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Access to the labour market for gays and lesbians: Research review

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ABSTRACT

This article reviews findings of scientific studies looking into the bias that gay men and lesbians face when accessing the labor market. Studies in this topic were scarce before year 2000, but a considerable body of literature appeared in the Western countries in the recent years. When summed up, the findings provide robust evidence that lesbians and gay men face negative bias when accessing employment. The magnitude of the bias varies considerably across contexts. Different labor market outcomes of gay men and lesbians are also partially caused by differences in household specialization between different-sex and same-sex households. Future research needs to address the contextual differences in bias against gay men and lesbians.

KEYWORDS

correspondence tests;
discrimination; employment;
gay; hireability ratings;
hiring; homosexual;
homosexuality; labor market
discrimination; lesbian;
same-sex households;
unemployment

Introduction

After being a subject of marginal attention, research into the position of gay men and lesbian women in the labor market has gained momentum in recent years. A considerable body of literature has investigated whether gays and lesbians face differential treatment in the labor market. This article provides theoretical background, important insights, and an empirical overview of outcomes of scientific studies that deal with access to the labor market for gays and lesbians. To the author's knowledge, this study provides the most extensive insight into literature in this topic. In this article we first discuss the main theoretical mechanisms and formulate a number of hypotheses. Then we introduce the methodology of the review. This is followed by an overview of the research scope and research designs of the articles that are included in this review. We also discuss the concept of sexual orientation and its operationalization. Finally, we present the findings of the reviewed research and contrast them with our hypotheses.

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Theoretical background

This section addresses the theories that aim to explain possible differences in access to the labor market between heterosexuals and gays and lesbians. Generally speaking, the differences can be caused by factors related to labor supply (see section Labor Supply) and labor demand sides (see section Labor Demand). The reviewed literature also proposes specific relationships directly related to distinct context of homosexuality. A brief overview of these hypothesized relationships and related theoretical considerations is provided in the section Overall Moderators Hypothesized by the Reviewed Literature. Following the presented theories and proposed relationships, we formulate 11 hypotheses. To a large extent they resemble the hypotheses of the reviewed articles. These hypotheses are tested against the findings of the reviewed studies and the results are presented in sections General Findings and further.

Labor supply

Differences in labor supply between heterosexuals and gays/lesbians can be caused by the inherent differences across sexual orientation and sexual orientation bias in the society or in the labor market. The former is mostly derived from labor supply theories taking into account the *different household composition* in terms of sex. This is probably the most important inherent difference affecting labor market behavior. According to Becker's neoclassical theory of family, biological differences between men and women have an impact on the traditional division of tasks in different-sex couples. While women traditionally specialized in household production, men were involved in market production (Becker, 1981). No such biological differences exist within same-sex couples. But same-sex partners may still face incentives to divide labor between household and market production because such specialization is economically beneficial (Becker, 1981). Because heterosexual men specialize on labor market work, they tend to invest more into labor market human capital. Because of limited specialization in same-sex couples, gay men are expected to invest less into labor market human capital (Black, Sanders, & Taylor, 2007), which is expected to *negatively influence* their labor market outcomes. For women the situation is reversed (Becker, 1981).

H1: We hypothesize that partners in same-sex couples will exhibit less specialization in household and market production than partners in heterosexual couples. This will influence the extensive margin and lesbians (gay men) will have higher (lower) labor force participation and employment rates, hereby resembling the labor market outcomes of heterosexual men (women).

England and Farkas (1986) postulate that *specialization* becomes more desirable once the partners are married because marriage provides more security for the non-working spouse. Additional incentives to specialize come when children are present in the household (Verbakel, 2013). Accordingly:

H2: We expect that marriage or presence of children in same-sex couples will strengthen the division of labor such as one partner will take up the role of primary earner and the other will become a secondary earner.

The labor market outcomes of primary (secondary) earners will then more resemble the labor market outcomes of heterosexual men (women).

Human capital strategy of lesbians and gay men just described has one more implication. Due to reduced (higher) pressure to perform the breadwinner role, gay men (lesbians) may be more willing than heterosexuals to sort into female (male)-typical and lower (higher)-paying occupations (Ueno, Roach, & Peña-Talamantes, 2013). Differences in the *choice of occupation* between gay men/lesbians and heterosexuals can be also attributed to gender-atypical behavior of gay men and lesbians and to family-status discrimination. As for the former, research suggests that gay men and lesbians are more likely to develop interests in gender-atypical activities in early life stages, which increases their chance of obtaining gender-atypical occupations in adulthood (Ueno et al., 2013). As for the latter, family-status discrimination refers to the phenomenon where employers tend to perceive fathers (mothers) more (less) committed to work than women and men who do not have children (Ueno et al., 2013). Because gay men and lesbians are more often childless than their heterosexual counterparts (Jaspers & Verbakel, 2012), for lesbians (gay men) this entails that they will have a higher (lower) chance of holding a male-typical job than their heterosexual counterparts (Ueno et al., 2013).

Career decision making of gay men and lesbians is also influenced by the existence of sexual orientation bias in the society (and in the labor market). Gay men and lesbians usually grow up in heteronormative society and most of them initially perceive themselves as non-homosexual (Cass, 1979). They need to progress through a number of stages to develop lesbian/gay identity as a relevant aspect of self (see, for example, model by Cass [1979]). The age of awareness of homoerotic feelings, the age of self-labeling as lesbian/gay, and the period between these two events vary across individuals (McDonald, 1982). During this time, gay men and lesbians may be unaware of or may reject a critical piece of their self-concept. This period often coincides with adolescence—the developmental stage when one evaluates academic and career directions. At the same time, the inclination of gay men and lesbians to pursue nontraditional occupations (Chung, 1995) may conflict with the gender-role expectations imposed by the society, due to which gay men and lesbians may not enjoy the support and activities that heterosexuals do (Trau & Härtel, 2002). Those who pursue a nontraditional career are often devalued or stigmatized. Those who respond to social pressure pursue traditional—but less fulfilling—careers. To avoid bias, some gay men and lesbians prefer to sort into occupations that they perceive as more “gay-friendly” (Chung, 1995). Because of limited self-awareness, constriction of self-concept, and lower social support, gay men and lesbians may prematurely foreclose on career choices (Hetherington & Orzek, 1989; Prince, 1995), possibly leading to suboptimal choice of field of education and career. Moreover, in adolescence, the primary context for validation, self-esteem, and autonomy involves

acceptance by a peer group. Many gay/lesbian adolescents develop a “false identity,” based on peers’ and others’ validation. These factors often negatively affect self-esteem and self-value of lesbians and gay men and may severely inhibit their development (Prince, 1995). Hull (2005) postulates that deficit of self-confidence and emotional inhibition resulting from internalization of society’s homophobia negatively affect lesbians and gay men in the hiring process and lowers their hiring probability. Taken altogether, the internalized social bias and labor market bias can leave gay men and lesbians with a comparative disadvantage to their heterosexual counterparts and can have a negative impact on their labor market outcomes, such as career progress, occupational status, income, and employment level. This can in turn lead to reduction of labor supply of lesbians and gay men.

Labor demand

Differences in labor demand for various groups are traditionally attributed to discrimination. Labor market discrimination exists when two equally qualified individuals are treated differently in the labor market on the basis of personal characteristics unrelated to productivity (Arrow, 1973). *Sexual orientation discrimination* is suspected to be an important factor, causing differences in access to employment between heterosexuals and gay men/lesbians. Two major economic theories try to explain the mechanisms of discrimination.

First, Becker’s (1971) *theory of discrimination* relates discriminatory behavior to people’s preferences. One may prefer being associated with persons with certain trait(s) and may feel disutility from association with individuals who do not possess this trait. An employer maximizing her utility (instead of profit) will choose to hire employees with preferred characteristics, even if they have lower productivity and/or higher reservation wage. The extent of employers’ distaste against a particular trait will influence their willingness to discriminate against persons with such a trait. Analogically, tastes play a role in workers’ willingness to be associated with certain colleagues and in customers’ choice of a service provider.

Second, according to *theory of statistical discrimination* (Arrow, 1973; Phelps, 1972) employers don’t have perfect information on a job applicant’s real productivity, but they believe that the productivity varies between different groups of employees. When assessing a lesbian/gay job applicant, an employer may use her beliefs about how productive gay men and lesbians are as a proxy for estimation of the applicant’s productivity. This can result in different hiring probabilities of heterosexuals and lesbians/gay men.

However, the discriminatory behavior observed in the real world may be subject to a more complex interplay of factors than what is suggested by the aforementioned theories. *Justification-suppression model* implies that automatic genuine prejudice is generated by stereotypes and ideologies based on an individual’s membership in a certain social group. This prejudice is expressed in the form of discriminatory behavior only when there is a lack of motivation to restrain it by suppression process, which is generated by social norms, personal standards, and beliefs (Crandall & Eshleman, 2003). Discrimination may manifest in an organizational

setting in formal or interpersonal ways. Formal discrimination refers to the most overt types of discrimination, including discrimination in hiring, promotion, access, and distribution of resources. Interpersonal discrimination is more subtle and involves nonverbal, paraverbal, and some verbal behaviors that occur in social interactions, such as showing less interest or terminating interaction sooner (Chung, 2001).

Discrimination (or expected discrimination) plays a role in different stages of the recruitment process. Job seekers may avoid applying for (a given category of) jobs in which they believe that they would be discriminated against. During the first contact with the employer, a stigmatized applicant can be rejected or simply treated less helpfully than a non-stigmatized candidate. A stereotyped formulation of a vacancy can lead to self-elimination of candidates who do not meet the required stereotypes. During the résumé selection process, equally qualified minority candidates—if identified—can be assessed less positively, rejected, or invited to an interview only as a back-up option. During the interview, the stigmatized candidate could be subjected to interpersonal discrimination even if the interviewer aims to be non-biased. When offering a job, an employer may offer the stigmatized candidate less attractive conditions or offer no employment at all. The less advantageous conditions can persist even during the employment and can lead to disadvantage when looking for a following job.

H3: We hypothesise that lesbians and gays will be disadvantaged in access to employment. Ceteris paribus, gay/lesbian job applicants will receive lower hireability ratings, fewer callbacks, or less positive interaction from employers than heterosexual applicants.

Discrimination in the workplace has a direct and an indirect effect on labor force status (i.e., [un]employment, and participation in the labor market). As for the direct effect, discrimination decreases the labor demand for gay/lesbian employees, lowering their flows from unemployment to employment and increasing their unemployment rate. This can, among other things, result in increased expected length of job search. Indirectly, discrimination in the labor market may negatively impact incentives for lesbians and gay men to find or keep a job (as proposed by Laurent & Mihoubi, 2017). In gay men (lesbians), the direct and indirect effect of discrimination will strengthen (weaken) the relationship proposed in H1 between sexual orientation and labor force participation/employment rates.

Finally, because sexual orientation is in the majority of contexts a non-observable characteristic, a person can be discriminated against (because of homosexuality) only if others perceive or suspect him or her to be gay/lesbian. To avoid the risk of discrimination, lesbians and gay men may choose to hide their sexual orientation at work.¹ The implications for research are discussed in the section Sexual Orientation.

Overall moderators hypothesized by the reviewed literature

The reviewed studies hypothesize that the bias against gay men and lesbians will vary across different contexts. The following paragraphs(a) discuss the hypothesized

relations that were found in the reviewed literature and (b) summarize the theoretical assumptions supporting them.

While applying aversive bias paradigm to sexual prejudice, Aberson and Dora (2003) suggest that when evaluation criteria are ambiguous, résumés of stigmatized individuals will be evaluated less favorably than non-stigmatized résumés. The ambiguity allows disguising that difference in evaluation is due to stigma. Also, there is latitude for stereotypes to influence judgments if provided information is ambiguous (Heilman, 2012). Kricheli-Katz (2013) proposes that individuals from stigmatized groups are treated more negatively when stigma is believed to be controllable or subject to a choice. Aberson and Dora (2003) explain that lack of information results in reduced cognitive complexity surrounding representations of out-group members (e.g., gay/lesbian people). Individuals who are less familiar with gay men and lesbians will tend to view them as more homogenous and exhibit more extremity in their ratings. This will lead to more extreme negative (or positive!) reactions to unqualified (qualified) gay men and lesbians. More positive ratings of qualified gay/lesbian candidates (as compared to heterosexuals) may originate from normative pressures toward being even-handed (overcorrection effect). In line with the theory of statistical discrimination, Drydakis (2014) assumes that providing additional favorable information on a job application can reduce employers' discrimination against gay men and lesbians.

H4: We hypothesize that lack/ambiguity of information (or lack of contact with gay/lesbian people) will lead to more extreme negative (positive) ratings in individuals who are prone to discriminate (be even-handed).

Due to different gender stereotypes about lesbians and gay men, employers' behavior toward lesbian and gay job seekers may not be uniform (Tilcsik, 2011). Societies usually assign a specific set of meaning to gender (Drydakis, 2015), where men are stereotypically seen as more agentic (independent, aggressive, competitive, self-confident, assertive, career-oriented, and task-oriented) while women are seen as communal (generous, warm, affectionate, family-oriented, and sensitive). Gay men and lesbians are perceived to have stereotypical characteristics of the opposite sex (lesbians are stereotyped as masculine and gay men as feminine [see Ahmed, Andersson, & Hammarstedt, 2013; Cunningham, Sartore, & McCullough, 2010; Drydakis, 2015]). Individuals who violate traditional gender norms are often presumed to be gay. This perception may be important in relation to discrimination based on sexual orientation, particularly in occupations that are traditionally perceived as masculine or feminine (Ahmed et al., 2013). An occupation is called masculine (feminine) when the majority of employees are male (female). Most male (female)-dominated occupations also involve (and require) employee traits that are stereotypically associated with males (females) (Weichselbaumer, 2004). Stereotyping may play an important role in an interviewer's approach toward a job applicant (Nadler & Kufahl, 2014); for example, by formulation of stereotype-affirming questions and in formation of final judgments that affect hiring decisions. Job applicants who (stereotypically) violate the gender role required for the job may be sorted away.

H5: We hypothesize that gay men (lesbians) will face more negative bias than their heterosexual counterparts when applying for male(female)-dominated jobs and they will be advantaged when applying for female(male)-dominated jobs.

H6: We also assume that gay/lesbian people who exhibit gender–non-congruent characteristics will experience more negative bias in access to the labor market than those who exhibit gender-congruent characteristics.

An individual's sex is another important factor determining attitudes toward gay men and lesbians (Horvath & Ryan, 2003). Heterosexual men tend to hold more negative attitudes toward lesbians and especially toward gay men than straight women (see, e.g., Herek, 2000, 2002; Kite & Whitley, 1996). Some studies insinuate that heterosexual women may be more prone to discriminate against lesbians than against gay men (Baker & Fishbein, 1998; LaMar & Kite, 1998).

H7: We hypothesize that employers' bias against gay men and lesbians will be stronger if the employer is of the same sex, and this relationship will be especially pronounced for males.

Because lesbians and gay men are supposedly penalized for breaking norms of the heterosexual majority (Horvath & Ryan, 2003), Weichselbaumer (2015) hypothesizes a beneficial effect of marriage or registered partnership on labor market performance of lesbians and gay men. This is because the lifestyle of married gay men and lesbians (or those in registered partnership) is more aligned with traditional social norms.

H8: We expect that gays and lesbians who are married or in registered partnership (compared to those who are not) will experience relatively less negative bias in access to the labor market.

Horvath and Ryan (2003) postulate that employers' attitudes are one (but not the only) influence on their actual behavior and can therefore be seen as an antecedent of (hiring) discrimination. Employers may also discriminate because of prejudice held by their customers or employees (Hammarstedt, Ahmed, & Andersson, 2015). The magnitude of prejudice varies across contextual factors, such as geographical location, sector, occupation, sex, religiosity, or age. Employers with prejudice against gay/lesbian people are more likely to be found in contexts where attitudes toward gay men and lesbians are more hostile.

H9: We expect that individuals' (or public) hostile attitudes toward gay/lesbian people will be positively related to negative bias against (or to negative labor market outcomes of) lesbians and gay men.

Accordingly, as residents in larger cities have generally more liberal attitudes toward homosexuality (Ahmed et al., 2013), gay men and lesbians living in metropolitan areas could exhibit better labor market outcomes than those living in non-metropolitan areas.

Tebaldi and Elmslie (2006) and Klawitter and Flatt (1998) postulate that *anti-discriminatory legislation that forbids discrimination based on sexual orientation* will be more likely enacted in areas with positive social attitudes toward lesbians and gay men. Simultaneously, such legislation may have positive effects on the

social attitudes toward gay people. Following Becker's deterrence theory, Barron and Hebl (2013) explain that prejudiced employers will discriminate less in the presence of anti-discriminatory laws because such laws create an additional cost if an employer is caught discriminating (instrumental effect). Antidiscrimination laws may also decrease interpersonal discrimination by creating social norms about what is acceptable and what is not (symbolic effect).

H10: We expect that when anti-discriminatory laws are applicable, gay/lesbian people will experience less negative bias when accessing the labor market and their labor market outcomes will be more aligned with outcomes of heterosexuals.

Because attitudes toward gay men and lesbians may vary across occupations, Drydakis (2009) and Ahmed and colleagues (2013) argue that gay/lesbian employees may sort into gay/lesbian-friendly occupations, where they expect to encounter less discrimination. Low presence of lesbians and gay men in less gay-friendly occupations may result in even more homonegativity, because people with less contact with lesbians and gay men tend to be more hostile toward them.

H11: We hypothesize that labor market outcomes of gay/lesbian people and bias against them will vary across occupations.

Methodology

This study aims to provide as comprehensive review of literature on the topic as possible. For this reason, all relevant studies are included in the review. To minimize the possible selection bias, the search for relevant studies was performed in multiple databases: APA PsycNET, EconLit, ProQuest IBSS, Scopus, and SocINDEX. The search terms were identical in all databases and were formulated rather broadly not to exclude potentially relevant studies. The search was performed on July 24, 2014, in abstracts, keywords (or subject terms or both where possible), and titles records of the databases just named.² This resulted in 2,682 matches, of which 738 references were identified as duplicates by Mendeley software. The abstracts of the remaining 1,944 references were manually assessed on whether they fulfilled the inclusion criteria for this literature review. A study fulfilled the inclusion criteria if

1. it quantified at least some *objective measure* of access to the labor market for lesbians and gay men (such as hireability ratings, probability of employer's call-back after résumé submission, probability of (un)employment and labor market participation);
2. the measure of access to the labor market for gay men and lesbians was compared between subgroups of gay/lesbian people and/or to other groups (e.g., heterosexuals) and/or between various groups of employers/résumé evaluators;
3. it at least to some extent controlled for heterogeneity in background characteristics by means of research design (e.g., controlled experiment) or analytical method (e.g., regression analysis); and
4. the outcomes of the study were a product of an original research.³

Thirty-two articles fulfilled the inclusion criteria and were included in the literature review. The bibliography of each study was checked for other potential studies that would fulfill the inclusion criteria. On a September 15 and 16, 2015, a non-systematic check was performed on Google Scholar among studies that cited the reviewed literature and identified 15 additional studies that fulfilled the inclusion criteria. One additional study fulfilling the inclusion criteria (Drydak, n.d.) has been encountered in the later stage of the research (July 6, 2016) and has been added to the literature review to safeguard completeness of the review. In total, the literature review is therefore based on 48 studies, the contents of which were examined and coded. This formed the basis for analysis and findings. Our method was guided by the systematic literature review as described by Gough, Oliver, and Thomas (2012).

Reviewed studies

This section provides an overview of the scope of the literature under scrutiny. The reviewed literature addresses different stages of access to the labor market (see Table 1). Three studies explored differences in treatment during the initial contact with a potential employer. Research concentrated at whether sexual orientation of a job applicant influences the hireability ratings (15 studies) and differences in probability of being invited for a real-world job interview between comparable job applicants who differ in sexual orientation (16 studies). One study addressed the duration before call-back and two studies addressed the job interview stage. Finally, 14 studies examined whether there are differences in the labor market status between heterosexuals and gay/lesbian people. The research looked into access to the labor market for gay men and lesbians in different occupations and countries. The overview is provided in Table 2.

Moderators

A number of possible moderators and mechanisms of the relationship between sexual orientation and labor market outcomes was previously noted. Reviewed literature addresses a wide range of these moderators. In Table 1, an overview of moderators (in rows) is provided and it is organized along the stages of access to the labor market (in columns). For each stage and moderator the table presents studies whose findings are discussed here. The moderators are grouped into four groups. The first group relates to applicant or employee characteristics and includes sex, marital (or partnership) status, presence of children in household, and adherence with gender stereotypes. The second group refers to local characteristics such as whether concerned area is metropolitan, local social and political attitudes, and presence of antidiscrimination legislation. The moderators in the third group refer to characteristics of employer or job application evaluator (namely sex), attitudes toward gay men and lesbians, and past contact with gay men and lesbians. The last group of moderators concerns occupation and recruitment and includes occupation

Table 1. An overview of employment access stages and moderators that are addressed in the reviewed studies.

Job Access Stage	First Contact	Hireability Rating /Hiring Recommendations and Decisions	Duration Before Call-back	Call-back	Interview	Employment Status /Labor Supply
All studies relating to certain job access stage	Hebl et al. (2002), Singletary and Hebl (2009), Barron and Hebl (2013)	Crow et al. (1998), Abernson (2003), Abernson and Dora (2003), Horvath and Ryan (2003), Hoye and Lievens (2003), Barron (2009), Cunningham et al. (2010), Pichler et al. (2010), Kricheli-Katz (2013), Gorsuch (2014), Nadler and Kufahl (2014), Pyatt (2014), Binder and Ward (2016), Everly et al. (2016), Niedlich and Steffens (2015)	Drydakis (2011)	Adam (1981), Berger and Kelly (1981), Hebl et al. (2002), Weichselbaumer (2003), Drydakis (2009), Drydakis (2011), Tilcsik (2011), Ahmed et al. (2013), Bailey et al. (2013), Baert (2014), Drydakis (2014), Acquisti and Fong (2015), Drydakis (2015), Gorsuch (2015), Patacchini et al. (2015), Weichselbaumer (2015)	Ellis (1993), Barron and Hebl (2013)	Tebaldi and Elmslie (2006), Leppel (2009), Buchmueller and Carpenter (2012), Laurent and Mihoubi (2017), Patacchini, Ragusa, and Zenou (2012), Antecol and Steinberger (2013), Mueller-Smith (2013), Giddings et al. (2014), Martell (2014), Powdthavee and Wooden (2014), Hammarstedt et al. (2015), Dillender (2015), Jepsen and Jepsen (2015), Drydakis (n.d.)
Moderators Applicant or employee characteristics Sex	Crow et al. (1998), Abernson (2003), Abernson and Dora (2003), Horvath and Ryan (2003), Hoye and Lievens (2003), Barron (2009), Cunningham et al. (2010), Kricheli-Katz (2013), Gorsuch (2014), Nadler and Kufahl (2014), Pyatt (2014), Gorsuch (2014), Pyatt (2014)	Crow et al. (1998), Abernson (2003), Abernson and Dora (2003), Horvath and Ryan (2003), Hoye and Lievens (2003), Barron (2009), Cunningham et al. (2010), Kricheli-Katz (2013), Gorsuch (2014), Pyatt (2014), Gorsuch (2014), Pyatt (2014)	Adam (1981), Berger and Kelly (1981), Weichselbaumer (2003), Drydakis (2009), Drydakis (2011), Tilcsik (2011), Ahmed et al. (2013), Bailey et al. (2013), Baert (2014), Drydakis (2014), Acquisti and Fong (2015), Drydakis (2015), Gorsuch (2015), Patacchini et al. (2015), Weichselbaumer (2015)	Adam (1981), Berger and Kelly (1981), Weichselbaumer (2003), Drydakis (2009), Drydakis (2011), Tilcsik (2011), Ahmed et al. (2013), Bailey et al. (2013), Baert (2014), Drydakis (2014), Acquisti and Fong (2015), Drydakis (2015), Gorsuch (2015), Patacchini et al. (2015), Weichselbaumer (2015)	Tebaldi and Elmslie (2006), Buchmueller and Carpenter (2012), Laurent and Mihoubi (2017), Patacchini et al. (2012), Martell (2014), Hammarstedt et al. (2015)	Tebaldi and Elmslie (2006), Buchmueller and Carpenter (2012), Laurent and Mihoubi (2017), Patacchini et al. (2012), Martell (2014), Hammarstedt et al. (2015)
Marital or partnership status	Nadler and Kufahl (2014)	Nadler and Kufahl (2014)	Baert (2014)	Baert (2014)	Baert (2014)	Baert (2014)
Presence of a child in household Adherence with gender stereotypes	Niedlich and Steffens (2015), Gorsuch (2014)	Niedlich and Steffens (2015), Gorsuch (2014)	Weichselbaumer (2015)	Weichselbaumer (2015), Gorsuch (2015)	Weichselbaumer (2015), Gorsuch (2015)	Weichselbaumer (2015), Gorsuch (2015)

Local characteristics Metropolitan vs. nonmetropolitan area				Tebaldi and Elmslie (2006), Leppel (2009)
Social characteristics	Barron and Hebl (2013)		Adam (1981), Ahmed et al. (2013) Bailey et al. (2013), Acquisti and Fong (2015), Weichselbaumer (2015) Tilcsik (2011), Drydakis (2015)	Hammarstedt et al. (2015)
Antidiscrimination legislation	Barron and Hebl (2013)	Horvath and Ryan (2003), Barron (2009)	Tilcsik (2011), Drydakis (2015)	Leppel (2009), Martell (2014)
Evaluator's or employer's characteristics			Hebl et al. (2002), Drydakis (2009), Baert (2014)	
Sex		Crow et al. (1998), Horvath and Ryan (2003), Hoye and Lievens (2003), Cunningham et al. (2010), Pichler et al. (2010), Gorsuch (2014), Everly et al. (2016), Niedlich and Steffens (2015)		Barron and Hebl (2013)
Attitudes toward gay people		Horvath and Ryan (2003), Pichler et al. (2010), Nadler and Kufahl (2014), Binder and Ward (2016), Niedlich and Steffens (2015)		Ellis (1993)
Contact with gays and lesbians		Aberson and Dora (2003), Krichelkatz (2013)		Ellis (1993)
Occupation and recruitment				
Occupation applied for			Weichselbaumer (2003), Drydakis (2009), Drydakis (2011), Ahmed et al. (2013), Baert (2014), Drydakis (2014), Drydakis (2015) Tilcsik (2011), Ahmed et al. (2013), Baert (2014), Drydakis (2015)	Leppel (2009)
Sexdominated or gender stereotypical occupation			Singletary and Hebl (2009), Drydakis (2014)	
Specificity of information				

Table 2. Scope of reviewed literature in terms of occupation and country.

Occupations	Belgium	Germany	Greece	Italy	Sweden	U.K.	U.S.	Other Countries
Experimental data								
Accounting position		Weichselbaumer (2015)		Patacchini et al. (2015)		Drydakis (2015)	Crow et al. (1998)	Austria: Weichselbaumer (2003)
Analytical positions, banking, and finance								
Café, restaurant, and food services			Drydakis (2009), Drydakis (2011)		Ahmed et al. (2013)	Drydakis (2015)	Tilcsik (2011), Acquisti and Fong (2015) Gorsuch (2015)	Cyprus: Drydakis (2014)
Client information workers				Patacchini et al. (2015)			Tilcsik (2011)	
Education position, teacher, professor					Ahmed et al. (2013)	Drydakis (2015)	Ellis (1993), Binder and Ward (2016)	
Industrial or manual jobs	Baert (2014)		Drydakis (2009), Drydakis (2011)		Ahmed et al. (2013)		Gorsuch (2015)	Cyprus: Drydakis (2014)
Leader of HIV/AIDS awareness campaign							Aberson (2003), Aberson and Dora (2003)	
Management or leadership positions	Hoye and Lievens (2003)	Niedlich and Steffens (2015)				Drydakis (2015)	Barron (2009), Pichler et al. (2010), Tilcsik (2011), Nadler and Kufahl (2014), Acquisti and Fong (2015), Everly et al. (2016)	
Sales workers and representatives			Drydakis (2009), Drydakis (2011)	Patacchini et al. (2015)	Ahmed et al. (2013)		Hebl et al. (2002), Singletary and Hebl (2009), Tilcsik (2011), Barron and Hebl (2013), Gorsuch (2015)	Cyprus: Drydakis (2014)

Secretaries, administrative/management assistants, receptionists, and other office jobs	Baert (2014)	Weichselbaumer (2015)	Drydakís (2009), Drydakís (2011)	Patacchini et al. (2015)	Tilcsik (2011), Pyatt (2014), Gorsuch (2015)	Austria: Weichselbaumer (2003); Cyprus: Drydakís (2014)
Social care, social services, nurses	Baert (2014)				Berger and Kelly (1981), Pichler et al. (2010)	Canada: Berger and Kelly (1981)
Technical positions, engineers	Baert (2014)	Niedlich and Steffens (2015)			Horvath and Ryan (2003), Acquisti and Fong (2015)	
Various other positions	Baert (2014)				Drydakís (2015)	
Naturally occurring data	Patacchini et al. (2012)		Patacchini et al. (2012), Drydakís (n.d.)	Patacchini et al. (2012), Harmarstedt et al. (2015)	Ahmed et al. (2013)	
					Ahmed et al. (2013)	
					Cunningham et al. (2010), Bailey et al. (2013), Krichelkatz (2013), Gorsuch (2014)	Canada: Adam (1981)
					Tebaldi and Elmslie (2006), Leppel (2009), Buchmueller and Carpenter (2012), MuellerSmith (2013), Drydakís (2014), Giddings et al. (2014), Martell (2014), Dillender (2015), Jepsen and Jepsen (2015)	Austria, Denmark, Finland, Ireland, Portugal and Spain: Patacchini et al. (2012); Australia: Powdthavee and Wooden (2014); France: Laurent and Mihoubi (2017)
					Patacchini et al. (2012), Harmarstedt et al. (2015)	
					Powdthavee and Wooden (2014)	

applied for, whether the occupation is sex-dominated or gender stereotypical, and the specificity of information used in the recruitment procedure. The summary of the findings about how these moderators affect access to the labor market of lesbians and gay men is provided later.

Research design

The reviewed studies used a variety of research designs, depending on whether they addressed factors related to labor supply or labor demand. Studies addressing labor demand factors generally used controlled experiments. Studies utilizing naturally occurring data generally identified the combined effect of factors related to both labor supply and labor demand. The reviewed studies are organized according to the research design in [Table 3](#).

Experimental methods allow isolating causal mechanisms by randomly assigning subjects into treatment and control conditions. The random assignment helps to remove the influence of any respondent characteristics that may affect their outcomes (Pager, 2007). Laboratory experiments typically use students (Harrison & List, 2004). The recruitment procedures often avoid mentioning the nature of the tasks in order not to alter subjects' behavior during the experiment. In reviewed studies with between-subject factorial design the subjects got a job description and résumé of a single candidate (who was either gay/lesbian or heterosexual) and were asked to assess the candidate's suitability for the job concerned. In reviewed studies with a within-subject factorial design, subjects were asked to evaluate résumés of multiple candidates. In addition, Kricheli-Katz (2013) manipulated subjects' beliefs about the controllability of sexual orientation by a reading comprehension test. To investigate the effect of media on evaluation of résumés, Binder and Ward (2016) exposed subjects during the experiment either to heterosexist/non-heterosexist rap music or no music at all.

The relevance of inferences drawn from laboratory experiments is criticized because the subjects are students. Such samples may exclude individuals with characteristics that are important determinants of underlying population behavior (Harrison & List, 2004). This concern is addressed by laboratory experiments with non-standard subject pools. [Table 3](#) lists such studies and the subjects they used. The participants were generally asked to evaluate whether presented résumés match requirements of a given job. Nadler and Kufahl (2014) additionally provided the participants with a video of a fictional job interview. Gorsuch (2014) presented the study as a real job task so the subjects were not aware that they were taking part in an experiment. Barron and Hebl (2013) manipulated subjects' beliefs on legality of employment discrimination against gay men and lesbians in a short training. The subjects then conducted a practice job interview with a researcher disguised as a gay/lesbian job candidate. Crow, Fok, and Hartman (1998) listed all eight combinations of sex, race, and sexual orientation and asked subjects to select six that had their preference.

While laboratory experiments provide a clear glimpse into the effects of exogenous treatments on behavior, making generalizations outside of this domain might

Table 3. Research designs of reviewed studies.

Data Collection Method	Factorial Design	
	Within-Subject	Between-Subject
Controlled experiments In laboratory setting Standard subject pool		
Nonstandard subject pool	Horwath and Ryan (2003), Kritchell-Katz (2013), Binder and Ward (2016) <i>Amazon Mechanical Turk</i> : Gorsuch (2014); <i>Convenience Sample of Employees</i> : Crow et al. (1998); <i>HR Professionals</i> : Barron (2009).	Ellis (1993), Aberson (2003), Aberson and Dora (2003), Cunningham et al. (2010), Pichler et al. (2010) <i>Amazon Mechanical Turk</i> : Nadler and Kufahl (2014), Pyatt (2014), Everly et al. (2016); <i>HR Professionals</i> : Hoye and Lievens (2003); <i>Paid Volunteers</i> : Barron and Hebl (2013) (third study); <i>Convenience Sample of Students and People From the Street</i> : Niedlich and Streffens (2015)
Correspondence tests	Berger and Kelly (1981), Weichselbaumer (2003), Drydak (2009), Drydak (2011), Tilcsik (2011), Bailey et al. (2013), Baert (2014), Drydak (2014), Drydak (2015), Patacchini et al. (2015)	Adam (1981), Ahmed et al. (2013), Acquisti and Fong (2015), Gorsuch (2015), Weichselbaumer (2015)
Inperson audit	Recruiting employers	Hebl et al. (2002), Singletary and Hebl (2009), Barron and Hebl (2013) (second study)
Studies using naturally occurring data	Recruiting employers <i>Full register data</i> : Hammarstedt et al. (2015); <i>Sample from 2000 U.S. Decennial Census data</i> : Leppel (2009), Antecol and Steinberger (2013), and Jepsen and Jepsen (2015). Giddings et al. (2014) uses 1990 Census data; <i>Survey data</i> : Tebaldi and Elmslie (2006), Buchmueller and Carpenter (2012), Laurent and Mihoubi (2017), Patacchini et al. (2012), Mueller-Smith (2013), Giddings et al. (2014), Martell (2014), Powdthavee and Wooden (2014), Hammarstedt et al. (2015), Dillender (2015), Drydak (n.d.)	

prove difficult (Harrison & List, 2004). The subjects in a laboratory are usually aware of being observed, which may alter their behavior—the so-called Hawthorne effect. In our context, the subjects could change their behavior to appear less prejudiced. This would bias the results, underestimating the bias against the stigmatized group. For this reason, studies with the subject's awareness of being observed are marked with an asterisk (*) when presenting the findings. This is only a gross attempt to account for Hawthorne effect. As noted in Weichselbaumer (2015), subjects may guess that they are being tested even in other research designs, such as correspondence studies with within-subject design.

Experiments in a field environment “blend experimental methods with field-based research, relaxing certain controls over environmental influences to better simulate real-world interactions” (Pager, 2007, p. 109). The reviewed studies that were applied field experiments used either *correspondence tests* or *in-person audits*.

In correspondence tests, résumés of two or more (fictitious) job applicants are prepared so that they match in relevant aspects but differ in the characteristics of interest (i.e., sexual orientation). The résumés are submitted to employers and the employers' reactions are measured for each applicant by means of written responses or call-backs. An advantage of this research design is that it provides the researcher with control over the precise content of treatment and control conditions (Pager, 2007). Correspondence tests are a popular method of testing for differential treatment of lesbians and gay men in the initial stage of the selection process of job applicants. The majority of reviewed correspondence studies used within-subject factorial design, meaning that they submitted matched résumés of two or more candidates to each job opening. The studies with between-subject design submitted a single résumé to each employer, keeping the résumé constant across employers in all aspects but sexual orientation (and sex in Ahmed et al., 2013; or applicant's masculinity/femininity in Gorsuch, 2015). Acquisti and Fong (2015) submitted identical résumés to the employers but manipulated the information in candidates' online profiles on professional and social networks. Drydakis (2015) was the only study to send résumés of real job applicants.

In-person audits utilize carefully matched testers who pose as job applicants in real job searches (Pager, 2007). The experiments attempt to control for all aspects of an individual that affect their work productivity (Rich, 2014). In-person audits provide information on whether the applicants got a job offer as well as what treatment they experienced (Pager, 2007). The reviewed studies applying in-person audits were more scarce than correspondence tests and involved sending undergraduate students (some of them signaled being gay/lesbian) to personally apply for jobs in stores in large mall areas. The researchers observed the characteristics of the interpersonal interaction between staff and job applicants and whether or not a job was offered.

Sixteen reviewed studies used naturally occurring data (i.e., data obtained in a non-experimental way). These studies used econometric models to construct a proper counterfactual that would identify the effect of sexual orientation on the variable of interest. The advantage of the naturally occurring data is their realism. The

drawback is that strong assumptions need to be made to identify the effect of sexual orientation (List, 2007).

The hypotheses formulated earlier were addressed by studies using different research designs. Hypotheses 3, 4, 5, 6, 7, and 8 were tested by studies using controlled experiments. Hypotheses 1 and 2 were tested by studies using naturally occurring data. Hypotheses 9, 10, and 11 were tested by studies using both controlled experiments and naturally occurring data.

Sexual orientation

Even though people can reportedly estimate one's sexual orientation based on body movements (Johnson, Gill, Reichman, & Tassinary, 2007) and facial cues (Freeman, Johnson, Ambady, & Rule, 2010), sexual orientation is traditionally viewed as a non-observable type of diversity (Milliken & Martins, 1996). Employers' potential to discriminate against gay men and lesbians depends on their ability to distinguish them from heterosexuals (Drydakis, 2009).

Laumann, Gagnon, Michael, and Michaels (2000) view homosexuality as a broad concept encompassing at least three dimensions:

1. same-sex sexual behavior referring to the sex of sexual partners and specific sexual acts or techniques and the time frame when these sexual relationships or activities took place;
2. same-sex desire and sexual attraction relating to one's sexual appeal, fantasies, and thoughts and the sex of the people to whom the respondent is attracted; and
3. self-identification as gay or lesbian.

Individuals' sexual expression in relation to these dimensions is not binary, but rather presents a continuous scale (e.g., the extent to which one is sexually appealed to men/women). For this reason, proper operationalization of sexual orientation is problematic and complicates the generalizability of research findings to the whole population of gay men and lesbians. The reviewed studies (with the exception of Ellis, 1993; Mueller-Smith, 2013; Powdthavee & Wooden, 2014) used a binary scale of sexual orientation allowing only for variation between heterosexuals and gay/lesbian people. Powdthavee and Wooden (2014) is the only reviewed study that distinguished bisexuals as a separate category. Ellis (1993) used only homosexual conditions. Mueller-Smith (2013) used a proxy signaling that certain categories of men have a higher probability of being gay.

The operationalization of sexual orientation further depends on the research design and varies considerably between studies that use naturally occurring data and studies with experimental design (see Table 4). The studies using naturally occurring data operationalize individuals' sexual orientation by identifying features that indicate whether a given observation concerns a heterosexual or a gay/lesbian individual (or household). The most frequently used procedure to identify the sexual orientation of individuals in the data set was comparing their sex with the sex of their cohabiting partners. This method allows identification of sexual orientation

Table 4. Methods of identification or manipulation of sexual orientation.

<i>Identified sexual orientation using:</i>	
Naturally occurring data	
-Cohabitation method	Tebaldi and Elmslie (2006), Leppel (2009), Laurent and Mihoubi (2017), Patacchini et al. (2012), Antecol and Steinberger (2013), Giddings et al. (2014), Hammarstedt et al. (2015), Dillender (2015), Jepsen and Jepsen (2015)
-Individual's sexual history	Martell (2014)
-Respondent's selfassessment	Buchmueller and Carpenter (2012), Powdthavee and Wooden (2014), Drydakis (n.d.)
-Fraternal birth hypothesis	Mueller-Smith (2013)
<i>Manipulation of sexual orientation by:</i>	
Controlled experiments	
-Reference to involvement in LGBT organization	Adam (1981), Ellis (1993), Horvath and Ryan (2003), Drydakis (2009), Drydakis (2011), Ahmed et al. (2013), Barron and Hebl (2013) (third study), Drydakis (2014), Pyatt (2014), Binder and Ward (2016)
-Reference to jobrelevant involvement in LGBT organization	Berger and Kelly (1981), Weichselbaumer (2003), Barron (2009), Pichler et al. (2010), Tilcsik (2011), Bailey et al. (2013), Kricheli-Katz (2013), Gorsuch (2014), Drydakis (2015), Gorsuch (2015), Patacchini et al. (2015), Weichselbaumer (2015)
-Reference to involvement in LGBT professional organization	Berger and Kelly (1981), Everly et al. (2016)
-Reference to partner's sex	Aberson (2003), Aberson and Dora (2003), Hoye and Lievens (2003), Ahmed et al. (2013), Baert (2014), Nadler and Kufahl (2014), Niedlich and Steffens (2015), Weichselbaumer (2015)
-Reference to LGBT scholarship program	Barron (2009), Cunningham et al. (2010)
-Reference to organization of gay pride	Ahmed et al. (2013)
-Sexual orientation listed as a selection criterion	Crow et al. (1998)
-Applicants in gay condition wore a baseball hat with text "Gay and Proud"	Hebl et al. (2002), Singletary and Hebl (2009), Barron and Hebl (2013) (second study)
-The applicant had a bag with a pin "Gay and Proud"	Barron and Hebl (2013) (third study)

in large conventional surveys or registers that do not explicitly address sexual orientation of respondents. However, this method may misclassify people who have a same-sex relationship but maintain heterosexual identity (and fail to report their true status) as well as those who engage in same-sex behavior while being in heterosexual relationships. Another disadvantage of the cohabitation procedure is that single individuals and individuals with non-cohabiting partners cannot be classified (Ragins & Wiethoff, 2005).

Some of these shortcomings can be addressed by identifying sexual orientation based on a person's sexual history. The drawback is that this may exclude individuals who self-identify as gay but have not acted on their feelings because of choice or lack of opportunity (Ragins & Wiethoff, 2005). Identification of respondents' sexual orientation based on respondents' self-assessment provides a solution to this. Moreover, self-reported sexual orientation is possibly more closely related to workplace disclosure than same-sex sexual behavior because the latter is likely unobservable to employers (Carpenter, 2005). However, representative data including respondents' sexual history or self-reported sexual orientation are rare and may be biased by lower readiness of gay/lesbian people to disclose their sexual orientation in a survey.

Mueller-Smith (2013) addresses the concerns related to self-reported sexual orientation by attempting to determine an individual's innate sexual orientation. For

this purpose he uses fraternal birth hypothesis, according to which men who have more older brothers are more likely to express same-sex attraction.

The reviewed experimental studies operationalize sexual orientation by manipulating the résumé (or video of a job interview in Nadler & Kufahl, 2014) of the (fictional) job candidates with carefully chosen signals. This is then presented to subjects. The most common way of indicating that a candidate is gay/lesbian is listing involvement in an organization that acts in the interest of gay men and lesbians in the résumé. To minimize the differences between gay/lesbian and heterosexual résumés, the majority of studies also list involvement in comparable non-LGBT organizations (e.g., environmental organizations) in the résumé of heterosexual candidates. The only studies that did not do so were early studies such as Adam (1981) or Horvath and Ryan (2003).⁴ Weichselbaumer (2003) points out that signaling sexual orientation on the résumé may be viewed as tactless by the employers. Tilcsik (2011) proposes to address this by mentioning a job-relevant involvement in the LGBT organization that justifies including it in the résumé.

Other studies manipulate job applicants' sexual orientation by a reference to sex of her or his partner. Less frequent manipulation of sexual orientation are references to LGBT scholarship programs or involvement in organization of gay/lesbian pride. Acquisti and Fong (2015) manipulated the sexual orientation on candidates' social network profile by stating the sex the candidate was interested in and filling in a number of other fields (such as favorite books) with answers common between other users with the same sexual orientation. Other experimental studies used different ways to operationalize sexual orientation. Crow and colleagues (1998) presented only a list of suitable candidates with eight combinations of race, sex, and sexual orientation.

The studies that performed in-person audit used researchers in person who acted as gay/lesbian or heterosexual job applicants. In both conditions the researchers were dressed similarly and wore a baseball hat with text reading either "Gay and Proud" (gay condition) or "Texan and Proud" (heterosexual condition). The researchers did not know which condition they represented. Barron and Hebl (2013; third study) signaled applicants' homosexuality by manipulating the résumé text and the researchers acting as job candidates wore a backpack with a rainbow pin that read "Gay and Proud."

Successful manipulation of sexual orientation is crucial for the internal validity of the experimental study. This is because employers' discriminatory behavior against a stigmatized individual is not triggered if the employer does not recognize the stigma. Unsuccessful manipulation of sexual orientation likely leads to underestimation of differences in treatment between lesbians/gay men and heterosexuals. To address this concern, Barron and Hebl (2013), Pyatt (2014), and Everly, Unzueta, and Shih (2016) eliminated subjects from the analysis if they did not successfully identify a gay candidate. Barron (2009) aimed to do the same but many subjects did not complete the questionnaire, leaving space for misclassification. Ellis (1993) mentions that the majority of subjects identified gay/lesbian applicants, but those who did not were not excluded from the analysis. Horvath and Ryan (2003) and Niedlich and

Steffens (2015) indicate that they successfully tested their manipulation of sexual orientation. The reported proportions of subjects misclassifying the sexual orientation of presented job applicants vary between studies from about 4% (Everly et al., 2016; second study) to 28% (Barron, 2009). Many reviewed studies did not mention whether they tested their success at effectively manipulating sexual orientation. This casts doubt on whether these studies identified the full extent of differences in treatment between heterosexuals and lesbians/gay men.

General findings

Table 5 provides a categorization of reviewed studies according to their research findings. Consistent with H1, approximately three-quarters of studies using naturally occurring data found statistically significant differences in labor market outcomes between heterosexuals and gay/lesbian people. It is necessary to interpret these differences with caution as they may be caused by joined effect of labor market discrimination, inherent differences across sexual orientation (especially less labor specialization in same-sex households), and sexual orientation bias in the labor market and society as discussed in the section Theoretical Background. Findings of

Table 5. Research findings about differences in the access to labor market between lesbians/gays and heterosexuals.

Studies using naturally occurring data		
Job Access Stage	Statistically significant differences in labor market outcomes observed between lesbians/gays and heterosexuals	No or marginally statistically significant differences in labor market outcomes observed between lesbians/gays and heterosexuals
-Employment status/Labor supply	Tebaldi and Elmslie (2006), Leppel (2009), Buchmueller and Carpenter (2012), Laurent and Mihoubi (2017), Patacchini et al. (2012), Antecol and Steinberger (2013), Giddings et al. (2014), Hammarstedt et al. (2015), Jepsen and Jepsen (2015), Drydakis (n.d.)	Martell (2014), Mueller-Smith (2013), Powdthavee and Wooden (2014)
Experimental studies		
Job Access Stage	Negative bias toward lesbians/gays found in job access (in at least some contexts)	No bias or positive bias toward lesbians/gays found in job access (in at least some contexts)
-First contact	Hebl et al. (2002), Singletary and Hebl (2009), Barron and Hebl (2013)	
-Hireability rating/Hiring recommendations and decisions	Crow et al. (1998)*, Horvath and Ryan (2003)*, Barron (2009)*, Cunningham et al. (2010)*, Pichler et al. (2010)*, Gorsuch (2014), Binder and Ward (2016)*, Everly et al. (2016)*	Aberson (2003)*, Aberson and Dora (2003)*, Hoye and Lievens (2003)*, Kricheli-Katz (2013)*, Nadler and Kufahl (2014)*, Pyatt (2014)*, Everly et al. (2016)*, Niedlich and Steffens (2015)*
-Duration before call-back - Call-back	Adam (1981), Weichselbaumer (2003), Drydakis (2009), Drydakis (2011), Tilcsik (2011), Ahmed et al. (2013), Drydakis (2014), Drydakis (2015), Gorsuch (2015), Patacchini et al. (2015), Weichselbaumer (2015)	Drydakis (2011) Berger and Kelly (1981), Bailey et al. (2013), Baert (2014), Acquisti and Fong (2015)
-Interview	Ellis (1993), Barron and Hebl (2013)	

studies using naturally occurring data are useful to identify the total effect of these factors on labor market outcomes of gay men/lesbians as compared to heterosexuals. Because the theorized differences in labor market outcomes vary between sexes, the findings will be further discussed in the section on effect of the applicant's or employee's characteristics.

Two-thirds of reviewed experimental studies found (at least in some contexts) a negative bias toward gay men and lesbians when accessing employment. About one-third of reviewed studies did not identify any bias or found that lesbians and/or gay men were at an advantage as compared to heterosexuals.

When the stage of access to the labor market is taken into account, research found that gay and/or lesbian applicants experienced interpersonal discrimination during their first contact with the employer. There is mixed evidence on whether they faced negative bias in hireability ratings and hiring recommendations. Half of the studies detected a significant negative bias against gay men and lesbians, while half of studies detected no bias (or a positive bias). Drydakis (2011) was the only study that investigated differences in the duration of the waiting times before candidates were invited for interview. He found no significant differences between lesbian and heterosexual women. No study looked into such differences between gay and heterosexual men. When it comes to call-back probability, the research strongly indicates that lesbians and gay men face—in at least some contexts—disadvantages as compared to heterosexuals. The scarce research dealing with the interview phase suggests that gay/lesbian people are treated more negatively than heterosexuals.

The findings could be influenced by the research design used, because the designs seem to differ in their capacity of detecting discrimination. Almost three-quarters of correspondence tests found a negative bias toward gay/lesbian people. In-person audits did not detect any formal discrimination, but they identified interpersonal discrimination against gay men and lesbians. On the other hand, the majority of studies that did not identify a significant bias against gay men and/or lesbians in the labor market were experiments in a laboratory setting, where subjects knew that they were observed and may have adapted their behavior to look more even-handed.

Consistent with H3, the evidence suggests that lesbians and gay men are disadvantaged in their access to the labor market as compared to their heterosexual counterparts. The magnitude of the disadvantage seems to be strongly dependent on the contextual factors. In the theoretical part, a number of moderators were suggested and their expected effects were discussed. The following sections discuss whether the theoretical predictions presented earlier are supported by the empirical evidence.

Effect of applicant's or employee's characteristics

The personal characteristics of applicants/employees are theorized to be important moderators of the relationship between sexual orientation and labor market access. Individual's sex is arguably the major moderator and its effect is summarized in Table 6.

Table 6. Research findings about differences in the access to labour market per sex.

	Male	Female
Labor market outcomes of gays and lesbians are as compared to heterosexuals	<p>Lower probability of being employed in gays: Buchmueller and Carpenter (2012)$p \leq .01$, Laurent and Mihoubi (2017)$p \leq .05$, Hammarstedt et al. (2015)$p \leq .01$, Drydakis (n.d.)$p \leq .01$. Lower probability of labor market participation in gays: Laurent and Mihoubi (2017)$p \leq .1$</p> <p>Probability of being employed: Patacchini et al. (2012); Labour market participation: Tebaldi and Eimsle (2006), Martell (2014), Patacchini et al. (2012)</p> <p>Crow et al. (1998)*, Horvath and Ryan (2003)*, Barron (2009)*, Gorsuch (2014)$p \leq .01$ (male evaluators)</p> <p>Aberson (2003)*, Aberson and Dora (2003)*, Hoyer and Lievens (2003)*, Cunningham et al. (2010)*, Kricheli-Katz (2013)*, Pyatt (2014)*</p> <p>Adam (1981), Drydakis (2009)$p \leq .01$, Tilcsik (2011)$p \leq .001$, Ahmed et al. (2013)$p \leq .05$, Drydakis (2014)$p \leq .01$, Drydakis (2015)$p \leq .001$, Gorsuch (2015)$p \leq .05$, Patacchini et al. (2015)$p \leq .1$</p>	<p>Higher probability of being employed in lesbians: Buchmueller and Carpenter (2012)$p \leq .05$; Higher probability of labor market participation in lesbians: Tebaldi and Eimsle (2006)$p \leq .01$; Lower probability of labor market participation in lesbians: Patacchini et al. (2012)$p \leq .05$</p> <p>Probability of being employed: Hammarstedt et al. (2015), Patacchini et al. (2012)</p> <p>Crow et al. (1998)*,</p> <p>Cunningham et al. (2010)*, Pyatt (2014)*,</p> <p>Horvath and Ryan (2003)*</p> <p>Adam (1981), Weichselbaumer (2003)$p \leq .05$, Drydakis (2011)$p \leq .01$, Ahmed et al. (2013)$p \leq .05$, Drydakis (2014)$p \leq .01$, Drydakis (2015)$p \leq .001$, Weichselbaumer (2015)$p \leq .05$ (Munich)</p> <p>Bailey et al. (2013), Gorsuch (2015), Patacchini et al. (2015)</p> <p>Baert (2014)$p \leq .1$</p>
In hireability ratings, gays and lesbians are compared to heterosexuals	<p>Significantly different</p> <p>Not significantly different</p> <p>Disadvantaged</p> <p>No significant difference</p>	<p>Significantly different</p> <p>Not significantly different</p> <p>Disadvantaged</p> <p>No significant difference</p>
In callback rate, gays and lesbians are compared to heterosexuals	<p>Advantaged</p> <p>Disadvantaged</p> <p>No significant difference</p> <p>Advantaged</p>	<p>Advantaged</p> <p>Disadvantaged</p> <p>No significant difference</p> <p>Advantaged</p>

In the majority of studies, gay men were not found to have significantly different labor market participation as compared to heterosexual males. However, the research indicates that they have lower probability of being employed. This only partially confirms H1. Observed difference may be a result of discrimination, but could as well reflect different household structures where some gay males choose to specialize in household production and invest less in labor market human capital. In terms of access to the labor market, four out of 10 laboratory experiments indicate that gay men do not receive significantly different hireability ratings from heterosexual males. However, this is not reflected in the outcomes of experiments in a real-world context where the subjects did not know that they were observed. The majority of such studies found that gay males face a statistically significant penalty in call-back rates. Two out of three studies that did not find such differences either used a small sample (Berger & Kelly, 1981) or sent multiple résumés to each employer (Bailey, Wallace, & Wright, 2013), which raises questions about whether employers suspected that they were tested. We presume that field experiments expose bias in access to labor market more reliably than laboratory experiments. For this reason we conclude that the evidence supports H3.

For lesbians, the evidence is less consistent. The research points in opposite directions when it comes to lesbians' labor market participation and provides only weak evidence that lesbians are more likely to be employed compared to heterosexual women. These mixed findings only partly confirm H1, which is consistent with the effects of direct and indirect discrimination as discussed in the section Labor Demand. As for hireability ratings, there is no strong evidence from laboratory experiments that lesbians would be disadvantaged as compared to heterosexual women. This is again not reflected in the correspondence studies, which provide a strong indication that lesbians have a lower probability of call-back than their heterosexual counterparts. Baert (2014; $p \leq .1$) was the only study that found that lesbians were advantaged in the call-back rates. Two studies that did not identify any significant difference sent multiple résumés to each employer (Bailey et al., 2013; Patacchini, Ragusa, & Zenou, 2015), possibly exposing the experiment to the subjects. All in all, the presented literature provides evidence that is largely consistent with H3.

Research indicates that same-sex couples are, compared to married heterosexuals, less probable to have one partner working ($p \leq .01$; Jepsen & Jepsen, 2015) and more probable to have both partners working ($p \leq .01$; Giddings, Nunley, Schneebaum, & Zietz, 2014; Jepsen & Jepsen, 2015). This appears to be true regardless of whether we look at same-sex households with or without children (Jepsen & Jepsen, 2015; only for lesbian couples, Giddings et al., 2014). Antecol and Steinberger (2013) identified a certain level of specialization in lesbian households, with primary earners having higher labor force participation than secondary earners. However, secondary lesbian earners still had higher labor force participation than married heterosexual women even after controlling for relevant variables. No such research studying gay male couples has been identified. Accordingly, partner's role as primary or secondary earner needs to be taken into account when investigating

the labor market outcomes of same-sex couples. The findings confirm H1. The specialization gap between different-sex and same-sex couples tends to decrease over time (Giddings et al., 2014). Lesbian (but not gay male) couples shift from arrangements where both partners work into one-breadwinner arrangements after legal recognition of same-sex unions in the United States (Dillender, 2015). No significant impact of legal recognition of same-sex unions on their employment probabilities was found in California (Buchmueller & Carpenter, 2012). Due to lack of significance, we conclude that H2 is only partially supported.

The research does not confirm H8, which posited that married lesbians and gay men would be preferred by employers over their single counterparts. Namely, lesbian job applicants in Germany did not benefit from increased call-back when being in a registered partnership (Weichselbaumer, 2015). No such study was found for gay men. In contrast with the theoretical predications, Nadler and Kufahl (2014)* observed that single lesbian applicants received higher ratings than married lesbians ($p \leq .05$). No significant effect of marital status on hiring ratings was observed for gay men.

Another important factor influencing the labor market outcomes is presence of children in household. Antecol and Steinberger (2013) compared how children affect labor force attachment in primary and secondary lesbian earners. While for primary lesbian earners the attachment remained stable, in secondary earners it dropped remarkably when children were present ($p \leq .05$). No reviewed study looked into the effect of children separately per primary and secondary earner in male same-sex households. This limited evidence supports H2 that children bolster specialization in lesbian same-sex couples. Baert (2014) found that young lesbian job applicants with children were more likely to be invited for an interview than their heterosexual counterparts ($p \leq .1$). It appears that lesbians could be penalized for having children less than heterosexual women. Giddings and colleagues (2014) highlight that in same-sex couples, having children is usually the parents' deliberate choice and it is misleading to consider children as exogenous to the household's labor distribution. For this reason, the outcomes regarding presence of children were not presented unless this issue was addressed by the research design or analytical method.

H6 postulates that a job applicant's congruence with gender stereotypes will moderate the effect of sexual orientation on the access to employment. Reviewed research does not support this hypothesis for gay males and for a large part also not for lesbians. For lesbian applicants, Gorsuch (2014) found a positive effect of masculine gender on hireability ratings ($p \leq .1$) when the evaluator was male, but no significant effect when the evaluator was female. According to Weichselbaumer (2003), being masculine or feminine did not impose any additional negative effect on the call-back rates of lesbian applicants. While gay men received lower hiring recommendations ($p \leq .01$) from male evaluators (Gorsuch, 2014) and lower probability of call-back for an interview (Gorsuch, 2015), their congruence with gender stereotypes did not lead to any additional (dis)advantage.⁵ Interestingly, Niedlich and Steffens (2015)* found that *ceteris paribus*, gay and lesbian applicants

were rated higher on both task-related competence ($p \leq .01$) (stereotypically male trait) and social skills ($p \leq .01$) (stereotypically female trait) than their heterosexual counterparts. However, in the majority of cases this did not lead to higher hireability ratings. The evidence indicates that congruence with gender stereotypes influences access of lesbians and gays to employment similarly as it does in heterosexuals.

The reviewed literature only rarely addressed other applicants' characteristics. In terms of qualifications the findings are contradictory. Patacchini and colleagues (2015) found that the call-back penalty in Italy is higher for high-skilled gay men than for low-skilled ones ($p \leq .1$). No such effect of education was observed for lesbians. Aberson (2003)* failed to find evidence that candidates' qualifications moderated the relationship between sexual orientation and candidate's evaluation. Drydakis (n.d.) found that *ceteris paribus* less educated gay males were more likely to be unemployed than heterosexual men ($p \leq .01$). Past joblessness led to higher level of non-participation in the labor market in gay men than it did in heterosexual men ($p \leq .01$; Tebaldi & Elmslie, 2006). Again, no such effect was observed in lesbians. In terms of race, Tebaldi and Elmslie (2006) detected no differences between Black and White gay men or lesbians. Regarding age, Drydakis (n.d.) observed that gay men's disadvantage in probability of being unemployed (as compared to heterosexuals) is increasing with age ($p \leq .01$). In contrast, Laurent and Mihoubi (2017) found that gay men younger than 40 years experienced employment probability penalty ($p \leq .01$) and labor force participation penalty ($p \leq .1$) not experienced by their heterosexual counterparts. No significant differences were observed in males older than 40 years. Finally, Drydakis (n.d.) found that gay male migrants face an additional penalty in unemployment probability as compared to heterosexual male migrants ($p \leq .01$).

Effect of local characteristics

A limited number of studies looked directly into the moderating effect of public attitudes on access to the labor market for gays and lesbians. Still, other studies investigated factors that are supposedly linked with public attitudes, such as whether an area is metropolitan or not, the proportion of gay/lesbian population in the area, and political orientation of the area. This allows us to indirectly infer the moderating effect of public attitudes.

Leppel (2009) found that gay men and lesbians living in metropolitan areas had a lower probability of being out of the labor force ($p \leq .01$) or being unemployed ($p \leq .01$, gay men; $p \leq .05$, lesbians) than those living in non-metropolitan areas. A similar, but weaker, effect was found for heterosexual men and for married heterosexual women. Ahmed and colleagues (2013) found a split image in Sweden. While gay men had higher call-back rates in metropolitan areas in public sector jobs compared to heterosexual males ($p \leq .1$), lesbians were disadvantaged in the same context ($p \leq .05$). Tebaldi and Elmslie (2006) detected no significant effect of living in metropolitan areas on labor market participation probability of gay/lesbian people. The beneficial effect of metropolitan area is contested by Adam (1981), who found

that gay men and lesbians faced lower call-back rates in metropolitan Toronto but not in the rest of the Ontario province. The author proposes that bias against gay people in Toronto is allowed by a higher competition on the labor supply side. The presented findings are inconsistent and do not provide conclusive evidence supporting H9. This could be caused by within- and between-group variation—the cities in conservative areas may be more tolerant than the countryside but still they can be less tolerant than the countryside in progressive areas.

Comparing areas according to their social characteristics partly addresses this issue. Barron and Hebl (2013) observed that in areas with a larger lesbian/gay population, lesbian/gay applicants were treated more favorably than heterosexual ones ($p \leq .05$) while the opposite was true in areas with more conservative populations ($p \leq .05$). Lesbians were significantly disadvantaged in call-back rates compared to heterosexual women in socially conservative Munich, Germany ($p \leq .05$), but no such differences were detected in liberal Berlin (Weichselbaumer, 2015). In Sweden, the percentage of population with negative attitudes toward gay men and lesbians is negatively related to gay men's and lesbians' probability of being employed ($p \leq .01$; Hammarstedt et al., 2015). In contrast, no significant differences in call-back rates between gay/lesbian people and heterosexuals were found when comparing Republican, Democratic or mixed U.S. states (Acquisti & Fong, 2015) and four cities from distinct regions of the United States (Bailey et al., 2013). Because two out of five reviewed studies failed to detect a significant relationship, there is only partial support for H9, which posited that public hostility toward gay men and lesbians is related to their negative labor market outcomes. The observed relationship also could be caused by geographical mobility of gay/lesbian people because the most productive individuals may migrate from hostile to more friendly areas (Ahmed et al., 2013).

Literature paid a considerable attention to the effect of antidiscrimination legislation. The findings indicate that antidiscrimination laws reduce interpersonal discrimination. Employers in areas without anti-discrimination laws were found to behave more negatively toward gay/lesbian applicants ($p \leq .01$), and were more rude ($p \leq .05$) and less helpful ($p \leq .05$) (Barron & Hebl, 2013). At the same time, knowledge of illegality of discrimination against gay/lesbian people reduced interviewers' anxiety-related words ($p \leq .05$), non-fluencies ($p \leq .05$), and increased the length of the interview ($p \leq .05$; Barron & Hebl, 2013*).

However, the positive effect of anti-discrimination legislation is less clear when it comes to other labour market outcomes. Hireability ratings of gay applicants were not significantly related to evaluators' perception of legality of sexual orientation discrimination (Horvath & Ryan, 2003*) and, after controlling for background characteristics, nor to existence of state antidiscrimination laws (Barron, 2009*). In terms of call-back rates, Drydakis (2015) observed that gay applicants were more disadvantaged in companies without a written commitment to equal opportunity ($p \leq .01$) than in companies with such commitment. Also Tilcsik (2011) found that county- and state-level antidiscrimination laws reduce negative bias against gay men ($p \leq .05$), but this effect was not significant when controlling for state-level attitudes

toward lesbians and gay men. This could indicate that attitudes toward gay men and lesbians—rather than antidiscrimination laws themselves—could be the actual driving factor influencing labor market outcomes of gay/lesbian people.

The evidence is inconclusive also with regards to the effect of antidiscrimination laws on labor supply of lesbians and gay men. According to Martell (2014), gay men's labor supply probability is higher in states with antidiscrimination laws ($p \leq .01$). This effect decreases with time after enactment of this legislation ($p \leq .05$). Leppel (2009) found that presence of such laws increases the probability of unemployment in both lesbians and gay men ($p \leq .01$) and of being out of the labor force for lesbians ($p \leq .01$). The finding that antidiscrimination laws may lead to worse labor market outcomes of gay people may be caused by their migration to areas where they enjoy better legal protection (Leppel, 2009). As such, the presented findings only partly support H10. Further research should shed more light on the effect of antidiscrimination laws on the labor market bias against lesbians and gays.

All in all, the research reveals that access to the labor market for gay men and lesbians varies considerably across different geographical locations. This difference seems to be (at least partially) driven by differences in legal protection of lesbians and gay men in the labor market and variation in public attitudes toward homosexuality.

Effect of evaluator's and employer's characteristics

Another set of theorized moderators are the characteristics of the employer or evaluator of the résumés. Sex of evaluator seems to significantly moderate the relationship between applicants' sexual orientation and their hireability ratings or call-back probability (e.g., Cunningham et al., 2010*, $p \leq .05$; Drydakis, 2009; Everly et al., 2016*, $p \leq .05$; Horvath & Ryan, 2003*, $p \leq .05$).

Several studies indicate that female evaluators do not treat the résumés of gay/lesbian and heterosexual applicants differently (Baert, 2014; Cunningham et al., 2010*; Drydakis, 2009; Pichler, Varma, & Bruce, 2010)*, and for lesbian applicants only, Gorsuch, (2014). Everly and colleagues (2016)* ($p \leq .05$; Study 1; $p \leq .01$; Study 2) found that lesbian and gay applicants may be advantaged when the rater is female. Crow and colleagues (1998)* found a similar pattern for gay male applicants.

Male evaluators show a different pattern. The findings unanimously agree that gay male applicants face a significant negative bias when the evaluator is male (Cunningham et al., 2010*; Drydakis, 2009, $p \leq .01$; Everly et al., 2016*, $p \leq .01$ and Gorsuch (2014).⁶ There is contradictory evidence for lesbian applicants—two studies indicate that they are advantaged when the evaluator is male (Baert, 2014, $p \leq .1$; Crow et al., 1998*,) while two other studies found the opposite (Gorsuch, 2014, $p \leq .1$; Pichler et al., 2010*, $p \leq .05$). Finally, Hebl, Foster, Mannix, and Dovidio (2002), Hoyer and Lievens (2003)*, and Niedlich and Steffens (2015)* did not detect any significant relationship between sex of evaluator and the hireability ratings, call-back probability, or discrimination toward the applicant. The findings largely support H7.

The literature indicates that individuals' attitudes toward gay people are significantly related to hireability ratings (Pichler et al., 2010*, $p \leq .05$). Evaluators

with positive attitudes toward gay men and lesbians rated gay/lesbian candidates as more hireable than heterosexuals (Niedlich & Steffens, 2015,* $p \leq .1$). Also, subjects with more negative attitudes toward gay/lesbian people tend to choose more negative-seeking interview questions for gay/lesbian applicants (Ellis, 1993*, $p \leq .1$). In contrast, Horvath and Ryan (2003)* and Nadler and Kufahl (2014)* failed to detect significant effects of individuals' attitudes. Binder and Ward (2016)* postulate that individuals' assessments of gay applicants could be influenced by media's heterosexism. He found that male students who were subjected to heterosexist music rated gay applicants' qualifications as less suitable ($p \leq .05$) and were less willing to attend his office hours ($p \leq .1$). However, no significant relationship with hireability ratings of gay applicants was observed. Empirical research only partly supports H9 because a considerable proportion of studies fail to find a significant effect of individual attitudes.

Aberson and Dora (2003)* investigated the effect of (past) conscious contact with gay/lesbian people on evaluator's behavior and found that evaluators with no gay/lesbian friends penalized in their ratings heterosexual male candidates for being alcoholic, but not the gay male candidates. Consistently with H4, such overreaction effect was not observed in evaluators who had gay friends. Ellis (1993)* noticed that subjects with low (high) exposure to gay men and lesbians chose more negative-seeking interview questions for gay male (female) applicants ($p \leq .05$). If subjects rated the previous interactions with gay men and lesbians more negatively, they tended to choose more negative-seeking interview questions ($p \leq .1$). In the case of gay men, this confirms H4. However, in the case of lesbians, the relationship was opposite than theorized. Further research could shed more light on this issue. Finally, Kricheli-Katz (2013)* notes that subjects who were led to think that homosexuality was a choice were less likely to select a gay male candidate than subjects who were led to believe that homosexuality is not a choice ($p \leq .1$). This supports the theoretical notion that beliefs of controllability of homosexuality are positively related to bias against gay men and lesbians.

Research also looked into other evaluators' characteristics. Age (Crow et al., 1998*; Hoyer & Lievens, 2003*), professional experience (Hoyer & Lievens, 2003*), and managerial status (Crow et al., 1998*) were not found to significantly moderate the relationship between sexual orientation and evaluators' hiring recommendations. Pichler and colleagues (2010)* suggest that evaluator's exposure to diversity training reduces the discriminatory tendencies in hireability ratings based on mis-fit between job and applicant's sex ($p \leq .05$).

Effect of occupation and recruitment

Findings of all of the studies that investigated the moderating role of occupation support H11, which posited that the bias against gay men and lesbians differs across occupations (Ahmed et al., 2013; Baert, 2014; Drydakis, 2009, 2011, 2014, 2015; Leppel, 2009; Weichselbaumer, 2003). The determination of relative size of bias

across occupations is difficult because a large number of contextual factors need to be taken into account. The literature mentions several observations.

First, gay men (lesbians) appear to face a relative larger bias when applying for male- (female-) dominated occupations (Ahmed et al., 2013, $p \leq .05$; Drydakis, 2015, $p \leq .01$). Gay men (lesbians) were also disadvantaged compared to their heterosexual counterparts in jobs where employer signaled a preference for a candidate with masculine (feminine) traits (Drydakis, 2015, $p \leq .05$) and only for gay men (Tilcsik, 2011, $p \leq .05$). At the same time, gay men (lesbians) didn't have any advantage in jobs with a preference for feminine (masculine) traits (Drydakis, 2015). Contrary findings were presented by Baert (2014), who observed that lesbians when compared to heterosexual women experienced discrimination only in a low-skilled male-dominated occupation ($p \leq .05$). The evidence only partly supports H5 because gay men (lesbians) don't seem to be in advantage when applying to female (male-)dominated jobs.

The literature mentions several other observations. Prestige of the occupation seems to play a role, because gay applicants experienced more disadvantage compared to heterosexuals in more prestigious jobs (Drydakis, 2014). Leppel (2009) found that gay/lesbian people in white-collar occupations had the lowest odds of being unemployed or out of the labor force. Another factor is the sectoral affiliation of the particular occupation. Ahmed and colleagues (2013) detected that gay/lesbian applicants faced lower probability of call-back from private sector employers ($p \leq .01$). In the public sector the situation was less clear-cut: compared to their heterosexual counterparts, gay men had an advantage while lesbians were either advantaged or disadvantaged depending on location and contact form. However, more research is needed on how these specific aspects of occupations moderate the relationship between sexual orientation and access to the employment.

Finally, Drydakis (2014) found that providing extra information in the résumé raised overall probability of call-back ($p \leq .01$), but it didn't reduce the magnitude of bias against gay applicants. Therefore, the observed differential between gays/lesbians and heterosexuals seems to be a matter of employer's preference rather than lack of information. Singletary and Hebl (2009) show that candidates' strategies compensating for their stigma have the potential to effectively reduce interpersonal discrimination to which they are subjected; especially, a candidate's increased positivity seems to reduce the interpersonal discrimination. The mixed evidence on the potential of additional information to reduce the negative bias against lesbians and gay men only partly supports H4.

Magnitude of the bias

Thus far, this article has not quantified the magnitude of bias faced by gay men and lesbians. The reason is that the reviewed studies used different models and estimation methods and therefore the quantitative outcomes are not fully comparable. However, it is desirable to provide at least some indication of the magnitude of differences in treatment between lesbians/gays and heterosexuals and the influence of

the moderators that were discussed. Table 7 provides an overview of call-back rates that were recorded in reviewed correspondence studies. The call-back rates are compared between the experimental and control groups by means of Z-tests and the corresponding p -value is noted in the table.⁷

The data show a considerable variation in the gay/lesbian-heterosexual differentials across regions, sex, occupations, and other moderators. The largest bias against gay/lesbian people was found by Drydakis (2009, 2011, 2014) in Greece and Cyprus, with the gay/lesbian-heterosexual difference in call-back rates ranging between 21 percentage points and 52 percentage points. Studies in other countries recorded lower differentials in call-back rates, with lesbians and gay men being mostly at a disadvantage. Still, several studies recorded, in certain contexts, bias toward heterosexual candidates (Acquisti & Fong, 2015; Ahmed et al., 2013; Baert, 2014; Bailey et al., 2013; Patacchini et al., 2015; Weichselbaumer, 2015).

It is expected that the bias toward gay men and lesbians is negatively related to the call-back rate of heterosexuals (i.e., in areas where heterosexuals have lower call-back rates, the ratio of gay/lesbian-heterosexual call-back rates should be lower, which indicates a larger bias toward gay/lesbian people). Namely, lower call-back rates could mean that there is more competition on the labor supply side with discriminating employers having more alternatives to stigmatized candidates. Lower call-back rates can also reflect that résumés used in the correspondence tests did not match employers' expectations. In such cases, additional candidates' stigma could discourage employers to a larger extent than if the candidates were suitable for the concerned job. Consistent with the prediction, we found a negative correlation between the heterosexuals' call-back rate and the ratio of gay/lesbian-heterosexual call-back rates (Pearson $r = -0.318$, $p \leq .01$). Future research could take a more detailed look at how candidates' qualifications and level of competition in the labor market moderate the relationship between sexual orientation and access to the labor market.

Finally, bias against lesbians and gay men may exist even if no statistically significant measure of formal discrimination is found. Hebl and colleagues (2002) did not detect any formal discrimination toward gay/lesbian job applicants, but observed that they were subjected to interpersonal measures of discrimination ($p \leq .05$). When interacting with gay/lesbian people, the employers spoke with fewer words ($p \leq .05$), shortened the interaction ($p \leq .1$), and were perceived more negatively by both the applicants ($p \leq .01$) and independent evaluators ($p \leq .05$). Employers' increased negativity toward gay/lesbian applicants was found also by Singletary and Hebl (2009, $p \leq .05$). Gorsuch (2014) observed that subjects of the experiment were less willing to work with lesbian ($p \leq .1$) and gay ($p \leq .1$, $p \leq .05$; depending on language in CV) applicants than with their heterosexual counterparts. Furthermore, evaluators found it less useful if job candidates mentioned leadership in a college LGBT group than if they mentioned leadership in a college group not related to LGBT issues ($p \leq .05$; Gorsuch, 2014). Laurent and Mihoubi (2017) observed that gay men (especially those younger than 40 years) had a higher job turnover rate than

Table 7. Overview of outcomes of reviewed correspondence studies.

Study	Scope of the Study	Specifications	Applications, <i>N</i>		Call-back Rate, %		Call-back Rate Differential
			Group A ^a	Group B	Group A	Group B	
Adam (1981)	Articling position at legal firm in Canada	Males	22	15	4.55	13.33	8.79
			17	27	17.65	18.52	0.87
Berger and Kelly (1981)	Social work positions in the U.S. (1978–1979)	Females	22	25	4.55	16	11.45
		Males	19	16	10.53	12.5	1.97
		Hetero (A) / Hetero (B)	113	113	15.04	16.81	1.77
		Group 2 agencies: Homo (A) / Hetero (B)	115	115	6.96	8.7	1.74
Weichselbaumer (2003)	Secretaries and accountants in Vienna (1998–2000)	Females	272	272	43.38	42.65	-0.74
		Males	171	171	47.95	60.82	12.87
Drydakakis (2009)	2006–2007 in Athens, Greece	Males	170	170	36.47	48.82	12.35
		Females	455	455	10.33	40.88	30.55
		Office jobs	346	346	12.14	37.28	25.14
		Industrial jobs	511	511	11.55	32.68	21.14
		Horeca	402	402	22.64	51	28.36
		Total	1714	1714	13.94	40.08	26.14
Drydakakis (2011)	2007–2008 in Athens, Greece	Females	276	276	19.57	42.75	23.19
		Office jobs	311	311	18.65	42.77	24.12
		Industrial jobs	256	256	30.08	57.42	27.34
		Horeca	214	214	20.09	57.48	37.38
Tilcsik (2011)	White-collar jobs at entry level in the U.S. (2005)	Total	1057	1057	21.95	49.29	27.34
		Males	337	337	9.2	11	1.8
		California	131	131	6.1	12.2	6.1
		Nevada	236	236	11.4	10.2	-1.2
		New York	201	201	9.4	12.9	3.5
		Pennsylvania	219	219	5.5	14.1	8.6
		Ohio	347	347	5.5	9.5	4
		Florida	298	298	3.7	12	8.3
		Texas	983	983	8.7	11.6	2.9
		Employers subject to anti-discrimination law					

(Continued on next page)



Table 7. (Continued).

Study	Scope of the Study	Specifications	Applications, <i>N</i>		Call-back Rate, %		Call-back Rate Differential	
			Group A ^a	Group B	Group A	Group B		
Ahmed et al. (2013)	10 different types of occupations in Sweden (2010)	Employers not subject to anti-discrimination law	786	786	5.3	11.3	6	D
		Job posting requires stereotypically male hetero traits	475	475	4.8	13.5	8.7	D
		Job posting doesn't require stereotypically male hetero traits	1294	1294	8.1	10.7	2.6	B
		Total	1769	1769	7.2	11.5	4.3	D
		Shop sales assistant	120	131	7.5	15.3	7.8	A
		Construction worker	90	90	22.2	30	7.8	
		Preschool teacher	173	164	55.5	53.7	-1.8	
		High school teacher	72	71	43.1	47.9	4.8	
		Motor-vehicle driver	53	53	15.1	15.1	0	
		Cleaner	108	124	11.1	11.3	0.2	
		Restaurant worker	135	134	17.8	25.4	7.6	
		Salesperson	115	122	25.2	34.4	9.2	
		Nurse	51	41	41.2	36.6	-4.6	
		Mechanic worker	63	65	9.5	21.5	12	A
		Metropolitan area	313	321	24	29	5	
Non-metropolitan area	667	674	27.1	30.1	3			
Public sector employer	147	138	47.6	41.3	-6.3			
Private sector employer	833	857	22.3	27.9	5.6	C		
Full-time position	719	738	27.5	31.7	4.2	A		
Part-time position	261	257	22.2	24.1	1.9			
Permanent position	705	695	24.4	28.4	4	A		
Position with conditional tenure	275	300	30.6	33	2.4			
Total	980	995	26.1	29.7	3.6	A		
			117	132	5.1	10.6	5.5	
			98	84	24.5	31	6.5	
			166	164	48.1	58.5	10.4	A
			74	72	40.5	51.4	10.9	
			55	48	10.9	20.8	9.9	
			113	135	8	17.8	9.8	B

Females

Restaurant worker	136	137	27.9	35.7	7.8	
Salesperson	128	123	29.7	30.1	0.4	
Nurse	47	47	46.8	42.6	-4.2	
Mechanic worker	72	67	13.9	13.4	-0.5	
Metropolitan area	339	328	23.9	32.6	8.7	B
Non-metropolitan area	667	681	27.3	31.6	4.3	A
Public sector employer	129	125	43.4	44	0.6	
Private sector employer	877	884	23.6	30.2	6.6	C
Full-time position	747	740	28	32.6	4.6	A
Part-time position	259	269	20.9	30.1	9.2	B
Permanent position	736	680	22.7	28.7	6	C
Position with conditional tenure	270	329	35.6	38.6	3	
Total	1006	1009	26.1	31.9	5.8	C
Chicago	192	384	22.4	14.32	-8.07	B
Dallas	192	384	11.46	13.28	1.82	
Philadelphia	192	384	15.1	9.9	-5.21	A
San Francisco	192	384	6.77	9.9	3.13	
Chicago	192	384	14.58	17.45	2.86	
Dallas	192	384	13.54	12.5	-1.04	
Philadelphia	192	384	6.77	10.94	4.17	
San Francisco	192	384	14.58	8.59	-5.99	B
Total	576	576	18.4	16.49	-1.91	
25 year	288	288	19.1	15.28	-3.82	
37 year	288	288	17.71	17.71	0	
One child	288	288	20.14	17.36	-2.78	
No children	288	288	16.67	15.63	-1.04	
25 year and one child	144	144	19.44	14.58	-4.86	
37 year and no children	144	144	18.75	15.97	-2.78	
37 year and one child	144	144	20.83	20.14	-0.69	
37 year and no children	144	144	14.58	15.28	0.69	
Secretary	96	96	13.54	11.46	-2.08	
Nanny	96	96	18.75	21.88	3.13	
Manual worker	96	96	18.75	9.38	-9.38	A
Management assistant	96	96	11.46	9.38	-2.08	
Ergo-therapist	96	96	32.29	27.08	-5.21	
Engineer	96	96	15.63	19.79	4.17	
Female recruiter	313	313	18.53	17.57	-0.96	
Male recruiter	215	215	18.6	13.95	-4.65	

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Bailey et al. (2013)

Wide range of occupations in the U.S. (2010)

Males

Baert (2014)

Flanders, Belgium (in 2012–2013)

Females

Table 7. (Continued).

Study	Scope of the Study	Specifications	Applications, <i>N</i>		Call-back Rate, %		Call-back Rate Differential	
			Group A ^a	Group B	Group A	Group B		
Drydakis (2014)	Republic of Cyprus (2010–2011)	Less infor- mative males	324	324	10.49	45.06	34.57	D
		Industrial jobs	337	337	11.87	45.4	33.53	D
		Horeca	248	248	17.74	58.06	40.32	D
		Shop sales	314	314	17.52	63.38	45.86	D
		Total	1223	1223	14.15	52.49	38.35	D
		Office jobs	261	261	10.73	56.7	45.98	D
		Industrial jobs	250	250	13.2	56	42.8	D
		Horeca	172	172	12.21	42.44	30.23	D
		Shop sales	357	357	9.24	43.14	33.89	D
		Total	1040	1040	11.06	49.52	38.46	D
Acquisti and Fong (2015)	Technical, managerial and analyst positions in the U.S.A. (in 2013)	More infor- mative males	305	305	9.18	48.85	39.67	D
		Industrial jobs	341	341	16.72	52.2	35.48	D
		Horeca	259	259	20.08	63.32	43.24	D
		Shop sales	295	295	17.29	68.81	51.53	D
		Total	1200	1200	15.67	57.83	42.17	D
		Office jobs	274	274	13.14	64.23	51.09	D
		Industrial jobs	258	258	15.5	65.12	49.61	D
		Horeca	172	172	9.88	45.35	35.47	D
		Shop sales	364	364	9.62	46.98	37.36	D
		Total	1068	1068	11.99	55.52	43.54	D
Males	444	427	11.71	11.24	–0.47			

Drydakis (2015)	The U.K. (in 2013)	Males	Politically mixed states	573	559	9.6	9.84	0.24		
			Republican states	49	39	14.29	15.38	1.09		
			Total	1066	1025	10.63	10.69	0.06		
Gorsuch (2015)	Office, retail, food service, labor, or skilled trade jobs	Males	Accountancy, banking, finance and management	1127	1127	58.47	65.04	6.57		
			Females	724	724	59.12	63.67	4.56		
			Total	1025	1025	61.85	65.95	4.1		
		Females	Education and teaching	707	707	65.49	72.28	6.79		
			Social care, social services, and charity	1003	1003	54.74	61.02	6.28		
			Total	2735	2735	60.18	65.78	5.59		
Patacchini et al. (2015)	Milan and Rome, Italy (in 2012)	Males	Males	323	338	17	23	6		
			Females	333	340	21	20	-1		
			Administrative clerk	68	89	5.88	3.37	-2.51		
			Bookkeeper	69	84	2.9	9.52	6.63		
			Call center	89	97	31.46	42.27	10.81		
			Receptionist	66	79	6.06	12.66	6.6		
		Females	Sales clerk	81	88	9.88	7.95	-1.92		
			Secretary	73	88	2.74	3.41	0.67		
			Shop assistant	85	107	3.53	2.8	-0.73		
			Administrative clerk	67	79	11.94	5.06	-6.88		
			Bookkeeper	68	86	10.29	3.49	-6.81		
			Call center	87	95	27.59	28.42	0.83		
Weichselbaumer (2015)	Secretaries, clerical assistants, and accountants in Germany (2011–2012)	Total	Receptionist	64	79	10.94	13.92	2.99		
			Sales clerk	80	110	16.25	10	-6.25		
		Females in Munich	Secretary	71	90	4.23	7.78	3.55		
			Shop assistant	80	101	2.5	2.97	0.47		
		Females in Berlin	Married or in partnership	1048	1272	10.97	11.08	0.11		
			Single	N/A	N/A	32.76	41.52	8.76		
		Unless specifications state otherwise, Group A stands for gay people and Group B stands for heterosexuals.			Married or in partnership	N/A	N/A	32.54	45.29	12.75
					Single	N/A	N/A	27.03	31.34	4.32
					Single	N/A	N/A	41.94	38.55	-3.38

^aUnless specifications state otherwise, Group A stands for gay people and Group B stands for heterosexuals.

their heterosexual counterparts, which could indicate that they experience negative bias also in employment.

Discussion

As summarized in Table 8, the reviewed literature at least partly supported the majority of hypotheses presented in the theoretical background. Differences in labor market outcomes between heterosexuals and gay/lesbian people can be partly explained by innate differences between these groups. This only partly supports the predictions of labor supply theories. On the other hand, there is robust evidence that gay men and lesbians face a negative bias in access to the labor market. This suggests that the observed differences in access to the labor market between heterosexuals and lesbians/gay men are to a large extent driven by labor demand in

Table 8. Summary of hypotheses and their correspondence with presented evidence.

Hypothesis	Correspondence With the Evidence	Discussed in Section
1. Labor market attachment of lesbians (gay men) will partly resemble the attachment of heterosexual men (women) due to less specialization in same-sex couples.	<i>Partly supported</i>	Sections General Findings and Effect of Applicant's or Employee's Characteristics
2. Marriage or presence of children in same-sex couples will strengthen the division of labor between the partners.	<i>Partly supported</i>	Section Effect of Applicant's or Employee's Characteristics
3. Gays and lesbians will experience negative bias in the access to employment.	<i>Supported</i>	Section General Findings and Effect of Applicant's or Employee's Characteristics
4. Lack/ambiguity of information will lead to more extreme negative (positive) ratings in individuals who are prone to discriminate (be even-handed).	<i>Partly supported</i>	Sections Effect of Evaluator's and Employer's Characteristics and Effect of Occupation and Recruitment
5. Gay men (lesbians) will face more bias than their heterosexual counterparts when applying for male (female)-dominated jobs and less bias when applying for female (male)-dominated jobs.	<i>Partly supported</i>	Section Effect of Occupation and Recruitment
6. Lesbians and gays exhibiting more gender-non-congruent characteristics experience more bias in access to the labor market.	<i>Not supported</i>	Section Effect of Applicant's or Employee's Characteristics
7. Employer's bias against gay people is stronger if the employer is of same-sex, especially in males.	<i>Supported</i>	Section Effect of Evaluator's and Employer's Characteristics
8. Marriage or in registered partnership reduces bias that gays and lesbians experience in access to the labor market.	<i>Not supported</i>	Section Effect of Applicant's or Employee's Characteristics
9. Individual's (or public) hostile attitudes toward gay people are positively related to negative bias against gay people (to negative labor market outcomes).	<i>Partly supported</i>	Sections Effect of Local Characteristics and Effect of Evaluator's and Employer's Characteristics
10. Under anti-discriminatory laws lesbians and gays will experience less bias when accessing the labor market and their labor market outcomes will be more aligned with outcomes of heterosexuals.	<i>Partly Supported</i>	Section Effect of Local Characteristics
11. Labor market outcomes of lesbians/gays and bias against them will vary across occupations.	<i>Supported</i>	Section Effect of Occupation and Recruitment

accordance with labor demand theories. The scarce evidence indicates that it is especially taste-based discrimination—rather than statistical discrimination—that explains the observed differences. In accordance with theoretical predictions, the magnitude of observed bias varies across the contexts—especially across occupations and depending on individuals' sex. There is partial evidence that the bias against gay men and lesbians depends on lack/ambiguity of information provided, hostility of public/individual attitudes, presence of anti-discriminatory legislation, and whether male (female)-dominated jobs are concerned. Finally, theoretical predictions that the bias will be lower in case of lesbians and gay men who are married/in registered partnerships or who have less gender–non-congruent characteristics were not supported by the evidence.

These findings imply that the bias against gay men and lesbians—which is observed in controlled experiments—negatively affects their labor market access possibilities. This in turn leads to more negative labor market outcomes (such as higher unemployment probability) of gay/lesbian people as compared to heterosexuals. The fact that the differences in labor market outcomes between these two groups are driven by labor demand rather than by labor supply has important implications for adequate policy response. The findings of this study indicate that anti-discriminatory legislation and enlightenment targeting negative attitudes and prejudice against lesbians and gay men could decrease the negative bias that they face in access to employment.

At the same time, it is necessary to be aware of limitations of current research on the topic. The presented evidence provides only a partial picture of differences in access to employment between heterosexuals and gays/lesbians. The literature concentrated on two stages of access to the labor market for gay men and lesbians—the assessment of résumés and call-back probability. The research only superficially addressed other stages of access to employment (first contact with employer, duration before being invited for an interview or sequence of such invitation, differences in treatment during the interview itself, or potential bias in employer's final recruitment decision). This literature review didn't succeed to identify any studies that would quantify how employees' disclosure of sexual orientation influences the probability of keeping employment. Neither were identified any studies comparing whether (openly) gay/lesbian employees are disadvantaged compared to heterosexuals in the context of dismissals. Even though these factors are not directly linked to access to the labor market for lesbians and gays, they need to be taken into account because they influence individuals' employment status and the potential need of searching for employment.

When interpreting the results, it is also important to note that the country where the research was carried out may have a considerable impact on the outcomes. As mentioned, the outcomes partially support the hypotheses that attitudes toward homosexuality and anti-discriminatory legislation relate to bias against gay men and lesbians. However, attitudes and anti-discriminatory legislation vary considerably across countries. The outcomes that we present are therefore limited to the country where a given study has been carried out. It can be expected that bias toward gay

men and lesbians will be smaller in countries where the population is on average less prejudiced and in countries with more extensive anti-discriminatory legislation. However, we cannot reliably test this assumption because we found no study with cross-country comparisons of the bias toward gay men and lesbians in access to the labor market. Doing such comparisons across studies turned out to be problematic due to cross-study differences in methods, reporting of results, sectors/occupations included, lack of comparable data (across countries and over time) on attitudes toward homosexuality, etc.

Finally, the observed differences in treatment evoke numerous questions for future research. Does the labor market bias against gay men and lesbians change over time? Is there less discrimination against lesbians and gay men if the labor supply is lower and the recruitment becomes harder for employers? Do gay people suffer from longer periods of unemployment? What strategies do gay men and lesbians apply when facing the negative bias? Do they try harder to conceal their sexual orientation? Or do they attempt to find a job free of discrimination? Does this lead to suboptimal allocation of their human capital? What are the social costs of labor market bias against gays and lesbians? In the context of providing same-sex couples with adoption possibilities, one could ask whether employers treat lesbians and gay men differently if they have children. How does the negative bias toward gay men and lesbians affect their ability to keep their jobs?

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Notes

1. See Chung (2001) for model of coping strategies to avoid discrimination.
2. The syntax of the search term can be provided upon request.
3. Number 1 on this list has been often addressed by literature studying labor supply of lesbians and gays. Articles and findings of such studies were included only if they explicitly address the extensive margin (rather than only number of working hours supplied).
4. Berger and Kelly (1981) did not specifically mention how the manipulation turned out for the heterosexual candidate.
5. The results were not reported for female evaluators.
6. As compared to blue-collar occupations, service occupations, and occupations in farming/fishing/forestry.
7. The significance levels of differences in call-back rates in this table may not match with the significance levels that were mentioned throughout the text. The reason is that the significance levels in the text are taken over from the reviewed articles, which in most cases performed a more advanced analysis.

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