation and the associated discriminatory practices, are encouraged to leave the company[36]; those who decide to stay are those who suffer the least from such practices, which explains the nullity of the wage penalty estimated on the subset of gay employees with high seniority (>5 years).

These results shed light on how wage discrimination is exercised against gay men. In both the public and private sector, it is not the salary at the time of hiring which is responsible for the wage discrimination, but rather the less successful careers of gay employees.

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[36] This explains the lower job stability of gay employees as compared to their heterosexual counterparts (see Table 1).

Table 8. – Wage equations for men by seniority

EARNINGS EQUATIONS FOR THE OVERALL ECONOMY			LESS THAN 1 YEAR		1 TO 5 YEARS		MORE THAN 5 YEARS	
			Overall economy	X Public sector	Overall economy	X Public sector	Overall economy	X Public sector
INDIVIDUAL CHARACTERISTICS	**Sexual orientation**	Gay	-0.080 (.050)	-0.023 (.20)	-0.068 (.028) ***	-0.059 (.076)	-0.032 (.026)	0.047 (.054)
	Age	Age	0.002 (.0007) ***	0.010 (.003) ***	0.005 (.0004) ***	0.006 (.0014) ***	0.008 (.0002) ***	0.005 (.0005) ***
		Age squared	-0.006 (.0009) ***	0.007 (.003) ***	-0.004 (.0004) ***	0.004 (.0014) ***	-0.002 (.0002) ***	0.002 (.0006)***
	Degrees	Master's, PhD	0.409 (.018) ***	-0.031 (.058)	0.369 (.009) ***	-0.038 (.027)	0.431 (.005) ***	-0.120 (.011) ***
		College	0.130 (.018) ***	0.084 (.064)	0.119 (.009) ***	-0.008 (.030)	0.143 (.005) ***	-0.044 (.011) ***
		No degree	-0.024 (.012)**	-0.040 (.052)	-0.050 (.006) ***	-0.051 (.027)*	-0.063 (.003) ***	-0.013 (.009)
	Family situation	Number of children		0.036 (.017)**		0.041 (.008) ***		0.021 (.003) ***
		Married	0.043 (.011) ***	-0.055 (.043)	0.050 (.0058) ***	-0.005 (.020)	0.036 (.004) ***	-0.012 (.009)
	Location	Town < 200 000 pop.	0.004 (.012)	-0.009 (.044)	0.005 (.006)	-0.011 (.021)	-0.015 (.003) ***	-0.017 (.008) **
		Paris metropolitan area	0.157 (.016) ***	-0.083 (.059)	0.162 (.008) ***	-0.094 (.027) ***	0.135 (.005) ***	-0.081 (.011) ***
JOB CHARACTERISTICS	**Sector of activity**	Industry	0.079 (.011) ***		0.056 (.005) ***		0.022 (.003) ***	
		Public	-0.072 (.070)		-0.113 (.033) ***		-0.054 (.014) ***	
	Firm size	< 50 employees	-0.043 (.010) ***		-0.046 (.0054) ***		-0.046 (.003) ***	
		> 500 employees	0.032 (.016)**		0.031 (.0073) ***		0.050 (.003) ***	
	Working hours	Part-time, 15-30 h /week	-0.636 (.031) ***	0.382 (.058) ***	-0.658 (.019) ***	0.463 (.031) ***	-0.387 (.011) ***	0.256 (.015) ***
		Part-time, < 15 h /week	-1.360 (.080) ***	-0..098 (.150)	-1.369 (.059) ***	0.026 (.11)	-1.010 (.062) ***	0.518 (.072) ***
		Flextime	-0.035 (.016)**		0.089 (.008) ***		0.115 (.005) ***	
		Special work schedule	0.023 (.014)	-0.075 (.048)	0.040 (.007) ***	-0.056 (.023) ***	0.058 (.0038) ***	-0.040 (.009) ***
	Qualifications	Highly skilled	0.314 (.014) ***	-0.057 (.051)	0.312 (.007) ***	-0.065 (.025) ***	0.289 (.003) ***	-0.032 (.009) ***
		Unskilled	-0.142 (.014) ***		-0.113 (.008) ***		-0.115 (.005) ***	
	Type of job	Blue collar	-0.048 (.014) ***		-0.090 (.007) ***		-0.095 (.003) ***	
		Short term labor contract	0.020 (.016)		0.032 (.021)		0.149 (.047) ***	
Intercept			7.25 (0.024) ***		7.29 (.012) ***		7.39 (.006) ***	
Size of the sample			6 166		18 667		58 469	

***=coefficients statistically significant at 1% level of confidence, **=coefficients statistically significant at 5%-1% level of confidence, *= coefficients statistically significant at 10%-5% level of confidence, no star= coefficient not significant at 10% level

4.3. – Oaxaca-Blinder decomposition

Wage discrimination has so far been estimated using a dummy variable for sexual orientation. In doing so we adopt the implicit assumption that discrimination affects all homosexual employees in the same way, regardless of their individual characteristics. Such an assumption is obviously excessive, since wage discrimination – see above – varies depending on the characteristics of the employee (sex, age, seniority, *etc*.) and the job held (qualifications). However this choice was constrained, because of the limited number of same-sex couples available in the French Employment Surveys. Even though the problem of limited sample size is probably inherent in this kind of study, we try to estimate in this subsection a "simple" model that makes it possible to account for differences in the returns to observable characteristics, between heterosexual and homosexual employees. The process used is similar to what one uses when applying the Oaxaca-Blinder method[37].

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[37] *Cf.* OAXACA [1973], BLINDER [1973], OAXACA & RANSOM [1994].

By using an analysis in terms of contribution to discrimination we are better able to identify the characteristics for which wage discrimination based on sexual orientation is the most pronounced.

The estimation results for men are presented in Table 9 below, while the decomposition of discrimination according to the differences in returns to observable characteristics is provided in Table 10. The model presented in Table 9 was obtained starting from a general specification integrating as explanatory variables all the products of the two variables "gay" and "sector" with all the other variables. This, in practice, is equivalent to considering, as in Oaxaca-Blinder, at least two different models: one for heterosexual employees and another for gays. In our case, we tested and then imposed, if necessary, all the restrictions corresponding to equal returns between gay and heterosexual employees.

Table 9. – Wage equations for men with returns differences (Oaxaca-Blinder)

EARNINGS EQUATIONS FOR THE OVERALL ECONOMY (with returns differences)			MALES		MALES × GAY	
			Overall economy	× Public sector	Overall economy	× Public sector
INDIVIDUAL CHARACTERISTICS	Age	Age	0.007 (.0002) ***	0.006 (.0004) ***		
		Age squared	-0.002 (.0002) ***	0.003 (.0005) ***		
	Degrees	Master's, PhD	0.412 (.004) ***	-0.086 (.010) ***	-0.340 (.043) ***	0,288 (.081) ***
		College	0.137 (.004) ***	-0.022 (.011)**	-0.167 (.047) ***	0.183 (.112)*
		No degree	-0.057 (.003) ***	-0.022 (.009) ***		
	Family situation	Number of children	0.006 (.001) ***	0.019 (.003) ***		
		Married	0.039 (.003) ***	-0.015 (.009)		
	Location	Town < 200 000 pop.	-0.009 (.003) ***	-0.016 (.008)**		
		Paris metropolitan area	0.142 (.004) ***	-0.083 (.011) ***	0.134 (.031) ***	-0.131 (.083)
JOB CHARACTERISTICS	Sector of activity	Industry	0.034 (.002) ***	0.075 (.017) ***		
		Public	-0.142 (.015) ***			
	Firm size	< 50 employees	-0.048 (.003) ***	0.013 (.008)*		
		> 500 employees	0.045 (.003) ***	0.016 (.008)*		
	Working hours	Part-time, 15-30 h /week	-0.486 (.009) ***	0.340 (.013) ***	-0.124 (.063)**	
		Part-time, < 15 h /week	-1.271 (.036) ***	0.564 (.049) ***		
		Flextime	0.092 (.004) ***			
		Special work schedule	0.050 (.003) ***	-0.034 (.008) ***	-0.124 (.038) ***	
	Qualifications	Highly skilled	0.295 (.003) ***	-0.033 (.009) ***		
		Unskilled	-0.120 (.004) ***	0.028 (0.020)		
	Type of job	Blue collar	-0.095 (.003) ***	0.022 (.009)		
		Short term labor contract	0.004 (.010)			
	Time with the firm	< 1year	-0.038 (.005) ***	0.015 (.017)		
		> 5 years	0.072 (.003) ***	0.070 (.010) ***		
	Intercept		7.303 (.006) ***			
	Size of the sample		83 302			

***=coefficients statistically significant at 1% level of confidence, **=coefficients statistically significant at 5%-1% level of confidence, *= coefficients statistically significant at 10%-5% level of confidence, no star= coefficient not significant at 10% level

Eventually, one gets the specification presented in the table, where only the significant differences in returns appear: the level of education, the location (Paris metropolitan area), the characteristic of having a part-time job (15-30 h /week) and the characteristic of having a "special work schedule".

It is then straightforward to calculate the magnitude of wage discrimination by summing all the differences in returns, with identical characteristics, between gays and heterosexuals. The resulting evaluation is similar to what has been presented in the previous sections. This confirms the existence of a wage discrimination that is slightly higher in the private sector (–6.3%) than in the public sector (–5.0%).

Inspection of Table 10 clearly shows the main mechanisms responsible for this discrimination. It is mainly through the highest educational degree obtained that discrimination occurs: the educational level of a gay is less valued than that of his heterosexual counterpart. This fact is especially true if it is a high degree, confirming the greater exposure to discrimination of highly graduated gays.

Table 10. – Breakdown of the wage discrimination against gay employees

BREAKDOWN OF THE WAGE DISCRIMINATION		DISTRIBUTION WITHIN THE OVERALL SAMPLE		COEFFICIENTS MEASURING RETURN-GAP		CONTRIBUTIONS TO WAGE DISCRIMINATION	
		PRIVATE	PUBLIC	PRIVATE	PUBLIC	PRIVATE	PUBLIC
Degrees	Master's, PhD	12.5%	28.0%	-0.340	-0.052 (=-0.34+0.288)	– 4.26 % (0.007)	−1.44 % (0.027)
	College	11.6%	18.2%	-0.167	0.016 (=-0.167+0.183)	– 1.93 % (0.006)	+0.29 % (0.009)
Location	Paris metropolitan area	16.0%	14.5%	0.134	0.003 (=0.134-0.131)	+ 2.16 % (0.006)	+ 0.04 % (0.013)
Working hours	Part-time, 15-30 h /week	3.2%	13.0%	-0.124	-0.0124 (=-0.124+0.0)	– 0.39 % (0.002)	− 1.61 % (0.010)
	Special work schedule	15.1%	18.3%	-0.124	-0.124 (=-0.124+0.0)	– 1.86 % (0.007)	-2.26 % (0.008)
WAGE DISCRIMINATION						– 6.28 % (0.008)	− 4.98 % (0.017)

Between brackets the standard deviations calculated by a bootstrap performed with 1000 replications

5. – Conclusion

This first attempt to assess the extent, in the French labor market, of wage discrimination based on sexual orientation provides some useful results. First of all, a significant wage discrimination against gay employees does exist in France, in both the private and the public sector. Despite controlling for many variables, and especially for the marriage premium, the estimated wage discrimination lies between –6% to –7% in the private sector and –5% to –6% in the public sector, a magnitude similar to that of gender wage discrimination. Keeping in mind that all gay employees of our sample are not identified as such by their employers, it is certain that those identified as homosexuals suffer a higher wage penalty than the average level we have estimated. This highlights the importance of discriminatory practices against gays within the French labor market.

In contrast, we were not able to identify a significant wage discrimination against lesbians. Such an asymmetry between gays and lesbians, as regards the magnitude of wage discrimination in France, is consistent with the "theoretical intuition" and with most of the results from other countries. The asymmetry observed in our results reflects a diversity of discriminatory practices, explained by the specificity of homophobia and the different nature of stereotypes associated with male and female homosexuality.

A higher degree does not protect gays from discrimination. On the contrary the higher the degree, the higher the magnitude of wage discrimination against gay employees. A *pink glass ceiling* effect seems to play stronger for highly skilled jobs, which are the most "visible" and include a representation component. As the learning process of employers about the sexual orientation of their employees takes time, the extent of wage discrimination increases with the age of employees and their seniority within the firm.

The results presented in this paper on the extent of wage discrimination based on sexual orientation in France, are in the low range of comparable estimates about other countries, especially Anglo-Saxon countries. Even if homophobia/heterocentrism may be more pronounced in the US, which could help to explain such a difference in results, our feeling is rather that several studies suffer from neglecting some essential control variables (marriage premium, hours of work per week, sector of activity), thus overestimating the magnitude of the wage penalty in the countries involved.

6. – Annex: variables used in the selection and wage equations

Table 11. – List of variables used

The underlined characteristics correspond to the base case

	VARIABLES		SELECTION EQUATION	WAGE EQUATION
INDIVIDUAL CHARACTERISTICS	**Sexual orientation**	Gay *vs.* <u>Heterosexual</u>		✓
	Age	Age, Age squared	✓	✓
	Degrees	No degree *vs.* <u>A-Level or Professional degree</u> *vs.* College *vs.* Master's, PhD	✓	✓
	Family situation	Number of children	✓	✓
		Married *vs.* <u>Unmarried</u>	✓	✓
	Location	Town < 200 000 *vs.* <u>> 200 000</u> *vs.* Paris metropolitan area		✓
	Real estate capital	Home owner *vs.* <u>Leaseholder</u>	✓	
	Partner income *Occupation / qualifications of the partner*	Craftsman, merchant, entrepreneur, independent *vs.* Middle or top managers *vs.* <u>Technicians, associate professionals</u> *vs.* Unskilled employee or worker, inactive, unemployed	✓	
	One year ago on the labor market	<u>Employed</u> *vs.* Unemployed *vs.* Inactive	✓	
JOB CHARACTERISTICS	**Sector of activity**	Industry *vs.* <u>Services</u>		✓
	Firm size	< 50 employees *vs.* <u>50-500</u> *vs.* >500		✓
	Working hours	< 15h/week *vs.* 15-30h *vs.* <u>30h</u> *vs.* Others		✓
		<u>Normal work schedule</u> *vs.* Special work schedule		✓
	Qualifications	Unskilled *vs.* <u>Skilled</u> *vs.* High-skilled		✓
	Type of job	Blue collar *vs.* <u>White collar</u>		✓
		Short term labor contract *vs.* <u>fixed-term or long term labor contract</u>		✓
	Time with the firm	< 1 year *vs.* <u>1-5 years</u> *vs.* >5 years		✓

Note: Our main sample being constituted of twelve stacked Employment Surveys (1996-2007), time dummy variables – one for each year – have also been systematically introduced into the equations, to remove a possible effect of the business cycle

7. – References

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