Doctoral Thesis

Labor, Firm and Wealth Effects of Gender and Sexuality

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Acknowledgment

On the long road of crafting this thesis, I have come to understand the significance of acknowledgment in scholarly work. Not only is this section often one of the most read chapters of a thesis, but it is more importantly my chance to give proper recognition to the people whose support has been both enjoyable and essential in reaching this point. To everyone who is mentioned below—and to everyone who is not—a deep and heartfelt thank you.

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Abstract

The prevalence of LGBTQ+ individuals, which stands for lesbian, gay, bisexual, transgender, queer, and additional identities, is steadily increasing in society. Global surveys conducted in 2023 indicate that 9% of adults in the world identify as LGBTQ+ individuals, with the proportion increasing to 18% among the youngest generation (Jackson, 2023). This demographic shift emphasizes the necessity for further economic research regarding LGBTQ+ populations. The aim of this thesis is therefore to explore the role of gender and sexuality in labor, firm, and wealth disparities.

The first paper, "Sexual Orientation, Entrepreneurship, and Firm Survival," draws on Swedish population and business registry data from 1995–2020. The findings reveal that sexual minority men are 7.8% less likely to engage in entrepreneurship than comparable heterosexual men, while sexual minority women are 4.8% more likely to do so than their comparable heterosexual counterparts. Additionally, it examines the survival rates of firms founded by sexual minorities, where disparities are found particularly for ventures led by sexual minority women. The results show that both external factors (such as attitudes toward sexual minorities and the density of same-sex couples) and internal factors (e.g., the presence of a romantic partner) may contribute to the differential survival of ventures founded by sexual minority women.

The second paper, "Wealth, Gender and Sexual Orientation – Evidence from Siblings," analyzes administrative data to explore wealth differentials across genders and sexual orientations. This study shows nuanced patterns, such as a wealth penalty for men in same-sex couples below the P80 percentile and a persistent wealth penalty for women below the P95 percentile.

The third paper, "Sexual Orientation and Multiple Job Holding: Evidence from Swedish Administrative Data," investigates the incidence of multiple job holdings among sexual minority individuals. This paper finds that sexual minority individuals are significantly more likely to hold multiple jobs, with the drivers of providing self-insurance for men and career mobility for women. Notably, holding multiple jobs among sexual minority women is associated with reduced unemployment and increased earnings growth.

In the fourth paper, “The Role of Legal Gender Change in Labor Market Outcomes,” a cohort of over 900 transgender individuals in Sweden who underwent legal gender changes is studied. A comparative approach reveals disparities in labor market outcomes, showing a reduced likelihood of employment and lower salary for transgender individuals compared to their cisgender siblings. Furthermore, transgender men have lower salaries, while transgender women have higher salaries but encounter challenges in finding employment after changing their legal gender. These findings highlight the vulnerable economic standing of transgender individuals in Sweden.
Through empirical analysis, this thesis underscores socioeconomic (in)equalities and their drivers across both sexuality and gender, offering insights into the economic opportunities and challenges of a growing population group.
Sammanfattning

Antalet individer som identifierar sig som hbtq+, det vill säga homosexuella, bisexuella, transpersoner, queerpersoner och andra identiteter, ökar stadigt i samhället. Globala undersökningar från 2023 visar att 9 % av vuxna i världen identifierar sig som hbtq+; där andelen ökar till 18 % bland den yngsta generationen (Jackson, 2023). Denna demografiska förskjutning synliggör behovet av ytterligare forskning vad gäller olika hbtq+-grupper, exempelvis inom nationalekonomi. Syftet med denna avhandling är därmed att utforska rollen som kön och sexuell läggning spelar beträffande skillnader på arbetsmarknaden, i företagande och gällande förmögenhet.


Den fjärde artikeln, "Ändring av juridiskt kön och utfall på arbetsmarknaden", studerar en grupp av över 900 transpersoner i Sverige som bytt juridiskt kön. Genom en jämförande ansats visar artikeln på skillnader i arbetsmarknadsutfall, där transpersoner har lägre sannolikhet för sysselsättning och lägre lön jämfört med deras cis-syskon. Vidare har transmän lägre löner medan transkvinnor, å ena sidan, har högre löner men, å andra sidan, möter utmaningar i att bli anställda efter
att ha ändrat sitt juridiska kön. Dessa resultat framhäver transpersoners sårbara ekonomiska ställning i Sverige.

Genom empirisk analys understryker denna avhandling socioekonomiska (o)jämlikheter och dess drivkrafter utifrån både sexuell läggning och kön, för att ge insikter om ekonomiska möjligheter och utmaningar hos en växande grupp i samhället.
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Paper 2 Wealth, Gender and Sexual Orientation – Evidence from Siblings

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Introduction and Summary of the Thesis

1 Introduction

The prevalence of LGBTQ+ individuals which stands for lesbian, gay, bisexual, transgender, queer, and additional identities, is steadily increasing in society. Recent global surveys conducted in 2023 indicate that 9% of adults in the world identify as LGBTQ+ individuals, with the proportion increasing to 18% among the youngest generation (Jackson, 2023). Similar to their heterosexual and cisgender counterparts, LGBTQ+ individuals engage in various economic activities, such as pursuing education, working in various industries, establishing businesses, investing in finance, and purchasing homes (Badgett et al., 2023). However, these populations also face distinct economic challenges, including discrimination from family members, employers, clients, and investors (Ahmed & Hammarstedt, 2022; Badgett et al., 2023; Sun & Gao, 2019).

Despite progress in equal opportunities, LGBTQ+ individuals still face significant challenges related to their personal freedom and legal rights (Badgett et al., 2023). Discriminatory laws and societal attitudes persist in many parts of the world, with more than 63 countries criminalizing LGBTQ+ individuals and 11 prescribing capital punishment as of 2024 (ILGA, 2024). These systemic barriers have historically impeded LGBTQ+ people from realizing their full economic potential, which could hamper overall economic growth (Badgett et al., 2019, 2023) and research progress (Klawitter, 1998).

The economics of LGBTQ+ individuals is a relatively new research field. Lee Badgett was the first scholar to publish peer-reviewed empirical papers on the labor market outcomes of sexual and gender-diverse populations in economics journals (Badgett, 1995a, 1995b). Compared to studies on race and gender economics, Klawitter (1998) identified various barriers that hinder research in LGBTQ+ economics, including knowledge gaps and data scarcity. Klawitter and Flatt (1998) further suggested that fear of exposure to illegal and unwelcoming environments might deter economists from engaging in economics research focused on LGBTQ+ populations.

In recent decades, policies concerning LGBTQ+ individuals have undergone crucial changes in numerous countries. Social liberalization movements have led to several anti-discrimination legislation and regulation improvements promoting equal LGBTQ+ rights worldwide and in Sweden in particular (Badgett et al., 2021; Kolk & Andersson, 2020; Sundevall & Persson, 2016). Focusing on Sweden, this thesis investigates these interesting patterns in a country with a long
history of openness and inclusion that has led to a rise in identified gender and sexual minorities since the early 1970s.

Since Badgett's seminal work in 1995, there has been a notable increase in LGBTQ+-related publications (Badgett et al., 2021). The current thesis aims to contribute to this growing literature by utilizing extensive population register data to explore economic outcomes for sexual and gender minorities in Sweden. By using population register data to identify sexual minorities and gender minorities, we do not have to rely on survey self-reports or censuses, about which there is a significant amount of uncertainty regarding identification and long-term follow-up. Furthermore, the sample sizes used in previous research focusing on these questions are often limited to a reduced sample of sexual minorities and gender minorities. The Swedish sample size is larger and allows researchers to exploit more accurate identification and increased spatial and temporal precision when estimating the independent relationship between sexual and gender minorities and economic outcomes. This approach allows for more accurate identification and a deeper investigation of previously unexplored economic factors. Through the introductory chapter and four independent papers, this thesis explores the role of gender and sexuality in labor, firm, and wealth disparities, offering insights into the economic opportunities and challenges of a growing population.

2 Background and Context

2.1 Sexual Orientation and Gender Identities

First, it is imperative to introduce the terminology utilized within the relevant body of research. Sexual orientation serves as an overarching term encompassing an individual’s sexual identity, attraction, and behavior.

The term LGBTQ+ stands for lesbian, gay, bisexual, transgender, queer, and additional identities. These terms are used to describe a person’s sexual orientation or gender identity. A lesbian is a woman whose enduring physical, romantic, and/or emotional attraction is to other women. Gay is a word used to describe people whose enduring physical, romantic, and/or emotional attractions are to people of the same gender. Sometimes lesbian is the preferred term for women. A bisexual person is a person whose enduring physical, romantic, and/or emotional attraction is to both men and women.

Gender identity refers to one’s innate sense of self as being male, female, both, or neither. Transgender people are individuals whose legal gender or sex assigned at birth differs from their gender identities and expressions. This mismatch can lead to distress and uneasy feelings, which is a concept that has been named gender dysphoria. Some but not all of these individuals may prefer to undergo a legal gender change and/or gender confirmation surgery. Some transgender individuals are sometimes referred to as MtF (for individuals who transition from
male to female) or FtM (for individuals who transition from female to male). Cisgender individuals are individuals who identify with their sex assigned at birth (Carpenter et al., 2020).

The term “sexual minorities” is an umbrella term used for people whose sexual orientation is not exclusively heterosexual; sexual minorities are sometimes referred to as LGBQ+. The term “gender minorities” is an umbrella term used for people whose gender identity is not exclusively cisgender including, but not limited to, transgender individuals. “Queer” is an umbrella term used for people whose sexual orientation is not exclusively heterosexual or whose gender identity is not exclusively cisgender.

2.2 Institutional Background for Sexual Minorities in Sweden

Since the 19th century, the trajectory of sexual liberalization in Sweden has been characterized by gradual, yet significant, legislative and societal shifts. Beginning in 1944, Sweden decriminalized sexual relations between consenting adults of the same sex (Swedish Ministry of Employment, 2018). In 1972, the age of consent was equalized to heterosexual activities (Aldén et al., 2015). In 1979, the National Board of Health and Welfare ceased to classify same-sex behavior as an illness (Swedish Ministry of Employment, 2018).

The legislative momentum continued in 1987 with the prohibition of discrimination based on sexual orientation (Aldén et al., 2015). In 1995, Sweden became the third country in the world to introduce registered partnerships for same-sex couples, creating a legal union similar to heterosexual marriage but with specific exceptions, including a requirement for legal residency in Sweden prior to entering into such a partnership (Kolk & Andersson, 2020). By 2003, the rights of registered partners were expanded to include the ability to jointly adopt children (Kolk & Andersson, 2020; Van der Vleuten et al., 2023). In that same year, the scope of the crime of incitement to racial hatred was broadened to encompass hate speech based on sexual orientation (Swedish Ministry of Employment, 2018).

In 2005, women in same-sex relationships could request medically assisted insemination (Swedish Ministry of Employment, 2018; Van der Vleuten et al., 2023). Additionally, the Prohibition of Discrimination Act was extended to cover discrimination based on sexual orientation within various social spheres, including social services, the social insurance system, unemployment insurance, and healthcare (Swedish Ministry of Employment, 2018).

The legal framework for same-sex unions underwent a pivotal transformation in 2009 when marriage legislation was amended to be gender neutral, affording same-sex couples equal access to marriage and thereby phasing out the registered partnership model (Kolk & Andersson, 2020). Thus, the same-sex civil union or registered partnership was a legal union offered from 1995 to 2009 in Sweden until same-sex marriage was legalized.
In this analysis, registered partnerships and marriages are collectively referred to as legal unions. Finally, in 2011, the constitution was amended to include protection against discrimination based on sexual orientation.

### 2.3 Institutional Background for Gender Minorities in Sweden

The primary objective of changing legal gender markers is to align an individual's legal gender with their gender identity and expression. In a historic move in 1972, Sweden became the first country globally to permit the legal and surgical confirmation of gender, thereby enabling transgender individuals to amend their legal gender markers (Dhejne et al., 2014). Since then, the process of changing legal gender in Sweden has undergone significant evolution. From the outset, Sweden has provided comprehensive support for transgender individuals seeking to change their legal gender, with all associated medical investigations, surgeries, and treatments being provided free of charge under the national healthcare system (National Board of Health and Welfare, 2020).

In 2009, the Swedish Discrimination Act was amended to include transgender identity or expression as protected grounds against discrimination (Swedish Ministry of Employment, 2018). However, until 2010, individuals seeking to change their legal gender were required to be unmarried, and until 2013, gender confirmation surgery, sterilization, destruction of stored gametes, and Swedish citizenship were mandatory prerequisites for legal gender modification (Kolk et al., 2023; National Board of Health and Welfare, 2020). Significant strides toward inclusivity were made in 2013 when Sweden abolished these restrictive prerequisites, facilitating a more accessible process for legal gender change (Kolk et al., 2023). Until 2017, the process required a diagnosis of "mental illness," a condition that was removed to further reduce the barriers faced by transgender individuals (Dhejne et al., 2014). Finally, in 2018, Sweden enhanced protections for transgender individuals under criminal law, extending the scope of hate crime legislation to include offenses targeting transgender people. In the same year, those affected by the earlier requirement for sterilization and gamete destruction were able to apply for financial compensation.

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Currently, the formal step for changing legal gender in Sweden involves undergoing an investigation with a specialist team, which typically consists of a psychologist, a psychiatrist, a doctor, and a counselor (National Board of Health and Welfare, 2020). This investigation aims to determine the diagnosis of gender dysphoria, a term that is medically used to describe the sense of unease that a person may have because of a mismatch between their biological sex and their gender identity. This investigation also aims to identify the appropriate treatment options for individuals (National Board of Health and Welfare, 2020). The investigation process can take anywhere from 7 months to 2 years (RFSL, 2015).

Once the investigation is complete and gender dysphoria is diagnosed, the investigation team can assist the transgender individual in applying for a legal
gender change and accessing gender affirmation surgery treatment (National Board of Health and Welfare, 2020). The team collaborates with the individual to determine the right treatment plan, which may include hormone treatment, hormone blockers, voice treatment, speech therapy, or hair removal (National Board of Health and Welfare, 2020). Transgender individuals can apply to the National Board of Health and Welfare’s legal counsel, which handles changes in legal gender markers (National Board of Health and Welfare, 2020). Such an application can be submitted no less than two years after the initial meeting with the investigation team (National Board of Health and Welfare, 2020). The National Board of Health and Welfare's legal counsel reviews the application and takes approximately 6 to 12 months to grant approval. There are specific requirements for applicants seeking a legal gender change in Sweden. The individual must have experienced belonging to another gender for an extended period, expect to live as the requested gender identity in the future, be older than 18 years old, be a resident of Sweden, and behave in accordance with their gender identity for a significant period (National Board of Health and Welfare, 2020).

Upon approval of the National Board of Health and Welfare’s legal counsel, the Swedish Tax Agency is informed of the legal gender change, and the applicant's legal gender marker is modified accordingly (National Board of Health and Welfare, 2020). Additionally, transgender individuals are allowed to join the queue for gender confirmation surgery (National Board of Health and Welfare, 2020). Many individuals opt to apply for gender confirmation surgery simultaneously with their legal gender change, although gender confirmation surgery has not been a requirement for changing one’s legal gender since 2013 (National Board of Health and Welfare, 2020).

Overall, drawing on data spanning from 2017 to 2020, Flores’ (2021) evaluation of 175 nations positioned Sweden as the fourth most accommodating country for LGBTQ+ individuals, trailing behind only Iceland, the Netherlands, and Norway. This ranking underscores Sweden's long-standing commitment to advancing the rights and welfare of sexual and gender minorities.

3 Data Quality for LGBTQ+ People

3.1 Limitations of Experiments and Self-Reported Information

Current research methodologies, including traditional experiments and correspondence studies, have been instrumental in highlighting discrimination and unequal opportunities within the labor market for LGBTQ+ populations (Badgett et al., 2021, 2023; Brahma et al., 2023). These approaches provide robust evidence of discrimination in the labor market through controlled experiments,
offering insights into the dynamics of workplace inequality (Flage, 2019; Lippens et al., 2023; Neumark, 2018).

Despite the controlled environment facilitating the reliability of these findings, the methodologies are not without limitations. The manipulation of productivity indicators and sexual orientation markers by researchers can introduce measurement errors, potentially distorting the outcomes (Black et al., 2007). The use of LGBTQ+ association membership as a proxy for sexual orientation in applications, while innovative, has been critiqued for possibly conflating political activism with sexual orientation, thereby overstating discrimination levels (Badgett et al., 2009a; Gorsuch, 2019; Tílsik, 2011).

Furthermore, the reliance on self-reported data and national surveys introduces challenges such as small sample sizes and limited representation of the full diversity within the LGBTQ+ community. This can result in biased portrayals that fail to capture the complexities of LGBTQ+ identities over time (Carpenter et al., 2022; Shannon, 2022). The reliance on cross-sectional census data further complicates the landscape, offering only snapshots that may not accurately reflect the dynamic nature of LGBTQ+ identities over time (Ahmed & Hammarstedt, 2010; Carpenter et al., 2020; Geijtenbeek & Plug, 2018).

Moreover, social and privacy concerns inherent in self-identification processes are challenging. The differential likelihood of disclosure among LGBTQ+ individuals, influenced by socioeconomic factors, introduces another layer of complexity. Disclosing identities may be more difficult for families in household surveys, in person in front of the surveyor, and in more hostile regions and countries. Studies indicate that higher-income LGBTQ+ participants may be more inclined to disclose their identities, skewing data representation toward a more economically secure subset of the community (Curley, 2018; Weichselbaumer, 2015). This intricate interplay underscores the complexity of determining sexual orientation and gender identity through self-reports and behavioral data, urging a cautious interpretation of these metrics (Kühne et al., 2019; Manning & Payne, 2021; Martell, 2021).

3.2 Data Quality in Sweden

Sweden's commitment to comprehensive administrative record-keeping offers a unique advantage for analyzing LGBTQ+ populations. The nation's databases compile an extensive range of individual information, including gender, wages, social income, employment status, and more, sourced from authoritative entities such as the tax authority. This rich data pool facilitates a nuanced exploration of socioeconomic patterns, providing insights into the lives of those with legal residence in Sweden.

The use of Swedish administrative data has several advantages. The meticulous compilation of Swedish administrative data enables the construction of detailed longitudinal datasets that trace individuals' lives across decades. This approach allows for an in-depth examination of economic patterns and outcomes,
enriching our understanding of how gender identity and sexual orientation intersect with economic realities. A key strength of this methodology lies in its ability to identify gender and sexual minorities with greater fidelity than self-report survey data, significantly reducing the risks of identification uncertainty, selection bias, nonresponse issues, and misreporting.

Moreover, the scope and scale of Swedish administrative samples exceed those typically available in international research, enabling more precise analyses of the relationships among gender identity, sexual orientation, and economic outcomes. The use of population registers to track individuals in registered same-sex legal unions for at least one year between 1990 and 2021 offers a pragmatic approach to identifying sexual minorities, facilitating longitudinal studies that compare their economic outcomes with those exclusively in different-sex legal unions.

Despite its strengths, the methodology's reliance on legal unions to identify sexual minorities has its limitations. It potentially excludes those who do not enter such unions from the research scope, underscoring the need for more inclusive methods. Additionally, identifying gender minorities solely through administrative gender marker changes overlooks individuals who do not or cannot legally change their gender markers, limiting the breadth of experiences captured in the data.

The administrative data approach to identifying "likely sexual minorities" and "likely heterosexuals" based on legal union status and terms such as "gender minorities," "transgender individuals," "MtF," and "FtM" based on gender marker changes, although pragmatic, may not fully encompass the diversity within the LGBTQ+ community. These categorizations, while useful for specific analyses, highlight the methodological challenges of accurately representing the complex realities of gender identity and sexual orientation through administrative records alone.

4 Demographic Characteristics of LGBTQ+ Individuals

The prevalence of LGBTQ+ individuals within the global population has notably increased, reflecting broader social acceptance and recognition. Recent global surveys from 2023 revealed that approximately 9% of adults worldwide identify as LGBTQ+, with this figure doubling to 18% among the younger generation, signifying a significant generational shift in self-identification (Jackson, 2023).
4.1 Comparison by Sexual Orientation

In a detailed analysis of demographic disparities by sexual orientation, a study in Sweden by Ahmed and Hammarstedt (2010) utilized 2003 administrative data, focusing on individuals aged 25 to 64 with positive earnings. Their findings highlight a distinct age differential, with individuals in same-sex couples being younger on average than their different-sex couples. Specifically, men in same-sex couples are found to be 3.7 years younger, while women are found to be 5.8 years younger than those in different-sex couples.

This age disparity aligns with findings from the United States, where analyses of the National Health Interview Surveys (2013-2018) and the American Community Surveys (2008-2018) echoed similar trends. Badgett et al. (2021) observed that individuals who identify as lesbian or gay are generally younger than their straight counterparts. These patterns underscore the growing willingness among younger people to openly identify their sexual orientation (Gallup, 2022; Jackson, 2023; Mishel, 2019). Furthermore, a study by Hu and Denier (2023) documented a 7% shift in reported sexual orientation between 2013 and 2019 even among the older generation, suggesting evolving social norms and acceptance.

A segment of the literature also delves into the intersection of race and sexual orientation, indicating the need for more comprehensive research in this area. Del Rio and Alonso-Villar (2019) emphasized the importance of examining the interplay between sexual orientation, gender, race, and ethnicity, pointing to a gap in the current understanding of these complex dynamics.

4.2 Comparison by Gender Identity

Although they represent a smaller segment of the population, transgender individuals form a critical aspect of the LGBTQ+ demographic landscape. Recent global surveys from 2023 revealed that approximately 80 million adults, or 1% of adults worldwide, identify as transgender (Jackson, 2023). Nevertheless, the body of research specifically addressing the demographic characteristics of transgender individuals remains relatively underdeveloped compared to studies on sexual orientation.

The literature reveals that transgender individuals often skew younger than their cisgender counterparts and face distinct racial characteristics and socioeconomic challenges (Badgett et al., 2021; Carpenter et al., 2020; Mann, 2021; Meyer et al., 2017; Shannon, 2022). Notably, disparities within the transgender community are stark, with a greater proportion identifying as nonwhite (40% vs. 27%) and there being a greater likelihood of living below the poverty line (26% vs. 16%) compared to cisgender individuals (Crissman et al., 2017).

In Sweden, a recent paper by Kolk et al. (2023) on demographic trends among transgender individuals over the past five decades revealed significant
demographic disparities between transgender and cisgender populations. Their research, utilizing comprehensive Swedish administrative data, provides an in-depth look at the demographic characteristics of transgender individuals who request medical care, underscoring the need for further study in this area.

Acknowledging the need for more detailed research on gender minorities, this dissertation has the goal of bridging the knowledge gap regarding the sociodemographic characteristics of transgender individuals. By leveraging high-quality Swedish administrative data, this study constructs a comprehensive longitudinal dataset that enriches our understanding of transgender individuals who have undergone legal gender changes.

5 LGBTQ+ Marriages and Partnerships

Recent changes in legal frameworks, including gender marker adjustments and the legalization of same-sex unions, have opened new avenues for family-economic research. This section describes how these legal transformations have influenced the dynamics of marriage and partnership.

5.1 Marriage and Partnerships by Sexual Orientation

The advent of same-sex partnership legalization has yielded fresh data for analysis. Fisher et al. (2018) found that in 2015, same-sex couples constituted 0.48% of all joint tax filers in the U.S., translating to approximately 250,450 couples. A comparison of partnership rates from the 2013-2018 National Health Interviews Survey revealed a disparity in partnership and marriage rates across sexual orientations. Straight men (64%) and women (59%) reported higher partnership rates than gay men (43%), lesbian women (53%), bisexual men (30%), and bisexual women (40%). Moreover, a significant majority of straight partners were married (88%), highlighting a tendency toward formalized unions being not as prevalent among bisexual, gay, and lesbian partners.

The discourse on marriage and partnership within the LGBTQ+ community is nuanced, with some studies identifying a "partnership penalty" and others noting a "marriage premium". Research utilizing U.S. household data shows that marriage confers an earnings premium across the board (Martell & Nash, 2020). Notably, gay men and lesbian women experience marriage earnings premiums of 3% and 6%, respectively, compared to their unmarried cohabiting peers, although the premium for gay men falls short of that for heterosexual men, and the lesbian premium aligns with that of heterosexual women (Martell & Nash, 2020).
Using advanced decomposition methodologies such as the Kitagawa–Blinder–Oaxaca (Jann, 2008) and Firpo–Fortin–Lemieux (Firpo et al., 2009) frameworks, Aksoy et al. (2018) and Bridges and Mann (2019) conducted analyses within the UK context. The researchers discovered a notable trend: the previously documented lesbian earnings premium and gay earnings penalty, when adjusted for various demographic and socioeconomic factors, appear to be diminishing among individuals but not in partnerships. This finding implies that data derived from couples might amplify perceived disparities linked to sexual orientation while potentially minimizing the significance of partnership status itself. This observation is further supported by discussions in the literature suggesting that being in a partnership could act as a “flag” for sexual minority status, thereby making it a more pronounced indicator of one's sexual orientation than being single (Aksoy et al., 2018).

In exploring the dynamics of household and partnership specialization, Aksoy et al. (2018) revealed that such specialization plays a significant role in contributing to the earnings premium observed among lesbian women. This phenomenon mirrors the traditional economic effects of marriage observed in heterosexual relationships, where marriage tends to increase household specialization, with heterosexual men typically more active in the labor market, particularly in households with children.

Further insight into the Swedish context is provided by Andersson et al. (2006) and Kolk and Andersson (2020), who examined trends in marriage and childbearing among different sexual orientations. Their research highlighted a steady increase in the rate of same-sex civil unions among both men and women between 1995 and 2012. Comparative analysis with U.S. data revealed that in 2019, 6,592 women and 4,510 men in a same-sex civil union were engaged in same-sex civil unions within Sweden. In comparison, 3,209,894 adults were in an opposite-sex civil union.

### 5.2 Marriage and Partnerships by Gender Identity

Using the 2014-2018 Behavioral Risk Factor Surveillance System, Badgett et al. (2021) reported that transgender men exhibit lower rates of marriage (39%) and partnership (3%) than cisgender men, who show higher incidences of marriage (53%) and partnership (5%). A similar trend is observed among transgender women, who have a lower likelihood of marriage (41%) than their cisgender counterparts (50%), yet they demonstrate a greater propensity toward partnerships (6% vs. 4% for cisgender women).
6 LGBTQ+ Family Structure and Childbearing

6.1 Family Structure and Childbearing by Sexual Orientation

In line with Leppel (2009), Badgett et al. (2021) reported disparities in childbearing across sexual orientations in the U.S., noting that heterosexual women (33%) have a greater likelihood of having children in their households than lesbian women (20%). Similarly, heterosexual men (31%) are significantly more likely to be parents than gay men (5%). Intriguingly, the vast majority of bisexual women (87%) and men (90%) are in different-sex relationships (Badgett et al., 2021). This pattern is also found in other countries, such as Chile and Uruguay (Brown et al., 2019). Studies have further revealed that lesbian households not only have lower fertility rates but also exhibit a more equitable distribution of labor within the home (Ahmed et al., 2011b; Antecol & Steinberger, 2013; Baert, 2014; Drydakis, 2011; Elmslie & Tebaldi, 2007; Weichselbaumer, 2003).

Swedish data from 2003, analyzed by Ahmed and Hammarstedt (2010), corroborate these trends, showing that heterosexual women (50.7%) are more likely to have children in the household than are lesbian women (24.0%). The study also highlights a stark contrast in childbearing between heterosexual (48.8%) and gay men (0.5%). Andersson et al. (2006) suggested that the higher incidence of children in female same-sex marriages often stems from previous heterosexual relationships.

Academic discourse extends to the educational outcomes of children from same-sex families. Rosenfeld (2010) discovered that children of same-sex couples in the U.S. progress educationally at rates comparable to those of their peers from different family structures. In the Netherlands, studies by Kabátek and Perales (2021) and Mazrekaj et al. (2020) revealed that children raised from birth by same-sex parents outperform their counterparts from different-sex families in both primary and secondary education. These findings underscore the imperative for further research to explore the diverse outcomes of children from various families.

6.2 Family Structure and Childbearing by Gender Identity

The landscape of transgender households, particularly regarding childbearing and family structure, remains underexplored in the literature. Badgett et al. (2021) and Meyer et al. (2017), utilizing U.S. national survey data, documented nuanced
differences in the likelihood of transgender individuals having children residing in their households compared to their cisgender counterparts. They reported that transgender women have a lower probability of having children in the household (28%) than do cisgender women (38%), while transgender men exhibit a greater likelihood (41%) than do cisgender men (34%).

In contrast, Dutch administrative data reveal a more pronounced disparity, with Geijtenbeek and Plug (2018) documenting significantly lower rates of childbearing among transgender individuals compared to their cisgender counterparts; transgender women (6%) and transgender men (13%) have children in their households at much lower rates than cisgender women (52%) and cisgender men (45%), respectively.

These divergent findings underscore the variability in transgender family structures across different geographical and legal contexts. By employing a comprehensive longitudinal register dataset, this dissertation aspires to shed light on the economic and demographic characteristics of transgender households.

7 Geographical Choices and Sorting

This section examines the geographical location of LGBTQ+ individuals. Surveys and longitudinal data provide new opportunities to study new dimensions of LGBTQ+ research.

7.1 Geographical Comparison by Sexual Orientation

Badgett et al. (2021) reported a notable trend: individuals in same-sex couples are more inclined to reside in states different from their birth state. Furthermore, U.S. states characterized by higher revenues, urbanization, and progressive policies tend to have a greater presence of same-sex couples compared to states with lower revenues, rural areas, and conservative leanings (Florida, 2019; Florida & Mellander, 2010, 2016). This distribution suggests a preference among gay men for urban settings over that of lesbian women and heterosexual individuals, which can be attributed to several factors (Klawitter, 2011; Rothblum et al., 2004).

First, gay households, which often have lower fertility rates, face fewer financial constraints, allowing for greater concentration in areas with desirable amenities (Black et al., 2002). The appeal of quality-of-life factors, such as a mild climate and metropolitan living, often outweighs the aspect of gay friendliness in determining gay household locations. Vossen et al. (2019) highlighted how inclusive and tolerant areas positively impact internal migration, although living costs and job availability play a more significant role for high-skilled workers.
Second, disparities in employment prospects may encourage LGBTQ+ individuals to prefer urban settings (Leppel, 2009).

Third, Tílsik (2011) identified a marked geographical variation in discrimination levels against LGBTQ+ job applicants, reflecting regional differences in societal attitudes and anti-discrimination laws. Such discrimination influences unemployment rates among lesbian women, gay men, and same-sex partners in nonmetropolitan areas (Leppel, 2009). Political ideology and religious beliefs are strong indicators of attitudes toward sexual minorities, with higher levels of conservatism and religiousness correlating with lower levels of tolerance (A. B. Becker & Scheufele, 2011).

In Sweden, the majority of the LGBTQ+ population resides in metropolitan areas, with 84% of gay men and 75% of lesbian women living in such regions, in contrast to 56% of straight men and 51% of straight women living in such regions (Ahmed & Hammarstedt, 2010).

### 7.2 Geographical Comparison by Gender Identity

The geographical distribution of the transgender community presents a unique pattern that diverges from broader LGBTQ+ population trends. Urban environments, known for their higher wages and educational levels, generally exhibit greater openness toward LGBTQ+ communities, as highlighted by Black et al. (2000), Florida (2019), and Wimark and Östh (2014). However, Crissman et al. (2017) uncovered a surprising trend using U.S. survey data, namely, transgender individuals exhibit a greater propensity to reside in rural areas (28.7%) than their nontransgender counterparts (22.6%). These findings challenge prevailing narratives and suggest a complex interplay between gender identity and geographical preferences.

This divergence underscores the need for further research to explore the underlying reasons behind the transgender population's residential choices. Whether these patterns reflect a search for community, affordability, privacy, or other factors remains an area ripe for exploration.

### 8 LGBTQ+ Education

#### 8.1 Education by Sexual Orientation

Research across multiple countries, including Sweden, Chile, the UK, Uruguay, and the U.S., has consistently shown that sexual minorities often achieve higher levels of education than their heterosexual and bisexual counterparts. This trend is reflected in years of schooling and rates of earning bachelor’s degrees (Ahmed & Hammarstedt, 2010; Badgett et al., 2021; Black et al., 2000; Bridges & Mann,
Furthermore, Carpenter (2009) showed that gay men not only achieve higher college GPAs but also place greater importance on their academic endeavors than their heterosexual peers.

In addition to higher educational attainment, same-sex couples in the U.S. demonstrate superior English proficiency, which is a phenomenon attributed to a lower proportion of immigrants and fewer years of residency compared to opposite-sex couples (Del Rio & Alonso-Villar, 2019) (Del Rio and Alonso-Villar, 2019). This higher educational level contributes to a wage premium for lesbian women and gay men, acting as a form of labor market protection (Antecol et al., 2008; Daneshvary et al., 2008). Sexual minority individuals also tend to choose college majors that potentially reduce stigma costs, aligning with theories of discrimination in the workplace (Burn & Martell, 2020).

Contrary recent findings suggest that gay boys excel academically over their straight counterparts in high school, whereas lesbian girls tend to underperform compared to straight girls (Mittleman, 2022). Additionally, LGBTQ+ students face challenges in graduating high school and pursuing higher education, potentially due to early identification and associated struggles (Pearson & Wilkinson, 2017; Sansone, 2019). As a result, while sexual minority pupils might struggle and feel marginalized in high school, greater independence, anonymity, and flexibility possibilities that might come with university experience may offer an opportunity for LGBTQ+ adults to thrive (Annes & Redlin, 2012; Scourfield et al., 2008).

Discrimination at the educational level significantly affects LGBTQ+ students in various ways. Research by Bontempo and d’Augelli (2002), Marcotte (2023), and Humphries et al. (2021) highlighted that LGBTQ+ students face a greater likelihood of bullying than their heterosexual peers, suggesting a pervasive environment of intolerance within educational institutions. This bullying has profound implications, as Drydakis (2014) reported, linking such adverse experiences directly to negative long-term outcomes in employment and participation in the labor force for sexual minorities. Furthermore, an intriguing study by Diaz-Serrano and Meix-Llop (2016) utilizing a corresponding study framework revealed a marked hesitancy among schools to engage with gay parents compared to heterosexual ones, with gay couples experiencing a significant 22-percentage-point gap in response rates from educational institutions. This reluctance and outright discrimination not only hinder educational attainment but also perpetuate long-lasting adverse effects on labor market outcomes and performance for LGBTQ+ individuals.

8.2 Education by Gender Identity

While gay and lesbian adults often report higher educational attainment, transgender individuals face unique challenges that impact their educational levels compared to their cisgender counterparts. Research indicates a significant
disparity in college graduation rates among transgender people, with findings from Carpenter et al. (2020), Crissman et al. (2017), and Sansone (2019) indicating lower academic completion rates. Specifically, Crissman et al. (2017) highlighted that only 35.6% of the transgender population is likely to pursue a college education, in contrast to 56.6% of nontransgender individuals. Moreover, Badgett et al. (2021) revealed that only 13% of transgender women and 12% of transgender men attain a college degree, compared to 27% of cisgender women and 26% of cisgender men.

The educational journey for LGBTQ+ students who identify as transgender also diverges significantly from that of their cisgender peers. Beattie et al. (2021) underscored that these students face distinct educational outcomes. Dugan et al. (2012) further reported that transgender students experience lower levels of cognitive skill development in college than do their peers. Additionally, regarding choosing college majors, transgender and gender-diverse students show a preference for arts and humanities over business, science, or technology fields, suggesting a distinct academic and career trajectory within higher education (White et al., 2023). These disparities could affect labor market outcomes, wealth, and firm performance.

9 Discrimination Literature

9.1 Current Legal Framework and Consequences

By exploring the labor market and firm discrimination faced by LGBTQ+ individuals, this section draws connections across various discrimination research realms, including sex, gender, race, and other characteristics. Empirical studies employing surveys, job applications, and observational data have illuminated the extent to which LGBTQ+ individuals may encounter discrimination in their professional lives (Flage, 2019; Lippens et al., 2023; Neumark, 2018).

Valfort (2018) outlined the discrimination legislation currently in place in the OECD. Examining the 2016 European legislation, the author showed that OECD countries authorized and legitimated on average 3 significant discriminatory laws against sexual minorities, such as allowing employment discrimination based on sexual orientation. Similarly, OECD countries have authorized and legitimated on average 2 significant discriminatory laws against gender minorities, such as mandatory sterilization.

Furthermore, the literature underscores the particular vulnerabilities of transgender individuals in the labor market, namely, facing transphobia, harassment, and consequent mental health issues, poverty, and market exclusion (Bränström & Pachankis, 2020; Granberg et al., 2020; Leppel, 2016b; Van Borm & Baert, 2018).
Choices, sorting, and discrimination have a significant impact on the LGBTQ+ labor market. For example, in the U.S., some federal and state worker jobs, such as teaching, were banned for LGBTQ+ individuals until the 1960s. More recently, discrimination against LGBTQ+ individuals was allowed until the U.S. Supreme Court forbade discrimination against all LGBTQ+ individuals in 2020 (versus 2009 in Sweden). Currently, several countries are still authorizing and encouraging discrimination against LGBTQ+ individuals in the labor market.

The absence of nondiscrimination laws critically affects LGBTQ+ workplace well-being (Gates, 2011). While not all individuals are aware of anti-discrimination regulations, their implementation influences workplace behavior and hiring practices and potentially mitigates the earnings penalty associated with discrimination (G. S. Becker, 2010; Schwab, 1986).

Anti-discrimination laws not only foster workplace acceptance, support, and tolerance (Barron, 2009; Deal, 2022, 2023) but also serve as catalysts for structural changes in policies, practices, and labor norms (Baumle et al., 2020; Skidmore, 2004). Remarkably, such laws have been linked to increased innovation among firms (Gao & Zhang, 2017) and have been shown to reduce unemployment and the gay earnings penalty in the private sector (Burn, 2018; Klawitter, 2011; Leppel, 2009; Martell, 2013b).

Moreover, nondiscrimination regulations have broader socioeconomic implications, thereby influencing housing and financial conditions for same-sex couples (Dillbary & Edwards, 2019) and shaping the entrepreneurial landscape (Conti et al., 2022).

Although anti-discrimination laws play a crucial role in mitigating bias based on sexual orientation and gender identity, they are not a panacea. The existence of such laws does not automatically transform an unsupportive environment and culture into an inclusive one (P. Wang & Schwarz, 2010). Research in the UK by Colgan and Wright (2011) showed that the implementation of anti-discrimination legislation has had a limited impact on altering workplace practices. Beatty and Kirby (2006) emphasized that while legal protections are vital for fostering supportive environments, they should be viewed as the initial step toward ensuring equal opportunities for sexual and gender minorities.

Regarding the labor outcomes for transgender individuals, Leppel (2021) found no significant correlation between state-level employment nondiscrimination laws and improved employment outcomes for transgender people in the United States. This outcome highlights the complexity of addressing discrimination and underscores the need for a multifaceted approach that goes beyond legislative measures.

Sweden stands as a beacon of tolerance and LGBTQ+ friendliness in both the European and global stages (European Commission, 2019). The wealth of Swedish administrative data offers valuable insights into the socioeconomic outcomes of LGBTQ+ individuals within one of the world's most accepting environments. Nevertheless, importantly, tolerance levels vary within the population. Despite the country's progressive stance, a notable segment still harbors discomfort or opposition toward transgender rights, with 57% of Swedes
(48% in the EU28) acknowledging widespread discrimination against transgender people in their nation (European Commission, 2019). This discrepancy serves as a reminder of the ongoing challenges faced by the LGBTQ+ community and of the need for continued advocacy and policy development to ensure true equality and inclusion.

9.2 Theoretical Models and Framework of Discrimination

G. S. Becker's (2010) seminal work on the economics of discrimination laid the groundwork for understanding how prejudices and preferences might shape the socioeconomic outcomes of sexual minority and transgender individuals. This framework identifies three primary sources of taste-based discrimination—employers, customers, and coworkers—each of which potentially influences LGBTQ+ individuals' earnings, employment opportunities, productivity, and job positions differently.

**Employer Discrimination:** The framework suggests that the gay and transgender earnings penalty arises from employers paying sexual minority and gender minority workers less than their heterosexual counterparts or cisgender counterparts, which is driven by a distaste for employing them.

**Coworker Discrimination:** Here, the focus is on coworkers' reluctance to work alongside sexual minority men or gender minority individuals, leading employers to compensate prejudiced workers to mitigate their discomfort, thereby penalizing sexual minority individuals and transgender workers.

**Customer Discrimination:** The framework posits that the earnings penalty for sexual minority individuals and transgender people stems from employers paying less for sexual minority and transgender employees due to anticipated inefficiencies and reduced profitability when interacting with prejudiced customers.

Research across Europe has documented that both customer and coworker discrimination against transgender individuals negatively impacts their economic outcomes (European Commission, 2019; Van Borm et al., 2020; Van Borm & Baert, 2018). For instance, before hiring, transgender workers are not only predicted to use less parental leave but also perceived as needing more medical care. Moreover, discrimination could take a more obvious form, such as harassment (Van Borm et al., 2020; Van Borm & Baert, 2018). Waite (2021) reported that gender-diverse public employees in Canada are between 2.2 and 2.5 times more likely to experience discrimination and workplace harassment than their male cisgender coworkers, underscoring the pervasive nature of prejudice within the workplace.

Burn (2020) linked an increase in the gay earnings penalty to an increasing level of prejudice within hostile states, with evidence suggesting that managerial bias is the primary driver. Tiley (2011) highlighted employer discrimination against gay male applicants for roles requiring traditionally masculine traits.
Hammarstedt et al. (2015) further documented how prejudice detrimentally affects the employment and wages of sexual minorities. Moreover, discrimination affects occupation sorting, thus generating a "gay glass ceiling" (Aksoy et al., 2019). Baert (2014) and Flage (2019) documented that discrimination during the hiring process is notably more pronounced for low-skilled positions than for high-skilled positions and disproportionately affects gay applicants compared to lesbian applicants.

Cech and Waidzunas (2021) explored science, technology, engineering, the arts and mathematics (STEAM) industries and the related sorting mechanism, noting higher exit rates among sexual and gender minorities due to negative treatment, which hinders career progression and innovation. Intersectionality exacerbates these challenges, particularly for LGBTQ+ women and professionals of color, who face professional devaluation and harassment more acutely.

Finally, as introduced by Arrow et al. (1973), Phelps (1972), and Schwab (1986), statistical discrimination involves employers making assumptions based on observable characteristics. This theory suggests that employers might discriminate against or favor LGBTQ+ individuals, thereby affecting hiring decisions and workplace dynamics. For example, employers could favor transgender individuals due to their lower likelihood of parental leave.

This refined section aims to provide a clearer understanding of the mechanisms driving discrimination in the labor market and its impact on LGBTQ+ individuals, emphasizing the need for comprehensive strategies to address and mitigate these biases.

9.3 Correspondence and Experimental Studies

Traditional nonexperimental methods, such as analyzing wage gaps and regression decomposition, have long been employed to investigate labor market discrimination. While these methods account for individual characteristics, they often fall short of fully explaining unobserved productivity-related characteristics and personal choices. Furthermore, differential outcomes observed in regression decompositions may themselves be a manifestation of discrimination, such as reduced experience for women due to historical biases (Gronau, 1988).

To overcome these limitations, a specialized domain within discrimination research utilizes correspondence experiments and fictitious hiring processes to uncover the mechanisms of (un)equal opportunities in the labor market. These experimental approaches offer robust models and counterfactuals, providing clear and credible confirmation of discrimination (Flage, 2019; Lippens et al., 2023; Neumark, 2018). The controlled nature of these experiments allows researchers to complete oversight over data compilation, revealing that LGBTQ+ job applicants often face lower interview or job offer rates than their heterosexual counterparts. Flage (2019) noted in his meta-analysis that sexual minority applicants are 40% less likely to receive a callback, mirroring discrimination trends observed among racial minorities.
This discrimination spans various countries, affecting LGBTQ+ individuals in diverse labor markets and showing consistent patterns of hiring bias in Austria (Weichselbaumer, 2003), Belgium (Baert, 2014, 2018), Canada (Dilmaghani & Robinson, 2022), Cyprus (Drydakis, 2014a), Germany (Weichselbaumer, 2015), Greece (Drydakis, 2009, 2011, 2022), Italy (Patacchini et al., 2015), Sweden (Ahmed et al., 2013a), and the U.S. (Gorsuch, 2019; Tilcsik, 2011). However, recent studies indicate a shift, with some studies finding no significant hiring discrimination against sexual or gender minority applicants in the U.S. (Acquisti & Fong, 2020; Kline et al., 2022).

Nevertheless, discrimination persists for gender minorities, with studies in Belgium and Sweden documenting hiring biases against transgender individuals (Baert, 2018; Granberg et al., 2020). For instance, Granberg et al. (2020) conducted a correspondence study in Sweden, revealing differential responses to job applications based on gender identity, with transgender applicants receiving fewer positive responses than cisgender applicants. Likewise, these results confirm other research findings showing that gender stereotypes make it difficult for LGBTQ+ individuals to be accepted into occupations that are considered more traditional for people of their gender (Drydakis, 2015; Tilcsik, 2011).

According to corresponding studies, the interplay of statistical, taste-based, and limited information discrimination complicates the landscape of sexual minority discrimination. Economic downturns, far-right rhetoric, and polarized LGBTQ+ political agendas exacerbate hiring discrimination against sexual minorities (Drydakis, 2022). An intriguing aspect of taste-based discrimination is the differential treatment by recruiters based on gender, with Baert (2014) noting that male recruiters exhibit a preference for lesbian job applicants, whereas female recruiters do not display such bias. This contrasts with the statistical discrimination theory, which Baert (2014) applied to illustrate a penalty for young heterosexual women that is attributed to their anticipated greater likelihood of maternity leave and domestic responsibilities.

Discrimination impacts not only LGBTQ+ individuals but also employers, who may overlook the true monetary costs associated with biased hiring practices (Baert, 2018). These studies collectively underscore the nuanced dynamics of labor market discrimination, advocating for continued exploration and intervention to dismantle barriers facing LGBTQ+ individuals.

9.4 Importance of Anti-Discrimination Laws

Promoting LGBTQ+-inclusive environments yields significant advantages, extending beyond social equity to economic prosperity. Research by J. Wang et al. (2018) highlighted that gay men experience greater earnings in companies that adopt diverse and inclusive management policies. Furthermore, Hansen et al. (2022) illustrated that an increased tolerance toward sexual minorities from 2003 to 2015 is correlated with an additional week of paid work annually for cohabiting gay men in the U.S. Similarly, studies by Hossain et al. (2020) and Patel and Feng
(2021) demonstrated that anti-discrimination labor regulations promoting sexual orientation inclusivity are catalysts for innovation, thereby enhancing firm performance and marketing capabilities. Moreover, Shan et al. (2017) found that U.S. companies with higher rates of sexual minority integration see significant increases in stock returns and market valuations. On a macroeconomic scale, Badgett (2020) estimated that each additional legal right for LGBTQ+ individuals boosts the real GDP per capita by approximately $2,000. Noland (2005) finds that more tolerant countries attract more foreign direct investment (FDI). This body of literature clearly supports the economic and social benefits of inclusive LGBTQ+ policies, highlighting their positive effects on both LGBTQ+ and non-LGBTQ+ individuals in the labor market and beyond (Badgett, 2020; Hossain et al., 2020; Patel & Feng, 2021; Shan et al., 2017; J. Wang et al., 2018).

10 Labor Outcomes and Inequalities

This section examines the labor market outcomes of LGBTQ+ individuals. Surveys and administrative data linked to business administrative data provide opportunities to study new dimensions of socioeconomic outcomes.

10.1 Comparison of Labor Outcomes by Sexual Orientation

Badgett’s seminal work in 1995 constituted the first peer-reviewed economic analysis on wage disparities stemming from sexual orientation discrimination. Subsequent studies have consistently indicated higher unemployment rates among gay men and lesbian women than among their heterosexual counterparts. Furthermore, gay men often face lower employment rates than heterosexual men, whereas lesbian women tend to have higher employment rates than heterosexual women, indicating a complex interplay of discrimination and labor market dynamics (Badgett, 1995b; Klawitter, 2015).

In terms of earnings, research has shown a persistent pattern in which lesbian women generally outearn their heterosexual counterparts and gay men earn less than their heterosexual counterparts, even when controlling for a range of demographic and occupational factors. This discrepancy suggests a nuanced impact of sexual orientation on labor market outcomes across diverse contexts, including Australia (La Nauze, 2015; Preston et al., 2019; Sabia et al., 2017), Brazil (Tampellini, 2024), Bulgaria (Heineck, 2009), Canada (Carpenter, 2008; Cerf, 2016; Dilmaghani, 2018; Waite & Denier, 2015), Chile (Brown et al., 2019), France (Laurent & Mihoubi, 2012, 2017), Germany (Humpert, 2016), Greece (Drydakis, 2011, 2012), Ireland (Heineck, 2009), the Netherlands (Plug & Berkhout, 2004), New Zealand (Carpenter et al., 2024), Poland (Heineck, 2009),
Spain (González & Sönmez, 2022), Sweden (Ahmed et al., 2011a, 2011b, 2013b; Ahmed & Hammarstedt, 2010; Hammarstedt et al., 2015), the UK (Aksoy et al., 2018, 2019; Arabsheibani et al., 2005; Bridges & Mann, 2019), Uruguay (Brown et al., 2019), and the U.S. (Allegretto & Arthur, 2001; Badgett, 1995b; Baumle & Poston, 2011; Berg & Lien, 2002; Black et al., 2000; Blandford, 2003; Carpenter, 2004; Carpenter & Eppink, 2017; Clain & Leppel, 2001; Del Río & Alonso-Villar, 2019; Klawitter & Flatt, 1998; Leppel, 2009; Sabia, 2015).

Bisexual individuals also face unique challenges. Studies by Aksoy (2018), Medina (2023), and Mize (2016) have highlighted earning penalties for bisexual men and women that cannot be fully explained by traditional labor market variables. This indicates that a broader spectrum of stigma and discrimination affects the labor outcomes of bisexual individuals.

Theoretical models by Arrow et al. (1973), Becker (2010), Phelps (1972), and Schwab (1986) offer insights into the mechanisms behind these disparities, suggesting that societal biases against nontraditional gender roles and sexual orientation could contribute to the observed earnings penalties. However, recent studies have indicated a reduction in these penalties, potentially due to evolving nondiscriminatory policies, although this trend is predominantly observed in developed countries, thereby possibly underrepresenting the situation in developing regions (Carpenter & Eppink, 2017; C. Jepsen & Jepsen, 2022; Waite, 2015).

Individual characteristics, such as competitive preferences, have also been explored with regard to their impact on labor outcomes. A previous study suggested that these traits could underlie some of the observed earnings penalties among gay men, while the lesbian earnings premium appears to be influenced by factors beyond competitive inclinations alone (Buser et al., 2018). However, other individual characteristics do not seem to affect labor market outcomes. Burn and Martell (2022) found that sexual orientation labor market differentials are not affected after controlling for differences in masculinity and femininity.

Research by Black et al. (2003), Clay and Leppel (2001), Elmslie and Tebaldi (2007), L. K. Jepsen (2007), Klawitter and Flatt (1998), and Tebaldi and Elmslie (2006) emphasized that lesbian women generally possess superior market-specific human capital, benefit from extensive on-the-job training, achieve higher educational levels, and work longer hours. This dedication not only enhances their labor supply on the intensive margin but also cultivates specialized skills that culminate in higher earnings. Antecol et al. (2008) and Daneshvary et al. (2008) further showed that the observed wage premium for lesbian women and gay men primarily stems from this elevated human capital accumulation, particularly in regard to education, rather than occupational sorting. However, when accounting for individual characteristics, the lesbian earnings advantage significantly narrows (Antecol et al., 2008).

Moreover, the literature posits that lower fertility rates and a more equitable household labor distribution indirectly augment the earning potential of lesbian individuals. Such dynamics encourage greater labor market engagement, productivity, and further human capital accumulation (Ahmed et al., 2011b;

Daneshvary et al. (2009) discovered that never-married lesbians exhibit significantly greater earnings than those who were previously married, suggesting that marital status impacts the lesbian wage premium by approximately 20%. This finding supports the notion that the earnings premium among lesbian women may be partially attributed to distinct labor market commitments and elevated workplace effort levels (Berg & Lien, 2002).

Leppel (2009) reported that parenthood notably diminishes employment prospects for heterosexual women and gay men, with heterosexual women facing a more pronounced earnings penalty due to childrearing responsibilities. However, several studies have shown that lesbian women, who are less likely to have children, experience a lower child penalty (Andresen & Nix, 2022; Antecol & Steinberger, 2013; Baert, 2014; Van der Vleuten et al., 2023; Waldfogel, 1998). Van der Vleuten et al. (2023) found that the child penalty is not universally applied and is less severe for straight fathers and lesbian mothers than for straight mothers, indicating a disparity in the impact of parenthood across sexual orientations.

The intersection of race, gender, and sexual orientation plays a significant role in labor market outcomes, as demonstrated by studies such as those by Aksoy et al. (2019), Cech and Rothwell (2020), and Del Rio and Alonso-Villar (2019). These studies revealed complex patterns of earnings disparities, with white heterosexual men typically enjoying the highest earnings, while gay men, regardless of race, earn less. All women are found to have lower wages than the average earnings, except lesbian Asian women.

Utilizing Swedish administrative data from 2003, Ahmed and Hammarstedt (2010) conducted an in-depth analysis of labor market participation segmented by sexual orientation. Their study revealed that 84% of gay men and 87% of lesbian women were gainfully employed with positive earnings, which, when compared to 89% of heterosexual men and 82% of heterosexual women, aligns with patterns observed in prior research. Consistent with theories on gender norms, their findings further indicated a pronounced divergence in occupational fields among sexual orientations. Specifically, gay men were found to be markedly underrepresented in sectors traditionally associated with manual labor, such as agriculture, manufacturing, and construction, instead showing a predisposition toward roles in the service, healthcare, and public administration sectors. Conversely, lesbian women were found to engage less frequently in healthcare roles than their heterosexual counterparts, yet they were found to be more inclined toward employment in fields typically dominated by manual labor, as well as in the service and public administration sectors. These outcomes underscore the need for more comprehensive research utilizing national administrative data to fully understand the broad spectrum of the economic outcomes of sexual minorities.
10.2 Labor Market Comparison by Gender Identity

Few research studies have focused on transgender identity and socioeconomic outcomes, and the limited extant cross-sectional research has shown that the employment rate and income of transgender individuals are lower than those of cisgender individuals (Carpenter et al., 2020, 2022; Mann, 2021; Nettuno, 2024; Shannon, 2022). Using cross-sectional representative survey data from the Behavioral Risk Factor Surveillance System, which covered 35 states during the period ranging from 2014 to 2019 and asked about transgender status and gender identity, Carpenter et al. (2020) found that transgender individuals have significantly lower employment rates, lower household incomes, higher poverty rates, and worse self-rated health than male individuals who do not identify as transgender. Carpenter et al.’s (2020) study was based on gender identity optional state survey data and a cross-sectional research framework. In the U.S., Leppel (2021) also found high labor force participation and unemployment rates for transgender individuals.

In an intimate exploration of workplace dynamics, Schilt and Wiswall (2008) analyzed the pre- and posttransition experiences of 43 transgender employees, revealing a gendered dichotomy in earnings posttransition. Concurrently, Shannon (2022) correlated the income levels of transgender individuals with their transition and disclosure status, adding another layer to a complex socioeconomic tapestry.

In Sweden, a recent paper by Kolk et al. (2023) on demographic trends among transgender individuals over the past five decades revealed significant demographic disparities between transgender and cisgender populations.

Geijtenbeek and Plug (2018) narrowed their focus to Dutch transgender workers who underwent gender confirmation surgery between 2003 and 2012 and compared their outcomes with those of a sample of the overall Dutch population. Their study revealed a nuanced economic trajectory posttransition, with male-to-female individuals experiencing a decrease in earnings postregistration as females and their female-to-male counterparts maintaining consistent earnings before and after registration as males. This research, while insightful, highlights the need for a broader investigative lens that includes all cisgender individuals and transgender individuals who change their gender marker without surgery.

11 Occupational Sorting

The exploration of occupational sorting within LGBTQ+ economics highlights a critical shortfall, namely, the detailed industry and occupational data at the organizational level remain sparse. Understanding the nuanced distribution of LGBTQ+ individuals across various job roles and sectors is vital for comprehensively analyzing their labor market dynamics. Addressing this gap
necessitates the utilization of extensive national administrative datasets that include granular industry, occupational, and corporate information, thereby facilitating a more profound understanding of the LGBTQ+ workforce and its economic outcomes.

11.1 Occupational Sorting by Sexual Orientation

Extant research has indicated that sexual minorities often diverge from traditional gender-based occupational patterns, with lesbian workers, for instance, gravitating toward better-compensated roles that have traditionally been dominated by men (Ahmed & Hammarstedt, 2010; Antecol et al., 2008; Baert, 2014; Blandford, 2003). This trend extends to gay men, who are found predominantly in occupations and industries characterized by a greater representation of females. Del Río and Alonso-Villar (2019) underlined the significant influence of occupational choice on earnings disparity, controlling for various demographic factors, including education, immigration status, and age.

The workplace preferences of LGBTQ+ individuals, which are potentially influenced by employer bias, underscore earnings discrepancies and occupational sorting patterns. Studies such as Plug et al. (2014), which utilized the Australian Twin Register, highlight the tendency of lesbian, gay, and bisexual individuals to select occupations within more accepting environments. Martell (2013a) found that wage differentials act as a compensatory mechanism, where gay workers may accept lower wages in environments that support their sexual orientation disclosure.

Prejudice and discrimination affect not only workplace dynamics but also prelabor market decisions. Burn and Martell (2020) demonstrated that gay men prioritize factors beyond income when selecting college majors, possibly to mitigate stigma-related costs. This finding aligns with theories suggesting that discrimination significantly impacts the economic decisions of lesbian and gay workers.

Flage (2019) found that discrimination is more pronounced in low-skilled positions and affects gay applicants more than lesbians. The concept of a "gay glass ceiling" was further explored by Aksoy et al. (2019) and De Vries and Steinmetz (2023), who noted that despite higher managerial positions, gay men and lesbian women are often confined to lower-level roles compared to heterosexual men, suggesting a barrier to upper management for gay men and lesbian women.

Moreover, Martell (2018) observed that the gay earnings penalty diminishes in professional and management occupations, which offer greater independence, thereby allowing gay workers more control over their sexual orientation disclosure and reducing the impact of discrimination.

The representation of sexual minorities in science, technology, engineering, and mathematics (STEM) fields has garnered increased attention, with research indicating disparities in participation and retention rates for sexual minorities.
compared to those of their heterosexual peers (Cech & Waidzunas, 2021; Hughes, 2018; Hughes & Kothari, 2023; Sansone & Carpenter, 2020). Notably, gay men in same-sex couples are less likely to pursue STEM-field bachelor’s degrees, and LGBTQ+ students and academicians face hostile environments, which impacts their retention and success in these fields.

A considerable volume of research has been devoted to understanding the presence of sexual minorities in STEM fields, uncovering nuanced disparities and challenges (Cech & Waidzunas, 2021; Hughes, 2018; Hughes & Kothari, 2023; Sansone & Carpenter, 2020). Notably, Sansone and Carpenter (2020) discovered a 12-percentage-point deficit in the likelihood of men in same-sex relationships obtaining a STEM-field bachelor’s degree compared to their heterosexual counterparts, with no corresponding gap found among women. Furthermore, studies by Hughes (2018) and others reveal a troubling trend of LGBTQ+ students exiting STEM fields at rates higher than those of their heterosexual peers, with sexual minority students being 7% less likely to remain within these fields. These studies also highlight the critical role of LGBTQ+ visibility and mentorship in the STEM careers of faculty members, showing positive associations between the presence of gay men and a more inclusive environment for all underrepresented groups in STEM fields. Sansone and Carpenter (2020) suggested that implicit and explicit biases such as sexual harassment, unequal access to funding, and fewer speaking invitations are driving the associated gap in STEM fields between gay and heterosexual men. Finally, both Hughes (2018) and Sansone and Carpenter (2020) reported that the level of gay male representation in STEM fields is positively associated with the level of female representation and the presence of a friendly environment for women.

In Sweden, Ahmed et al. (2013a) and Ahmed et al. (2011a) identified discrimination and sorting against gay and lesbian applicants in gender-typical sectors, highlighting the need for broader research using nationally representative data to understand the barriers faced by sexual minorities in the labor market and educational pathways. This underscores the importance of delving into specific challenges and opportunities for sexual minorities, particularly in STEM fields, to foster a more equitable labor market.

11.2 Occupational Sorting by Gender Identity

In Sweden, while occupational sorting has been analyzed in terms of sexual orientation (Ahmed et al., 2011a), the dynamics based on gender identity remain unexplored. Future research should fill this gap by examining the occupational and industrial sorting of transgender and cisgender workers, considering those who have and have not undergone gender confirmation surgery, across different stages of gender transition.

The representation of LGBTQ+ individuals in STEM fields, particularly in STEAM industries, underscores a trend toward higher attrition rates for LGBTQ+ students than for their non-LGBTQ+ peers (Hughes, 2018; Hughes & Kothari,
Cech and Waidzunas (2021) highlighted that negative workplace treatments, such as limited career opportunities, social marginalization, and expertise devaluation, contribute significantly to the departure of sexual and gender minorities from STEM fields.

The scarcity of sexual and gender minorities in STEM fields not only raises equity and access issues (Hughes, 2018; Sansone & Carpenter, 2020; Tao, 2018) but also poses a threat to innovation within these fields. Research has demonstrated that diversity within teams fosters more creativity, productivity, and objective innovations, making the inclusion of more varied perspectives critical for advancing scientific and technological progress (Díaz-García et al., 2013; Hofstra et al., 2020; Hossain et al., 2020; Nathan & Lee, 2013; Sommers, 2006).

12 Wealth Inequalities

This section delves into the wealth accumulation patterns, real estate ownership, financial assets, and savings behavior among LGBTQ+ individuals, leveraging surveys and administrative data to uncover novel aspects of economic disparities.

12.1 Wealth Comparison by Sexual Orientation

Research into real estate wealth reveals notable disparities based on sexual orientation, underscoring the importance of homeownership for both personal and social benefits. Florida and Mellander (2010) identified a positive impact of gay populations on housing values within their communities. During periods when same-sex marriage was not legalized, Leppel (2007) found that same-sex couples were more likely to own homes than unmarried opposite-sex couples, yet less so than married opposite-sex couples. Furthermore, studies have shown that sexual minorities possess less housing wealth (C. Jepsen & Jepsen, 2009), are less inclined to share joint accounts (Klawitter, 2008), and face a greater risk of poverty (Schneebaum & Badgett, 2019; Uhrig, 2015) than their counterparts. Same-sex couples, even when adjusted for income, education, and demographic factors, are 5% less likely to own a home than their heterosexual counterparts, as reported by C. Jepsen and Jepsen (2009).

Discrepancies extend to mortgage costs and approval rates, with lesbian couples facing higher annual mortgage payments relative to house value than both heterosexual and gay couples (Negrusa & Oreffice, 2011). Sun and Gao (2019) observed 0.02–0.2% higher mortgage fees and lower loan acceptance rates for same-sex borrowers, despite presenting lower risk profiles. Dillibary and Edwards (2019) and Sun and Gao (2019) found evidence of 2 to 7% lower acceptance rates of loans for same-sex male applicants, suggesting sexual orientation-based bias as a probable cause, despite prohibitions against such discrimination in federally funded FHA loans.
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In terms of financial assets, Klawitter (2008) noted that married opposite-sex couples are more likely to hold joint accounts than same-sex and unmarried opposite-sex couples, pointing toward a disparity in financial integration and wealth management within these groups.

The evident need for more comprehensive research on the wealth and economic experiences of sexual minorities prompted this dissertation. By leveraging high-quality Swedish administrative data, this thesis aims to provide a detailed longitudinal analysis of the wealth patterns among LGBTQ+ individuals residing legally in Sweden, thus contributing significantly to the understanding of wealth disparities.

12.2 Wealth Comparison by Gender Identity

The intersection of gender identity and wealth remains underexplored, highlighting a significant gap in our understanding of how transgender individuals’ demographics influence their economic status. Future research needs to address this gap and examine wealth disparities faced by the transgender community, contributing valuable knowledge to the field and informing future policy and research directions.

13 Firms and Entrepreneurship

In a groundbreaking decision in August 2021, the Securities and Exchange Commission (SEC) approved NASDAQ's initiative to implement listing rules promoting board diversity (Brahma et al., 2023; Nasdaq, 2021). This policy mandates that listed companies achieve gender and racial diversity benchmarks, including the requirement for at least one board member who self-identifies as an LGBTQ+ individual or as a racial minority. NASDAQ supported this regulation, citing the substantial shareholder and stakeholder consensus that such diversity mandates improve corporate governance and performance, thereby meeting investor expectations for board diversity (Brahma et al., 2023; Nasdaq, 2021).

This evolution in policy underscores a significant shift in both corporate and social attitudes toward LGBTQ+ inclusion within the financial sector. However, the nuanced impact of LGBTQ+ policies on financial dynamics remains largely uncharted. Theoretical frameworks suggest disparities in self-employment preferences among different sexual orientations and gender identities, attributing this to the unique challenges and opportunities faced by marginalized groups (Clark & Drinkwater, 2000; Fairlie & Meyer, 1996; Galloway, 2007; Moore, 1983).

Investor influence on firm performance through policies that are supportive of sexual and gender minorities is also critical. Research by Do et al. (2022) revealed that investor behavior is significantly impacted by a firm's stance on LGBTQ+
issues, with mutual funds adjusting their investments based on their preference for LGBTQ+-friendly companies, especially during periods of favorable public sentiment toward LGBTQ+ policies.

Shanaev, Skorochodova, and Vasenin (2023) elucidated the implications of having LGBTQ+ chief executive officers (CEOs) for stock performance. Their research examined the stock performance of firms led by LGBTQ+ CEOs and analyzed an exhaustive sample of 26 LGBTQ+ publicly listed company CEOs since 2000. The findings are compelling, indicating that stocks of firms led by LGBTQ+ CEOs outperform the market by 0.69–1.08% per month. The effects are smaller for gay male CEOs than for CEOs with other LGBTQ+ identities.

In summary, the adoption of NASDAQ's diversity requirements not only reflects a transformative stance on corporate inclusivity but also underscores the economic rationale behind promoting LGBTQ+ leadership within the business realm.

13.1 Firms and Entrepreneurship by Sexual Orientation

The exploration of entrepreneurial activities across sexual orientations reveals a complex landscape, with studies presenting varied outcomes. Leppel (2016), utilizing American Community Survey data, found disparities in self-employment rates, indicating that gay men are less likely to engage in entrepreneurship than heterosexual men, whereas lesbians show a greater propensity than heterosexual women; this trend was corroborated by Waite & Denier (2016) through Canadian data analysis. Conversely, Pajovic et al. (2023) found that sexual minority men and women in Canada are generally less inclined toward self-employment. Similarly, Jepsen & Jepsen (2017) reported that in the U.S. context, gay men are less likely to be entrepreneurs than heterosexual men, while sexual minority women’s entrepreneurial rates do not significantly deviate from those of heterosexual women. In the UK, Marlow et al. (2018) identified no significant differences in entrepreneurial activity between sexual minorities and heterosexuals for both genders. This array of findings underscores the need for further exploration within this domain.

Self-employment research reveals additional layers of complexity, potentially influenced by race, gender, and minority status. Minority-owned businesses are often documented as underperforming, which is a trend that might extend to firms owned by sexual minorities due to similar hurdles such as lack of management experience or capital (Bapna & Ganco, 2021; Fairlie & Robb, 2009; Gafni et al., 2021; Loscocco et al., 1991; Robb, 2002). In Sweden, Ahmed et al. (2011) noted a dichotomy where gay men are less represented in managerial roles than heterosexual men, whereas lesbians are more likely to occupy such positions. Furthermore, Aksoy et al. (2019) and De Vries and Steinmetz (2023) found a “gay glass ceiling,” with gay men facing significant barriers to reaching top managerial positions within firms.
13.2 Firms and Entrepreneurship by Gender Identity

There is relatively little research documenting the differential rates of entrepreneurial activity across gender identities. Ciprikis (2023) found that transgender persons are less likely than cisgender men but more likely than cisgender women to be self-employed. Transgender people are also likely to earn less than cisgender persons; however, in terms of income from self-employment only, transgender people are no better or worse than self-employed cisgender men.

14. Contribution of the Thesis and Summary of the Papers

The existing research on the effects of sexual orientation and gender identity on labor, wealth, and firms is both emerging and evolving. This research has led to parallel advancements in workplace diversity, corporate policies, and legal decisions related to LGBTQ+ issues. In this chapter, I offer a thorough review of this literature, highlighting key findings and identifying areas that warrant further study. Below, I summarize the areas where more research is required (Badgett et al., 2021, 2023; Brahma et al., 2023).

There is broad agreement that LGBTQ+-friendly workplace policies contribute positively to corporate performance. These benefits arise through various channels, including attracting talent from a wider pool, enhancing the company's reputation, and gaining better access to financial resources. However, the discussion on the direct impact of LGBTQ+ inclusivity on business outcomes is ongoing. A critical gap in the literature is represented by its heavy focus on the United States, suggesting the need for research in other contexts, such as Sweden, to provide a more global perspective. Future research could also benefit from examining the actual representation of sexual and gender diversity among entrepreneurs and employees and its impact on company decisions and performance. Additionally, the relationship between LGBTQ+ identities and corporate governance is underexplored and thus ripe for investigation with more comprehensive data (Badgett et al., 2021, 2023; Brahma et al., 2023).

To fill this gap, in the first paper, we provide new evidence on sexual orientation, entrepreneurship, and firm survival using Swedish population register data linked to business registry data from 1995–2020. Over this period, we study over 19,000 individuals who ever entered a legal same-sex union and compare their entrepreneurship and firm-level outcomes with those of individuals exclusively in different-sex unions. We find that sexual minority men are 7.8% less likely than comparable heterosexual men to be entrepreneurs, while sexual minority women are 4.8% more likely than comparable heterosexual women to be entrepreneurs. Both differences are statistically significant. We also provide the first evidence regarding the survival of sexual minority-founded firms
compared to that of firms founded by heterosexual individuals. Our results show that firms founded by sexual minority women fail more quickly than do observably similar firms founded by heterosexual women, with no significant difference in survival observed for sexual minority men. We explore several mechanisms underlying these patterns and find evidence that both external factors (attitudes toward sexual minorities and the density of same-sex couples), as well as internal factors (e.g., the presence of a romantic partner), may contribute to the differential survival of ventures founded by sexual minority women.

Research has identified a critical consensus regarding the differences in financial decisions between LGBTQ+ and heterosexual couples. A concerning discovery within this area is the potential barriers that LGBTQ+ individuals may face in accessing mortgage markets (Negrusa & Oreffice, 2011; Sun & Gao, 2019). This highlights the need for further investigation to determine whether similar obstacles exist for other financial services. Additionally, understanding the broader financial landscape for LGBTQ+ individuals, including their wealth and debt portfolios, remains an underexplored area. Preliminary studies suggest that areas with larger LGBTQ+ populations may have positive impacts on real estate values; however, this research is limited primarily to large urban centers (Florida & Mellander, 2010). Thus, there is a clear demand for more comprehensive studies that look at housing prices, savings, investment behaviors, liabilities, and overall financial wealth disparities to better understand LGBTQ+ wealth disparities and drivers (Badgett et al., 2021, 2023; Brahma et al., 2023).

To expand upon existing research, the second paper, “Wealth, Gender and Sexual Orientation – Evidence from Siblings,” investigates the link between wealth and sexual orientation across genders using administrative data. By analyzing almost 4,400 individuals who have ever been in a same-sex legal union and comparing their wealth with that of their siblings exclusively in different-sex relationships, we show that the wealth gap by gender and sexual orientation varies across the wealth distribution. Men in same-sex couples experience a wealth penalty below the P80 percentile and a wealth premium above the P80 percentile. For women, the wealth penalty persists until the P95 percentile. Similar patterns hold for the subcomponents of wealth; men in same-sex couples tend to have more financial resources, real estate, and debt at the top of the respective distributions, while women in same-sex couples tend to have more financial resources but less real estate and total debt. Additional analysis highlights the positive marginal effects of urban residency and years of schooling on these patterns.

The economic study of labor market outcomes necessitates a deeper exploration of how sexual orientation and gender identity intersect with other characteristics. Understanding differential treatment in hiring, promotion, and layoffs requires data from individual companies. Moreover, there is a significant gap in the research identifying the occupations and industries that are the most welcoming to LGBTQ+ individuals (Badgett et al., 2021, 2023; Brahma et al., 2023).

Understanding who becomes a multiple job holder is important for understanding who may be subject to the adverse consequences of moonlighting,
especially as the incidence of moonlighting is likely to increase within the context of a global economy that is moving toward short-term labor models and online contract platforms. While a few studies have explored gender differences in moonlighting (Averett, 2001), most of the related research has focused on lower-skilled workers who take second jobs out of necessity (Caza et al., 2022). As a consequence of this narrow perspective, relatively limited work has investigated the incidence and drivers of multiple job holding across different groups (Campion et al., 2020). In particular, we lack a clear picture of moonlighting among sexual minority individuals, who may be at greater risk of adverse consequences from moonlighting due to their economic vulnerabilities and disadvantage in the labor market (Badgett et al., 2023).

To help close the research gap, in the third paper, for the first time, we use administrative data from Sweden to document the incidence and drivers of multiple job holdings among sexual minority individuals. Specifically, we use population registry data, which allows us to identify every individual who was ever in a registered same-sex relationship in Sweden from 1995–2021, and we compare outcomes for these individuals with the associated outcomes for individuals who were only ever observed to be in different-sex registered relationships. The population register data also allow us to identify individuals employed by either one or multiple firms within the course of a year, which we use to identify multiple job holders. Using these data, we demonstrate that sexual minority men are approximately 8 percentage points more likely to be multiple job holders than their otherwise comparable heterosexual counterparts are, while sexual minority women are approximately 3 percentage points more likely to be multiple job holders than their heterosexual counterparts.

We identify and analyze four potential mechanisms that may explain the greater incidence of moonlighting among sexual minority individuals. A commonly proposed explanation for holding multiple jobs pertains to financial constraints, namely, employees who cannot earn more in their primary job work a second job to supplement their earnings (Hirsch et al., 2016; Kimmel & Smith Conway, 2001; Shishko & Rostker, 1976; Smith Conway & Kimmel, 1998). It is well established that sexual minority individuals (especially sexual minority men) experience earnings disparities (Badgett et al., 2009b); therefore, sexual minority individuals may use multiple job holdings as a way to increase their income. To explore whether financial constraints drive our main findings, we explore whether disparities in multiple job holdings vary across the distribution of earnings and whether sexual minority individuals are differentially likely to work in low-skilled second jobs. Our findings demonstrate that the disparity in sexual orientation-based multiple job holding increases in magnitude across the distribution of earnings, that sexual minority individuals are less likely to hold a second job in a low-skilled job, and that sexual minority individuals are more likely to hold a second job that is highly skilled. Broadly, these results rule out differential financial constraints as the underlying mechanism.

Finally, regarding labor market outcomes, more work in economics is needed on the intersections of sexual and gender minority status with other
characteristics. To assess differential treatment at later stages of the hiring process, at promotion, or at discharge/layoffs, data from individual firms may be useful. More research on economics is needed to identify the occupations and industries that are more inclusive of LGBTQ+ people. (Badgett et al., 2021, 2023; Brahma et al., 2023)

A recurring theme in our review is the lack of comprehensive data on transgender individuals across economically significant aspects of life, such as education, family dynamics, and employment (Badgett et al., 2021, 2023; Brahma et al., 2023). This gap is partly due to historical data collection limitations, with only recent surveys beginning to include questions about sexual orientation and gender identity. The absence of detailed research on transgender and other identities within the LGBTQ+ community (indicated by the "+") is both notable and problematic (Badgett et al., 2021, 2023; Brahma et al., 2023). Specifically, there is a scarcity of nationally representative studies on the economic outcomes of transgender people (Geijtenbeek & Plug, 2018; Kolk et al., 2023). This underscores a broader consensus on the necessity for more inclusive research to understand the impact of LGBTQ+-friendly policies on economic growth, particularly how these policies influence regional development, FDI, and innovation rates. Research on transgender populations and their effect on economic development remains particularly underdeveloped (Badgett et al., 2021, 2023; Brahma et al., 2023).

Thus, to continue to the current field of literature, in the fourth paper, I examine the first evidence of labor market outcomes among TG individuals in Sweden through extensive population register data from 2006 to 2021. This study focuses on a cohort of more than 900 transgender individuals who underwent legal gender changes between 2013 and 2020. A comparative approach reveals disparities in labor market outcomes, showing a reduced likelihood of employment and lower salary for transgender individuals compared to their cisgender siblings. Notably, transgender women exhibit lower employment rates than their transgender brothers, cisgender sisters, and cisgender brothers. Furthermore, transgender men have lower salaries, and transgender women encounter challenges in finding employment after changing their legal gender. These findings highlight the vulnerable economic standing of transgender individuals in Sweden.
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Labor, Firm and Wealth Effects of Gender and Sexuality

Recent global surveys indicate that 9% of adults in the world identify as LGBTQ+ individuals, with the proportion increasing to 18% among the youngest generation (Jackson, 2023). This demographic shift emphasizes the necessity for further economic research across LGBTQ+ populations. This thesis aims to explore the role of gender and sexuality in labor, firm, and wealth disparities.

The first paper finds that sexual minority men and women are, respectively, 7.8% less and 4.8% more likely to engage in entrepreneurship than comparable heterosexual men and women. Moreover, the results suggest that both external factors (e.g., attitudes toward sexual minorities) and internal factors (e.g., the presence of a romantic partner) contribute to the lower survival of ventures founded by sexual minority women.

The second paper explores wealth differentials across genders and sexual orientations. This study shows nuanced patterns, such as a wealth penalty for men and women in same-sex couples below the P80 percentile and the P95 percentile, respectively.

The third paper finds that sexual minority individuals are significantly more likely to hold multiple jobs, with drivers providing self-insurance for men and career mobility for women. Notably, holding multiple jobs among sexual minority women is associated with reduced unemployment and increased earnings growth.

The fourth paper finds a reduced likelihood of employment and lower salary for transgender individuals compared to their cisgender siblings. After changing legal gender, transgender men have lower salaries, and transgender women have higher salaries but encounter challenges in finding employment.

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