Social-Institutional Structures That Matter:
A Quantitative Monograph of Sexual/Gender Minority Status and Earnings in Japan

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Abstract

While most previous studies examining the effects of sexual orientation on earnings rely on lesbians, gay men, and their heterosexual counterparts in Western societies, this quantitative monograph argues that focusing on social-institutional structures of a society and understanding specific stratification processes based on various sexual/gender minority statuses are important for the theory of stratification by sexual orientation and transgender status. Using the “niji VOICE 2018” survey, this study examines the association between sexual/gender minority status and earnings in Japan. The analysis shows that there is a negative association between being a sexual/gender minority and earnings among both designated females at birth and designated males at birth. The results suggesting the lesbian premium found in Western economies are not observed in Japan. The findings also indicate that the processes through which stratification based on sexual orientation and transgender status may operate depend on various categories of

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sexual/gender minorities such as lesbian, gay, bisexual, transgender, and a Japanese local transgender category “X-gender.”

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Introduction

Although the study of earnings inequality has been an important part of sociological research, the existing literature on this topic had traditionally focused on earnings disparity by gender and race (Morris and Western 1999). Since mid-1990s, however, a small but growing number of studies have explored the association between sexual orientation and earnings. These studies generally show that gay men tend to earn *less* than their heterosexual counterparts, a phenomenon known as the gay penalty, while lesbians tend to earn *more* than their heterosexual counterparts, a phenomenon known as the lesbian premium (Klawitter 2015). Klawitter's (2015) meta-analysis shows that lesbians gain a premium of 9% on average while gay men gain a penalty of 11% on average.

Understanding the relationship between sexual orientation and earnings is socially significant, because the U.S. society has been experiencing a rapid shift regarding public opinions about same-sex sexuality since 1990s, and this progressive change is characterized to occur faster than that of attitudes toward other social issues including racial and immigrant issues (Fetner 2016). In addition, it is sociologically significant, because sexual orientation may be concealed, whereas gender and race, which previous earnings inequality studies have largely focused on, are deemed visible in many social situations. A probability-based survey in the United States indicates that 46% of LGBTQ (lesbian, gay, bisexual, transgender, and queer) people hide their minority status at work (Human Rights Campaign Foundation 2018a). This distinctiveness of sexual orientation as an invisible trait (Martell 2013) points to the usefulness of sexual orientation as a potentially unique analytic case to advance theories of stratification based on social attributes.

However, almost all of the existing studies of sexual orientation and earnings currently

use data from Western countries such as the United States (Badgett 1995), Canada (Carpenter 2008), the United Kingdom (Arabsheibani, Marin, and Wadsworth 2005), France (Laurent and Mihoubi 2012), Germany (Humpert 2016), the Netherlands (Plug and Berkhout 2004), Sweden (Ahmed and Hammarstedt 2010), Australia (La Nauze 2015), and Greece (Athens only) (Drydakis 2012). Thus, they may fail to take into consideration the fact that there is a possibility that their results and theoretical explanations rest on the *social-institutional features* of a specific society. Also, there is little data that allows investigating the *internal* complexity of various sexual minorities such as bisexual people in the analysis. Many previous studies on this topic solely compare gay men and lesbians with their heterosexual counterparts. Furthermore, the research on earnings disparities experienced by gender minorities is extremely scarce. However, studying sexual and gender minorities simultaneously is considered important especially in non-Western societies such as Japan, where socio-cultural representation of same-sex sexuality and that of gender-crossing have often been inseparable (McLelland 2000), reflecting the historically close relationship between non-normative gender and sexuality in Japan. Moreover, as Badgett (2007) points out, there is a possibility that employers and coworkers in the workplace do not recognize clear distinctions between sexual orientation and transgender status to treat sexual minorities and gender minorities as identical, even in Western societies.

In order to describe the earnings patterns in much greater details than has been conducted in the past with a cross-national perspective, I use a unique Japanese dataset collected in 2018, titled “niji VOICE 2018: A Web Survey on LGBT Issues and the Workplace Environment” (the “niji VOICE 2018” survey, hereafter). Although this survey is a non-probability web survey, there is no population-based survey that measures sexual orientation, transgender status, and earnings in Japan and this survey is one of the only existing large-scale

surveys that permits the analysis of the economic situation of sexual and gender minorities in non-Western societies. Moreover, this dataset is unique in that it has questions about current gender identity and gender assigned at birth to capture transgender status as well as a question on self-identified sexual orientation, which makes it possible to construct a complex classification of sexual and gender minorities. However, these data come from an online cross-sectional non-probability sample of Japanese respondents, limiting the generalizability of findings and the identification of the causal order of relationships. Given the extreme scarcity of quantitative research on sexual and gender minorities in Japan, and non-Western countries, in general, the purpose of this study is to examine the associations between various LGBTQ statuses and earnings to provide a quantitative description of sexual and gender minorities in Japan. Hence, the approach employed in this research may be best described as that of “*quantitative monograph*” (Ojima 2001:5).

Overall, my findings suggest that, unlike what most studies in Western societies indicate, there is an earnings disadvantage for both lesbians and gay men in Japan. In addition, my analysis shows that patterns of associations between sexual orientation, transgender status, and earnings differ by various sexual/gender minority statuses. Results of these analyses underscore the usefulness of applying a social-institutional perspective on pathways that generate earnings inequality as well as the significance of incorporating diverse sexual and gender minorities for developing a fuller depiction of the relationship between sexual orientation, transgender status, and earnings across societies.

Background

Human Capital Theory in Cross-national Perspective

One important theory of earnings disparity by sexual orientation is human capital theory. Previous studies by labor economists apply human capital theory (Becker [1964] 1994), Becker's specialization model in particular (Becker [1981] 1993), to lesbians and gay men, attempting to explain the lesbian premium and the gay penalty. For example, Badgett (2007) states that gay men are less likely to invest in human capital than heterosexual men. Assuming that gay men are oriented toward partnering with a man, gay men can rely on their partner's earnings, while heterosexual men are supposed to be the household breadwinner once they are partnered with a woman, who tends to earn less than a man. On the contrary, she argues, lesbians are more likely to invest in human capital than heterosexual women, because lesbians do not anticipate to be partnered with a man and they need to be economically independent in order not to partner with a man, while heterosexual women can rely on their partner, who earns more than women.

However, empirical results do not fully support the predictions of the human capital model. While previous studies certainly indicate that lesbians tend to have higher educational attainment than heterosexual women, these studies also find that gay men are likely to have higher educational attainment than heterosexual men (Baumle, Compton, and Poston 2009; Black et al. 2000). This indicates that the model does not necessarily predict patterns of human capital acquisition by gay men. In addition to the fact that the human capital model does not fit the empirical data well, the *human capital development system* (Brinton 1988:305) represents another potential limitation of this original human capital model.

In an attempt to explain why gender inequality in Japan is larger than in most other industrialized country including the United States (Blau and Kahn 2003), Brinton (1988:305) proposes the concept of a "*human capital development system*" in her article "The

Social-Institutional Bases of Gender Stratification: Japan as an Illustrative Case” to refer to the ways in which women’s and men’s human capital accumulation is institutionally structured around gendered family, education, and labor market systems. This system consists of “(1) the social-institutional context of human capital development and evaluation, reflected by the structure of the educational system and the labor market and (2) the structure of exchanges and investment, especially intergenerational ones, within the family as the supplier of labor” (Brinton 1988:305). In this paper, I will call this system *the social-institutional structures* to further emphasize a structural focus, as opposed to the focus on presumably autonomous individuals under human capital theory.

Gender Stratification in Japan

Using this framework, Brinton (1988) analyzes the education system in Japan and shows that one cannot assume that individuals can autonomously invest in education in a variety of stages in the life course in Japan, while such a restriction is cross-nationally less prevalent in the U.S. society. Data on the proportion of newly enrolled students in Japan show that 95 percent of them are aged 19 or less, indicating that progress through the educational system in Japan is embedded in strict age norms (Ministry of Education, Culture, Sports, Science and Technology, Japan 2015). Given that little opportunity is provided to go back and resume the human capital accumulation process once people complete school in Japan, Brinton (1988) suggests that parents’ early educational investment in children plays a crucial role in determining how much human capital they can acquire. However, parental educational aspirations for their children are higher for sons than for daughters in Japan (Brinton 1988; Fujihara 2009). Combined with educational systems where parents play a decisive role in how much human capital children can

accumulate and family systems where parents aspire higher education for sons than for daughters, the social-institutional structures in Japan function to support strong gender inequality, even before students enter into the labor force. A recent trend shows that Japan has the lowest women share of bachelor's graduates (45.4%) in the OECD countries (OECD 2017).

In addition to educational systems and family systems, Brinton (1988) points out that employment systems also contribute to the persistence of gender inequality in Japan. One of the features of the Japanese labor market is a strong firm internal labor market supported by the long-term employment system (Kalleberg and Lincoln 1988), which is largely maintained in the 2010s (Kanbayashi 2017). Because the average years of job retention are shorter among women workers than men workers in Japan, companies are less willing to offer on-the-job training opportunities for women workers (Brinton 1993). Therefore, women in the labor market are structurally disadvantaged by the Japanese social-institutional structures that value continuous labor force participation, because the fact that many Japanese women are pressured to leave the labor force upon marriage and childbirth makes it difficult for them to have the same number of years of continuous work experience as men to climb the career ladder (Brinton 2001). The Fifteenth Japanese National Fertility Survey conducted by the National Institute of Population and Social Security Research, Japan (2017) shows that 18.7 percent of women workers who married between 2010 and 2014 exited the labor force upon marriage, and 46.9 percent of married women workers in the labor force left their job upon their first childbirth that occurred between 2010 and 2014.

In relation to the barriers to career advancement for women, previous studies show that intra-occupational employment status such as full-time, part-time, permanent, and temporary employment, rather than occupation, account for the persistence of gender inequality in the

Japanese labor market (Shirahase and Ishida 1994; Chang and England 2011). It should be noted that the categories of employment status in the Japanese context refer to distinct employment *designations* as a status, not the number of work hours or the presence/absence of the contract period. Houseman and Osawa (1998) report that about 20-30% of “part-time” workers in Japan work as long as “full-time” workers. Recent research in economics in Japan also shows that “whether or not to be called a standard worker in the workplace” (Kanbayashi 2017:165) determines one’s employment status in Japan.

In Japan, women who return to the labor force after childbirth and childrearing are likely to return to work as part-time workers, not as full-time workers (Tanaka 1996), and these returnees tend to be in blue-collar work, which reduces the degree of gender occupational segregation in Japan (Shirahase and Ishida 1994). However, studies on gender inequality in Western countries tend not to focus on the gender wage gap within an organization, due to the low contribution of within-job gender differences in earnings (Kim and Shirahase 2014). Instead, these studies have focused more on occupational gender segregation to claim that occupational segregation is among the most important determinants of the gender wage gap (Blau and Kahn 2017). The results above, however, highlight the importance of employment status in contributing to gender pay gap in Japan (Chang and England 2011).

Sexual and Gender Minorities in Japan

In applying the arguments regarding gender stratification above to sexual and gender minorities in Japan, it is important to understand the cultural and legal contexts for sexual and gender minorities in Japan. Unlike Christianity, major religions in Japan such as Buddhism and the native *Shinto* do not have a clear moral system that is hostile to same-sex sexuality or

transgenderism (Faure 1998; Mitsuhashi 2008). History research shows that sexual behaviors between men was tolerated in pre-modern Japan (McLelland 2005), where sexual relations between men are associated with transgenderism and transgenerationality, as the penetrated man is regarded as having submissive female and youthful characteristics (Pflugfelder 1999). Similarly, there is a long tradition of (mainly male-to-female) cross-dressing in Japanese history (Mitsuhashi 2008). However, the public discourses regarding non-normative sexuality and gender became hostile, when Japan began to be incorporated into the modern world in the late 19th century (Leupp 1995). Nevertheless, it should be noted that the law prohibiting anal sex between men existed only between 1872 and 1882, and this was the only law prohibiting same-sex sexual behavior in Japan (Pflugfelder 1999).

After the defeat of Japan in World War II, the term *gei*, or gay, was introduced via gay men in the Allied occupation forces (McLellad 2005). In Japan, however, this term first came to be understood as effeminate gay “men who displayed transgender characteristics and worked in the entertainment world” (McLelland 2005:104). This historical overlap between concepts associated with gay men and those associated with male-to-female transgender people in Japan continues to date (Lunsing and Maree 2004), although the disassociation of same-sex sexuality from transgenderism also started gradually in 1980s with the rise of lesbian and gay movement in Japan, when the term *gei* started to be used in a similar way as English (McLelland 2005). Therefore, as sociologists of sexuality in Japan argue, the issues of sexual orientation and transgender status certainly have different aspects but these issues are not completely separable (Kazama and Kawaguchi 2010:169).

As of 2019, there is no discriminatory law targeted against sexual/gender minorities in Japan, but Tokyo, the city hosting the upcoming 2020 Olympics and Paralympics, is currently

the only prefecture where there is an anti-discriminatory ordinance based on sexual orientation and gender identity (Human Rights Watch 2018). Regarding attitudes toward same-sex sexuality in contemporary Japan, there is little difference compared to the United States in terms of the overall level of societal acceptance (Pew Research Center 2013). As for LGBT policies in the workplace, 32% of public-listed major/emerging companies in Japan have some policy about LGBT issues in 2018 (Toyo Keizai 2018), whereas 95% and 93% of the largest and most successful U.S. companies have sexual orientation protections and gender identity protections, respectively (Human Rights Campaign Foundation 2018b). Also, the “niji VOICE 2018” survey indicate that 30% of sexual minorities and 40% of gender minorities disclose their minority status at work in Japan (Niji Diversity and the Center for Gender Studies at International Christian University 2019), whereas 54% of U.S. sexual and gender minorities disclose their minority status in the workplace (Human Rights Campaign Foundation 2018a) and 53% of transgender people hide their gender identity at work in the past year (James et al. 2016). Therefore, sexual and gender minorities in Japan are even less likely to disclose their minority status than those in the United States.

Overall, despite Japan is one of the three largest economies in the world in terms of the Gross Domestic Product (World Bank 2017), Japan has an arguably distinct legal, cultural, and religious contexts regarding sexual and gender minorities compared to Western countries. Therefore, these differences make Japan a useful case to develop a theory of stratification based on sexual orientation and transgender status with a cross-national perspective.

Stratification by Sexual Orientation and Transgender Status in Japan

While previous studies on gender stratification help to understand stratification based

on sexual orientation and transgender status, it is also important to stress that stratification experienced by sexual and gender minorities is not just a reflection of gender stratification, but it is a distinct stratification structure that closely interacts with gender stratification, as is seen from Badgett's (2007) explanation, which assumes gender pay gap between women and men. In addition, it should be noted that, following the argument of Brinton (1988), stratification based on sexual orientation and transgender status in Japan is likely to exhibit a different pattern from that found in Western societies. Although research on stratification by sexual orientation and transgender status in Japan is virtually nonexistent, the following features can be inferred from previous gender stratification research and other very few studies on sexual and gender minorities in Japan.

First, although Brinton (1988) assumes that mothers can distinguish sons and daughters so that they can invest their children differently, it is difficult for them to clearly distinguish whether their children belong to sexual/gender minorities. This is one of the most important differences between potential mechanisms of gender stratification and those of stratification based on sexual orientation and transgender status. An online survey in the Kanto region (Greater Tokyo Area), Japan indicates that 9 percent of non-heterosexual designated females at birth and 6 percent of non-heterosexual designated females at birth disclosed their sexual minority status to their mother between when they went to elementary school and when they went to high school. Compared to sexual minorities, gender minorities seem to be somewhat more compelled to disclose their transgender status as it often entails a physical transition. The same survey shows that 21 percent of designated females at birth with gender dysphoria and 27 percent of designated males at birth with gender dysphoria disclosed their transgender status by high school (Inochi Respect. White Ribbon Campaign 2014). It should also be noted that

disclosing one's transgender status does not necessarily entail that their parents will henceforth treat them as having the gender that is different the gender assigned at birth. An online survey in Japan shows that only 23.3 percent of parents are positive about coming out, saying that they would "accept favorably" or "be surprised but be able to accept immediately" if their children came out as LGBT (Letibee 2016). Overall, these results imply that, if different levels of human capital accumulation among people of different sexual orientation or transgender status were observed in Japan, they are less likely to be related to different patterns of parental investing in education based on whether the parents' children are heterosexual/non-heterosexual or transgender/non-transgender, because they are unlikely to know their children's sexual/gender minority status, whereas their children's gender assigned at birth, which they regard as their children's gender, is clearly visible to them.

Second, there seems to be a difference between how sexual/gender minorities in Western countries and those in Japan avoid workplace discrimination. Some studies on sexual orientation and earnings in Western countries began to focus on the role of occupational sorting by sexual orientation (Blandford 2003; Antecol, Jong, and Steinberger 2008), examining to what extent cross-gender occupational preference among lesbians and gay men (Baumle, Compton, and Poston 2009; Ueno, Roach, and Peña-Talamantes 2013) is important for earnings disparity by sexual orientation. Currently, there is no solid consensus about whether occupational segregation is an important factor contributing to the lesbian premium and the gay penalty. While Blandford (2003) argues that occupational clustering is among the most plausible explanations, Antecol, Jong, and Steinberger (2008) shows that human capital accumulation (especially education) plays a significant role in explaining earnings disparity and occupational sorting plays a minimal role. However, although the empirical studies examining occupational

segregation are still limited, there seems to be a consensus that occupational segregation is an important topic to examine. This focus on occupation is based on an understanding that sexual minorities may attempt to minimize the risk of experiencing discriminatory language and behavior in the workplace by choosing gender-atypical occupation (Badgett and King 1997).

Women exhibits more negative attitudes toward lesbians than they do toward gay men and men tend to be more hostile toward gay men than they do toward lesbians, while this is more pronounced among men than women (Herek 1988).

However, the few observations in Japan suggest that it may be particularly important to understand the employment status of sexual and gender minorities, in addition to occupation, to explain earnings disparity by sexual orientation and transgender status in Japan. Based on interviews with 11 lesbian couples, Kamano (2009) reports that, although lesbians in Japan are more likely to be employed than heterosexual women to gain economic independence, these lesbians have histories of more nonstandard employment than heterosexual women workers. In addition, under the Japanese labor market structure where continuous employment is highly valued, transgender people, many of whom are compelled to temporarily leave the labor force upon taking a gender reassignment surgery, would find it extremely difficult to return as a full-time worker once they leave the labor force (Akechi, Endo, and Muraki 2013). This suggests that sexual and gender minorities in Japan are compelled to choose nonstandard employment positions, although previous studies of earnings disparity by sexual orientation conducted in Western countries may not fully incorporate employment status as a theoretically important factor.

Furthermore, employment status and the company size are generally the two significant factors determining one's earnings in Japan, whereas occupation contributes to

workers' earnings to a great degree in Western countries (Arita 2016). Thus, as Shirahase and Ishida (1994) claim about gender inequality in Japan and Arita (2016) claims about wage disparity in the Japanese labor market in general, there is a possibility that stratification by sexual orientation and transgender status in Japan may be best illustrated by segregation by employment status.

Thus, there are reasons to believe that stratification by sexual orientation and transgender status in Japan may be related to but distinct from gender stratification in Japan. At the same time, the Japanese pattern appears to differ from stratification by sexual orientation and transgender status observed in Western societies.

Empirical Findings regarding Sexual Orientation, Transgender Status, and Earnings

Lesbians and Gay Men

Although the majority of the previous research in Western countries suggests that lesbians earn more than heterosexual women (Klawitter 2015), the few studies investigating this topic in Japan do not follow this pattern.

In an attempt to explain the precarious employment status observed among lesbians in Japan, Kamano (2009) discusses the possibility that being lesbian in Japan does not affect earnings prospects positively, as observed in Western countries. She suggests that this is due to the fact that “strong women” are not highly valued in Japanese society, where women are expected to be more feminine than men are expected to be masculine and both women and men score higher feminine characteristics than masculine ones (Sugihara and Katsurada 2000). Kamano also states that it is less likely for employers in Japan to think of lesbians who are unmarried and have no children as a positive signal. Rather, her interviews indicate how being

lesbian in a school setting or the workplace compels them to drop out from school or to leave a job due to discrimination (Kamano 2009). Using the “Survey on LGBT Issues in the Workplace Environment Survey 2014,” the 2014 version of the same survey employed in this article, Hiramori’s² (2015) quantitative analysis shows that lesbians tend to earn less than heterosexual women. For gay men, Hiramori (2015) finds a disadvantage for gay men compared to their heterosexual counterparts, which is similar to the trend in Western countries.

Bisexual Women and Men

Because many previous studies on the effects of sexual orientation on earnings employ Census data and uses same-sex partners as a proxy for lesbian/gay status (Waite and Denier 2015), or employs other social surveys and uses same-sex sexual behavior as an indicator of lesbian/gay status (Badgett 1995), there exist an even smaller number of studies on the effects of being bisexual on earnings. A recent study by Mize (2016) shows that bisexual women and men tend to earn the least in the labor market after accounting for human capital differences, household composition, and occupational factors, suggesting that workplace discrimination may explain low earnings among bisexual women and men. Although there is no research examining social attitudes toward bisexual people in Japan, studies in the United States do show that bisexual women and men are more negatively viewed than lesbian woman and gay men (Herek 2002).

² The present paper is different from this paper in terms of both theory and data. Hiramori (2015), published in Japanese, provides no discussion about a cross-national perspective, one of the main focuses of the present article. Also, Hiramori (2015) uses romantic attraction as a proxy for sexual orientation identity as well as a seven-category yearly income question as a crude measure of earnings, both of which are major methodological limitations of Hiramori’s (2015) paper. Moreover, Hiramori (2015) and Hiramori (2019) differ in terms of how transgender is categorized. Hiramori (2015) does not include “X-gender,” a Japanese local transgender category, as a separate dummy variable from binary transgender to measure transgender status in the analysis. There are also some other detailed differences.

To explain factors associated with the lower income of bisexual women in Japan compared to lesbians found in the descriptive statistics of the “Survey on LGBT Issues in the Workplace Environment Survey 2015,” Sugiura³ proposes bisexual women’s “minority within minority” status as one of the possible accounts for this disparity. Overall, while theoretical explanations of low earnings among bisexual people is yet to be fully explored, these emerging studies illustrate the peculiar economic disadvantage among bisexual people, suggesting that it may be significant to include a finer classification of sexual orientation in order to understand the relationship between sexual orientation and earnings more comprehensively.

Transgender People

Although more studies on the effects of sexual orientation on earnings have been conducted recently, research on the effects of transgender status on earnings is extremely limited. Based on U.S. data, Schilt and Wiswall (2008) find an increase of earnings among female-to-male (FtM) transgender people after their gender transitions and a decrease of earnings among male-to-female (MtF) transgender people after their gender transitions, although their sample includes only 18 transgender workers who transitioned from male to female and 25 transgender workers who transitioned from female to male, as is acknowledged in their paper. Similarly, Geijtenbeek and Plug (2018) use administrative data in the Netherlands to show that FtM transgender people tend to earn less than non-transgender (cisgender, hereafter) men and MtF transgender people tend to earn more than cisgender women. However, their transgender

³ Ikuko Sugiura, an associate professor of sociology at Wako University, was invited as a talk guest at the “Report Meeting on the LGBT Workplace Environment Survey: The Power of Data for the Improvement of the Workplace Environment in Tokyo 2015,” held on September 5, 2015, at Musashino Public Hall, Tokyo, Japan. This event was co-sponsored by the nonprofit organization Nijiirō Diversity and the Center for Gender Studies at International Christian University.

sample is limited to those who administered a legal gender change, a subpopulation of those whose gender identity differs from their gender assigned at birth.

Regarding earnings inequality as it affects the transgender population in Japan, Tabata and Ishida (2008) use a nonprobability mail survey method to gather data from transgender individuals, and report that 20 percent of MtF transgender respondents earn more than the national average yearly income, but none of the FtM transgender respondents earn more than the national average⁴. Similarly, Matsushima (2013) shows that 93.2 percent of the sample whose gender assigned at birth was female earn less than the national average earnings, while 69.4 percent of those whose gender assigned at birth was male earn less than the average. Hiramori (2015) examines the association between transgender status on income and shows that both transgender people whose gender assigned at birth was female and transgender people whose gender assigned at birth was male tend to earn less than their cisgender counterparts (i.e. cisgender women and cisgender men, respectively).

A Japanese Local Transgender Category: X-gender

As seen above, prior quantitative research on transgender people in Japan solely focuses on gender assigned at birth and pays little attention on gender identity, but it is important to note that there is a new gender identity category called “X-gender” in Japan. The term X-gender is generally defined as “a gender that is neither male nor female, or, depending on the definition, both” (Dale 2012: paragraph 1). Since the late 1990s, the term X-gender has been

⁴ They note that this difference may be due to the sample compositional effect, because none of the MtF transgender respondents are in their teens or 20s, while none of the FtM transgender respondents are in their 50s and beyond. The average age for MtF transgender respondents is 43 years old, and the average age for FtM transgender respondents is 31 years old (Tabata and Ishida 2008:46-7). However, due to the small sample size (n=77), they do not conduct a three-way contingency table analysis between age, gender identity, and income.

used in LGBT community in Japan (Dale 2012), and it is now common for introductory books on LGBT issues to have an explanation of X-gender people (Yanagisawa, Muraki, and Goto 2015).

Nevertheless, little research has focused on the particularity of the experience of X-gender people. According to Dale⁵, because they do not necessarily want to make a transition from their gender assigned at birth to the opposite gender, X-gender people are less likely to go through gender reassignment surgery, compared to binary transgender people such as FtM transgender people and MtF transgender people. Also, the descriptive statistics from the “niji VOICE 2018” survey indicate that 26 percent of female-to-X (FtX) transgender people and 42 percent male-to-X (MtX) transgender people disclose their transgender status in the workplace, while 60 percent of FtM transgender people and 63 percent of MtF transgender people disclose their transgender status in the workplace (Nijjiro Diversity and the Center for Gender Studies at International Christian University 2019).

Given this pattern, one could argue that the lower disclosure rate among X-gender workers would situate these people in a better economic position compared to binary (FtM and MtF) transgender people, expecting that the lower rates of disclosure at work might mean less workplace discrimination against X-gender people. However, Dale’s (2013) research, one of the few studies on X-gender population, indicates that her interviewees try to avoid any social interactions in the workplace that might lead to the disclosure of their “difference” from non-transgender people. In fact, many of Dale’s (2013) interviewees are *freeters*, or “young people who were engaged in unstable forms of employment, such as temporary or part time

⁵ Personal conversation with S. P. F. Dale, an adjunct assistant professor at Hitotsubashi University, at the 75th Annual Conference of the Association of Asian Studies, April 1, 2016.

work,” (Kosugi 2006: paragraph 1) who are not married women or students. This suggests that X-gender people’s desire to avoid disclosure at the workplace may contribute to the instability of employment status among X-gender people in Japan.

Because one of the purposes of this article is to show a fuller picture of the relationship between sexual/gender minority status and earnings, I will take the category X-gender into consideration and construct an account that explains the importance of including X-gender when analyzing the relationship between transgender status and earnings, with a focus on how binary transgender (FtM and MtF) status and non-binary transgender (FtX and MtX) status may be related to earnings in a different way.

Research Questions

Below are the research questions that I propose in this quantitative monograph. Note that this paper is not a hypothesis-testing study, and the aim of this paper is to quantitatively describe earnings disparity experienced by sexual and gender minorities in Japanese society to develop a theory of stratification based on sexual orientation and transgender status with a cross-national perspective.

1. Is there an earnings disadvantage for both lesbian women and gay men in Japan?
2. Do patterns of the associations between sexual orientation and transgender status, and earnings differ by various sexual/gender minority statuses, and how?

Data and Methods

Data

This study uses data from the “niji VOICE 2018” survey. The “niji VOICE” surveys

are designed and carried out by Nijiirō Diversity, a nonprofit organization based in Osaka, Japan, in collaboration with the Center for Gender Studies at International Christian University, Tokyo, Japan. The target population for this survey is those who have work experience in Japan. Both sexual/gender minorities as well as non-minority individuals are eligible to take the survey. Conducted between June 1 and July 16 in 2018, this web survey was distributed using various social networking services (SNS) such as Twitter, Facebook, and Mixi (a Japanese SNS), as well as mailing lists of sexual/gender minority organizations, fliers, and through the clients of Nijiirō Diversity. As the first nonprofit organization promoting LGBT inclusion and diversity in the workplace in Japan, Nijiirō Diversity has delivered lectures for companies, government entities, academic institutions, and other organizations since 2012. During the period of survey, attendees of these lectures were also invited to take this survey voluntarily⁶.

Nijiirō Diversity counts everyone who answered questions to measure sexual orientation and/or transgender status (Questions 5, 6, and 8) as a valid respondent, and thus the official total number of respondents of the “niji VOICE 2018” survey is 2,262, including those who agreed to take the survey but quit in the middle of the survey and did not complete all of the 50 questions. In the analysis below, I focus on wage earners who are currently working and between the ages of 18-59⁷. Because the log of earnings used in the analysis is not defined when earnings are zero or negative, only respondents with positive earnings are included in the sample. Also, self-employed workers, family workers, and workers doing piecework at home, whose earnings determining factors may be different from those of wage earners because these workers

⁶ Given that many clients of Nijiirō Diversity are progressive organizations interested in promoting LGBT policies in the workplace, socioeconomic status of non-minority (cisgender-heterosexual) respondents in the sample may be higher than the average in Japan.

⁷ Kawaguchi (2011) shows that the analytical sample should be limited to workers younger than 60 years old when the Japanese data are used to study earnings, which is due to the mandatory retirement system in Japan.

are not affected by employer actions, are excluded from the analysis. In addition, individuals with missing values for any of the variables used in this analysis are excluded from the analysis. These procedures leave 1,276 respondents in the sample (827 designated females at birth and 449 designated males at birth).

Dependent Variable

The dependent variable is natural logarithm of the respondents' hourly wages in 10,000 Japanese yen (10,000 yen $\approx$ 100 U.S. Dollars). The wording for the question is: "Which one of the following best describes your annual earnings from your job (before tax) last year? Please include allowances and bonus. Income other than your main job, pension, rental income, stock dividend, and family supply are not included." Unlike major social surveys conducted in Japan such as the Japanese General Social Survey and the Social Stratification and Mobility Survey that measure income from all sources, the question about earnings used in the *niji VOICE* 2018 survey is unique in that non-work earnings are not included in the question. There are 17 ordinal earnings categories, and respondents' answers are assigned the midpoint of the earnings range. For the midpoint of the 17th category "15 millions yen or over," I use a quartile method proposed by Ligon ([1989] 1994) to estimate the mean earnings of the open-ended top category (33.42 million yen), based on the assumption that earnings follow a Pareto distribution. After assigning the midpoints, I divide annual earnings by 50 weeks and also by weekly working hours to construct a measure of hourly wage. Finally, I take the natural log of this hourly wage to normalize the wage distribution and to minimize the influence of outliers.

Although there is no official poverty line defined by the Japanese government, Ministry of Health, Labour and Welfare, Japan (2016) reports that the poverty line as defined by

OECD is 1,220,000 yen. The mean personal yearly earnings are 2,870,000 yen for women and 5,320,000 yen for men (National Tax Agency, Japan 2017). In the sample used for this study, the median earnings category is 3,000,000 ~ 4,000,000 yen for designated females at birth and 4,000,000 ~ 5,000,000 yen for designated males at birth. These results suggest that designated females at birth in this sample have slightly higher earnings than average women in Japan and designated males at birth in this sample have slight lower earnings than average men in Japan, while the overall earnings patterns in this sample do not remarkably differ from the national statistics by the National Tax Agency, Japan.

Main Independent Variables

Sexual Orientation

For sexual orientation, I use a question that asks about respondents' sexual orientation as an identity. Respondents were asked to "Choose the option that you think is closest to you." The choices are "gay, lesbian, homosexual⁸," "bisexual," "pansexual," "asexual," "heterosexual," and "Don't want to decide, haven't decided." Because of the small sample size, I combined "bisexual" and "pansexual" as well as "asexual" and "Don't want to decide, haven't decided" to create four dummy variables "heterosexual" (the reference category), "same-sex," "bisexual," and "other orientation."

Although many previous studies on the relationship between sexual orientation and earnings measure sexual orientation through questions that asks about gender of the respondent's partner (measuring same-sex couple status) or questions that asks about gender of sex partners

⁸ Unlike English, the Japanese term for homosexuals, or *doseiaisha* (same-sex lovers), does not have discriminatory connotations. Compared to the terms such as *gei* (gay) and *lezubian* (lesbian), the term *doseiaisha* sounds more formal in Japanese.

(measuring same-sex sexual behavior), I argue that it is more appropriate to use an identity question to measure sexual orientation for the purpose of this study, as pointed out by Badgett (2007). I consider that those who have an identity as a sexual minority are more likely to plan educational and labor market trajectory in relation to their minority status than individuals that merely have a same-sex sexual behavior, who may or may not identify as a sexual minority (Silva 2018). Also, it is impossible to understand the situation of single sexual minorities if the same-sex couple status is used to compare same-sex couples and different-sex couples (Klawitter 2015).

Transgender Status

The measure for transgender status is derived from two questions regarding gender identity and gender assigned at birth, using the “two-step” method (The GenIUSS Group 2014). Below are the two questions used to measure respondents’ transgender status. For gender identity, respondents were asked to “Provide the gender that you currently identify as (gender identity).” The choices are “woman,” “man,” “X-gender, gender-neutral, bi-gender, a-gender, and gender-fluid” and “other.” For gender assigned at birth, respondents were asked to “Provide your gender indicated on your family registration or birth certificate.” The choices are “female” and “male⁹.”

From these two questions, three dummy variables for transgender status, “cisgender” (the reference category), “binary transgender,” and “X-gender,” are created. The category

⁹ Because the Japanese terms for females (*mesu*) and males (*osu*) are not used for human beings, the Japanese word *josei* is translated as woman or female and the Japanese word *dansei* is translated as man or male, depending on the context. The original Japanese choices are “*josei*” (women) and “*dansei*” (men).

“cisgender” is designated for people whose gender identity aligns with the gender assigned at birth. The dummy variable “binary transgender” indicates either men whose gender assigned at birth is female (FtM transgender people) or women whose gender assigned at birth is male (MtF transgender people). The category “X-gender” represents those who identify as X-gender, etc.

Other Independent Variables

Various additional independent variables are used in the analysis to account for the social-institutional structures of a society. Although I do not use any direct measures of social-institutional structures, the following variables assist in explaining possible pathways that generate earnings disparity by sexual orientation and transgender status via differences in human capital accumulation through human capital development system and employment positions within the Japanese labor market. To measure human capital, education and potential work experience are used. To measure one’s job position, occupation and employment status are used. In addition, partnership status and parenthood status are included as control variables to account for the family structure that may partially explain the relationship between sexual orientation, transgender status, and earnings. The coding of these independent variables and the descriptive statistics for variables used in this paper by gender assigned at birth are shown in the appendices.

Analytic Strategy

Reflecting the fact that labor market trajectory is highly gendered, the sample of this analysis is divided into designated females at birth and designated males at birth. First, I start the analysis by describing the unconditional earnings differentials by sexual orientation and transgender status, using an ordinary least square (OLS) regression analysis to examine whether

there is an earnings disadvantage for both lesbian women and gay men in Japan (Model 1). Next, partnership and parenthood statuses are introduced to the analysis as control variable as they may confound the relationship between sexual orientation, transgender status, and earnings (Model 2). Then, education and years of potential work experience, along with its squared term divided by 100, are introduced to examine the relationship between sexual orientation, transgender status, and earnings after accounting for the differences in human capital (Model 3). After that, I shift the focus of the analysis to one's employment position within the labor market, and enter occupation (Model 4) and employment status (Model 5) separately to see how the relationship mentioned above may change and whether occupation or employment status is suggested to be an important factor explaining the relationship. After these analyses, I turn to the final analysis examining the remaining direct association between sexual orientation, transgender status, and earnings after accounting for human capital and labor market factors (Model 6).

Results

Below are the results of the analysis. Given that this is a non-representative survey and the sample size of some sexuality classifications is extremely small, using the standard methods of statistical inference is not entirely appropriate. Hence, although I indicate statistical significance in the tables showing the results, most of the discussion below focuses on descriptive patterns, rather than the statistical significance of hypothesis tests, following the orientation of quantitative monographs. Also, exponentiated regression coefficients are reported in tables to help clarify how many percent differences there are between the reference category and each dummy variable for categorical variables. For continuous variables, the exponentiated regression coefficients help understand the percent differential for one-unit increase of the

independent variable.

Figure 1 shows the results of an OLS regression analysis of hourly wage on sexual orientation and transgender status by gender assigned at birth (Model 1). Among designated females at birth, it indicates that lesbians earn 87.1% of heterosexual women's wage, bisexual women earn 73.0% of heterosexual women's wage, women with other sexual orientation earn 77.1% of heterosexual women's wage, FtM transgender people earn 90.6% of cisgender women's wage, and FtX transgender people earn 76.2% of cisgender women's wage. Among designated males at birth, it indicates that gay men earn 80.3% of heterosexual men's wage, bisexual men earn 69.2% of heterosexual men's wage, men with other sexual orientation earn 99.1% of heterosexual men's wage, MtF transgender people earn 90.6% of cisgender men's wage, and MtX transgender people earn 71.3% of cisgender men's wage. Overall, these results illustrate that, unlike Western societies where lesbians earn more than heterosexual women and gay men earn less than heterosexual men, there is a possible earnings disadvantage for both lesbians and gay men in Japan. More detailed information is included in the second column (Model 1) of Table 1 (designated females at birth) and Table 2 (designated males at birth).

[Figure 1 about here]

After examining the unconditional relationship between sexual orientation, transgender status, and earnings by gender assigned at birth, I will now turn to Model 2, where partnership and parenthood statuses are added to the analysis as control variables. The third column (Model 2) in Table 1 (designated females at birth) shows that the negative associations between sexual orientation and earnings as well as between transgender status and earnings observed in Model 1

remain after accounting for partnership and parenthood statuses. It indicates that lesbians earn 87.2% of heterosexual women's wage, bisexual women earn 74.4% of heterosexual women's wage, FtM transgender people earn 92.4% of cisgender women's wage, and FtX transgender people earn 78.3% of cisgender women's wage. On the other hand, the third column (Model 2) in Table 2 (designated males at birth) shows that gay men no longer earn less than heterosexual men, once partnership and parenthood statuses are controlled (80.3% in Model 1, 105.7% in Model 2). At the same time, however, the results indicate that, while the wage difference between bisexual men and heterosexual men becomes smaller in Model 2, bisexual men still tend to have lower earnings than heterosexual men, where bisexual men earn 79.8% of heterosexual men's wage. The results regarding the association between transgender status and earnings is similar to that between being a bisexual man and earnings. The analysis indicates that MtF transgender people earn 95.2% of cisgender men's wage and MtX transgender people earn 78.8% of cisgender men's wage.

To take human capital accumulation into account, educational attainment and potential years of work experience, along with its squared form divided by 100, are entered in Model 3. The fourth column (Model 3) in Table 1 (designated females at birth) shows that the association between sexual orientation and earnings becomes weaker after entering human capital factors. The wage rates for lesbians and bisexual women become higher in Model 3. The results indicate that lesbians earn 92.7% of heterosexual women's wage and bisexual women earn 89.3% of heterosexual women's wage. Likewise, the wage rates for FtM transgender people and FtX transgender people becomes slightly higher, but FtX transgender people earn 81.9% of cisgender women's wage even after human capital variables are entered into the analysis, while FtM transgender people earn as much as or perhaps more than cisgender women, where FtM

transgender people earn 105.9% of cisgender women's wage. The fourth column (Model 3) in Table 2 (designated males at birth) shows that wage rates of bisexual men and MtX transgender people in Model 3 change from those in Model 2. After human capital accumulation is taken into account, bisexual men earn 84.5% of heterosexual men's wage, a 4.7 percentage point increase from Model 2, and MtX transgender people earn 88.4% of cisgender men's wage, a 9.6 percentage point increase from Model 2. The wage rates of bisexual men and MtX transgender people are still substantially lower than their counterparts, but the differences seem to be smaller when human capital factors are taken into account. For gay men, they earn 104.9% of heterosexual men's wage, and for MtF transgender people, they earn 94.5% of cisgender men's wage.

After examining how taking human capital accumulation into consideration may alter the existing association between sexual orientation, transgender status, and earnings, I will now focus on workers' job position within the labor market. In addition to the variables entered in Model 3, occupation is added in Model 4. In Model 5, employment status is added to the variables used in Model 3. The fifth and sixth columns (Models 4, 5) in Table 1 (designated females at birth) show that the association between sexual orientation and earnings remain stable after entering labor market factors, occupation or employment status. When occupation is added, lesbians earn 93.5% of heterosexual women's wage and bisexual women earn 90.2% of heterosexual women's wage. When employment status is added, lesbians earn 91.1% of heterosexual women's wage and bisexual women earn 91.9% of heterosexual women's wage. For the association between transgender status and earnings, there seems to be some possible divergence between FtM transgender people and FtX transgender people in how the estimates change when occupation or employment status is included in the model. According to Model 4,

FtM transgender people earn 103.4% of cisgender women's wage and FtX transgender people earn 84.3% of cisgender women's wage. In other words, once occupation is held constant, the wage rate for FtM transgender people decreases in Model 4 by -2.5 percentage points and the wage rate for FtX transgender people increases in Model 4 by 2.4 percentage points. This divergence becomes larger when employment status, instead of occupation, is added. According to Model 5, FtM transgender people earn 97.2% of cisgender women's wage and FtX transgender people earn 84.6% of cisgender women's wage. In other words, once employment status is held constant, the wage rate for FtM transgender people decreases in Model 5 by -8.7 percentage points and the wage rate for FtX transgender people increases in Model 5 by 2.7 percentage points. This result points to the possibility that the role of employment status is different between FtM and FtX transgender people.

The fifth and sixth columns (Models 4, 5) in Table 2 (designated males at birth) shows a different pattern than the pattern found among designated females at birth. The results show that the association between sexual orientation and earnings remain stable after adding occupation to the model, but it changes after adding employment status to the model. When occupation is added, gay men earn 106.7% of heterosexual men's wage and bisexual men earn 85.0% of heterosexual men's wage. However, when employment status is added, gay men earn 101.2% of heterosexual men's wage and bisexual men earn 81.1% of heterosexual men's wage, indicating that gay and bisexual men tend to earn even less than heterosexual men when employment status is held constant. For the association between transgender status and earnings among designated males at birth, the results seem to be similar to those among designated females at birth. According to Model 4, MtF transgender people earn 92.2% of cisgender men's wage and MtX transgender people earn 87.9% of cisgender men's wage. In other words, when

occupation is held constant, the wage rate for MtF transgender people decreases in Model 4 by -2.3 percentage points and the wage rate for MtX transgender people does not substantially change in Model 4, where there is a -0.5 percentage point decrease. This divergence, although less pronounced than in the sample of designated females at birth, becomes larger when employment status, instead of occupation, is added. According to Model 5, MtF transgender people earn 93.3% of cisgender men's wage and MtX transgender people earn 92.9% of cisgender men's wage. In other words, when employment status is held constant, the wage rate for MtF transgender people decreases in Model 5 by -1.2 percentage points and the wage rate for MtX transgender people increases in Model 5 by 4.5 percentage points. Similar to the result for designated females at birth, this result for designated male at birth points to the possibility that the role of employment status is different between MtF and MtX transgender people.

Now I turn to the final analysis examining the remaining direct association between sexual orientation, transgender status, and earnings after accounting for human capital and labor market factors. The seventh column (Model 6) in Table 1 (designated females at birth) shows that most of the associations between sexual orientation, transgender status, and earnings remain stable in the full model. One important result is that being an FtX transgender is still negatively associated with lower wage after accounting for family compositions, human capital accumulation, and labor market factors, where they earn 85.9% of cisgender women's wage. Similarly, the seventh column (Model 6) in Table 2 (designated males at birth) indicates that most of earnings disparity based on sexual orientation and transgender status become smaller when other factors mentioned above are added to the model. However, there is an important exception to this overall pattern. The analysis shows that being a bisexual man is still negatively associated with lower wage in Model 6, where they earn 81.8% of heterosexual men's wage.

Overall, these results illustrate the usefulness of employing a detailed sexual/gender minority classification to understand how patterns of the associations between sexual orientation, transgender status, and earnings may differ by various sexual/gender minority statuses.

[Tables 1 and 2 about here]

Discussion

While economic and sociological research examining the effects of sexual orientation on earnings has expanded recently, most of the existing literature covers only a part of diverse sexual and gender minorities. Typically, data on same-sex/different-sex couples are used to approximate the earnings disparity between gay and lesbian people and heterosexual people. In particular, the number of studies that utilize transgender status as a focus of analysis is extremely limited. Furthermore, the fact that most of the previous research has been conducted in Western countries has made it difficult to consider the possibility that the theories and observations obtained from these studies may be specific to the labor market structures found in Western societies as well as the gendered structures of these markets. Therefore, this quantitative monograph uses the “niji VOICE 2018” survey to understand the association between various sexual/gender minority statuses and earnings in Japan. Overall, the results suggest that there is a negative association between sexual/gender minority status and earnings in Japan for both designated females at birth and designated males at birth and that the ways in which stratification based on sexual orientation and transgender status functions depend on various categories of sexual/gender minorities. Although the results of this quantitative monograph are complex, the general findings may be classified into the following four points.

First, unlike Western countries, where lesbian women earn *more* than heterosexual women, the general results indicate that lesbian women in Japan earn *less* than heterosexual women. Much of the earnings difference between these two groups decreases when human capital accumulation is taken into account. Given that human capital, and educational attainment, in particular, is considered to be the main reason for earnings disparity based on sexual orientation among women (Antecol, Jong, and Steinberger 2008), this result in Japan suggests that, unlike the patterns found in Western societies, lesbian women in Japan may be less likely to have higher educational attainment, which leads to the lower earnings among lesbian women.

Although there can be several possible explanations as to why lesbians in Japan are less likely to have higher educational attainment than heterosexual women, one motive would be that, because the labor market structure in Japan is highly gendered, they might think that they cannot get promoted and be considered as “one of the guys” in the workplace, even if they have higher educational attainment than heterosexual women. This is a departure from the patterns for lesbians in the Western countries, where human capital accumulation is more directly related to the high earnings regardless of their social attributes and thus lesbians invest in education more than heterosexual women to gain economic independence. The Japanese pattern shows a different situation where lesbian women may want to seek out economic independence in order to compensate for their sexual minority status (Seiishiki Chosa Group 1998), but the highly gendered social-institutional structures in Japan makes it difficult for these lesbian women to realize their aspiration to pursue higher education. Therefore, the institutional arrangements in Japan may account for a situation where lesbian women do not have higher educational attainment than heterosexual women. In addition to this inequality by gender, there are five difficulties that members of sexual/gender minorities including lesbians may face in education.

Yakushi (2017) points out that the fact that (1) school space is divided by gender based on the assumption that students are all cisgender and heterosexual, (2) sexual and gender minorities are rendered invisible, (3) it is difficult to obtain correct knowledge about sexual and gender minorities, (4) there is no one who can support sexual and gender minorities, and (5) it is difficult to imagine role models makes it difficult to continue education, suggesting that the Japanese human capital develop system is also stratified by sexuality so that lesbians in Japan may have even lower educational attainment than heterosexual women, although this is no study that examines the relationship between sexual orientation and educational attainment in Japan. To sum up, the results for lesbian women point to the importance of taking into consideration the peculiarity of the ways in which gender stratification and stratification by sexual orientation in the Japanese labor market interact with each other to disadvantage lesbian women's human capital acquisition.

Second, the results for gay men in Japan are more consistent with the existing literature in Western countries, where gay men tend to earn less than heterosexual men. Contrary to the results for lesbians, the multivariate analysis suggests that family structures may play an important role in explaining the earnings disadvantage for gay men, and, in fact, this advantage disappears once family structure is taken into account.

Third, the results for bisexual women and men are also similar to those observed in previous research (Carpenter 2005; Mize 2016). Both women and men tend to earn less than their heterosexual counterparts. One difference between bisexual women and bisexual men is that, while human capital accumulation may explain the majority of the earnings difference between bisexual women and heterosexual women, factors not considered in this study appear to explain the earnings disparity between bisexual men and heterosexual men. This result for

bisexual men is also different from the earnings pattern behavior for gay men. This points to the possibility that the processes through which the earnings disparity occurs may be different *within* various sexual minorities.

Fourth, the results for transgender status indicate that both binary (FtM and MtF) transgender people and X-gender people tend to earn less than their cisgender counterparts. However, the results within transgender people are complex, and the earnings patterns depend on what factors are accounted for. The analysis for designated females at birth shows that identifying as X-gender seems to be more detrimental to the earnings differentials than identifying as men, as Geijtenbeek and Plug (2018) show that FtM transgender people may gain earnings premium as men after gender transition and offset earnings penalty due to their transgender status. Similarly, MtF transgender people may lose male authority because they identify as women and behave as women accordingly, which leads to a dual earnings disadvantage as a transgender person and as a woman (Geijtenbeek and Plug 2018). The analysis for designated males at birth shows that X-gender people are suggested to have lower earnings than MtF transgender people, although there is little difference once human capital and labor market factors are taken into account. Overall, these results raise the possibility that identifying as X-gender may contribute to even lower earnings than identifying as opposite gender for both designated females and males at birth.

In addition, labor market factors, employment status, in particular, may play an important role in understanding the process of earnings disadvantage among X-gender people, regardless of their gender assigned at birth. That is to say, it may be possible that X-gender people are more likely to be in a temporary or part-time position, which leads to lower earnings among X-gender people. Discussing X-gender people and the workplace, Dale (2013:241) writes,

the interviewees “admit that they try as far as possible to avoid socializing unless necessary” so that “they keep to themselves in order to avoid revealing themselves as being ‘different’ from anyone else in the company.” This withdrawal from social contact at the workplace may be seen as one factor associated with the higher rates of precarious position among transgender people, and X-gender people, in particular, suggested by previous community-based research in Japan (Nijjiro Diversity and the Center for Gender Studies, International Christian University 2019). Needless to say, it should be noted that this seeming preference of X-gender people may be derived from the structural constraints that make them withdraw from the workplace. On the other hand, the results for binary transgender people indicate that their earnings become lower once labor market factors are taken into account, suggesting that binary transgender people experience lower earnings within the same occupation or employment status. These findings points to the possibility that the mechanism through which the earnings disparity occurs may be different *within* various gender minorities as well.

Given the above points, this quantitative monograph of sexual and gender minorities in Japan shows the usefulness of applying a social-institutional perspective on pathways through educational and labor market structures as well as the need to incorporate diverse sexual and gender minorities for developing a fuller depiction of stratification by sexual orientation and transgender status. At the same time, however, this article faces some methodological limitations. One major limitation is that the dataset employed in this study uses a non-representative purposive sampling method to maximize the number of respondents from various sexual and gender minorities. Also, many of the sexual/gender majority respondents are recruited at the corporate lectures on LGBT issues in the workplace by Nijjiro Diversity, and it should be noted that the companies interested in LGBT issues in the workplace in Japan tend to be liberal.

Therefore, these respondents are more likely to have higher educational attainment and higher earnings than the national average. Moreover, this study does not analytically incorporate the possibility that being heterosexual for cisgender people may be different from being heterosexual for transgender people, which calls for more detailed inquiries that accounts for the interactions between sexual orientation and transgender status¹⁰.

I argue that this study is the first step to develop a theory of stratification by sexual orientation and transgender status with a cross-national perspective, and the richness of the diverse sexual and gender minorities in the sample and the uniqueness of the Japanese data should counterbalance the limitations mentioned above. In the future, it is important to include questions about sexual/gender minority status in government surveys or other representative social surveys in Japan to statistically analyze the differences between sexual/gender minorities and the majority. In addition, new data collection is needed to contextualize these disparities. Because most of the current studies use existing census or surveys, they can neither directly test their theoretical propositions, nor are they able to contextualize how differences *within* sexual and gender minorities are produced. Moreover, cross-cultural cross-national work examining the role of social-institutional structures in shaping stratification by sexual orientation and transgender status is extremely scarce. I hope future research should take these issues into consideration to better understand how patterns of stratification by sexual orientation and transgender status may vary in more complicated ways than it has been understood in the past by virtue of the distinct social-institutional structures across societies.

¹⁰ I would like to thank Emi Koyama, who pointed out this issue.

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Tables

Table 1. OLS Regression Analysis of Log-Wages on Sexual Orientation and Transgender Status (Designated Females at Birth): nijj VOICE 2018

	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6
Heterosexual (Ref.)	----- (-----)	----- (-----)	----- (-----)	----- (-----)	----- (-----)	----- (-----)
Same-sex	0.871† (0.081)	0.872† (0.083)	0.927 (0.079)	0.935 (0.078)	0.911 (0.074)	0.919 (0.074)
Bisexual	0.730** (0.081)	0.744** (0.082)	0.893 (0.079)	0.902 (0.078)	0.919 (0.075)	0.923 (0.075)
Other sexual orientation	0.771** (0.087)	0.795** (0.087)	0.906 (0.084)	0.937 (0.083)	0.919 (0.079)	0.929 (0.079)
Cisgender (Ref.)	----- (-----)	----- (-----)	----- (-----)	----- (-----)	----- (-----)	----- (-----)
Transgender	0.906 (0.109)	0.924 (0.109)	1.059 (0.105)	1.034 (0.105)	0.972 (0.100)	0.955 (0.101)
X-gender	0.762** (0.072)	0.783** (0.072)	0.819** (0.069)	0.843* (0.068)	0.846** (0.065)	0.859** (0.065)
Partnership		1.221** (0.063)	1.069 (0.062)	1.035 (0.061)	1.069 (0.058)	1.051 (0.058)
Parenthood		1.009 (0.089)	0.901 (0.089)	0.924 (0.087)	0.928 (0.084)	0.934 (0.084)
High school or less (Ref.)			----- (-----)	----- (-----)	----- (-----)	----- (-----)
Junior college			1.213* (0.091)	1.127 (0.091)	1.218* (0.086)	1.166† (0.087)
University			1.473** (0.073)	1.279** (0.077)	1.203* (0.072)	1.140† (0.075)
Graduate school			1.639** (0.095)	1.373** (0.100)	1.346** (0.092)	1.259* (0.096)
Experience			1.077** (0.013)	1.066** (0.013)	1.055** (0.012)	1.052** (0.012)
(Experience) ² /100			0.891** (0.028)	0.901** (0.028)	0.920** (0.027)	0.921** (0.027)
Managerial (Ref.)				----- (-----)		----- (-----)
Professional				0.713** (0.105)		0.745** (0.101)
Clerical				0.646** (0.109)		0.723** (0.106)
Sales				0.582** (0.131)		0.687** (0.127)
Service				0.524** (0.123)		0.673** (0.122)

Blue-collar						0.476**	(0.159)			0.624**	(0.156)	
Other occupation						0.618**	(0.145)			0.748*	(0.141)	
Permanent (Ref.)								-----	(-----)	-----	(-----)	
Temporary								0.647**	(0.080)	0.671**	(0.081)	
Part-time								0.512**	(0.071)	0.540**	(0.075)	
Constant	0.212**	(0.056)	0.194**	(0.065)	0.057**	(0.155)	0.111**	(0.194)	0.097**	(0.157)	0.142**	(0.189)
N =	827		827		827		827		827		827	
Adjusted R ²	0.046		0.056		0.158		0.187		0.249		0.257	
BIC	2061		2063		1997		2002		1914		1940	

† $p < .10$; * $p < .05$; ** $p < .01$ (two-tailed tests).

Notes: Unstandardized regression coefficients are exponentiated to indicate factor changes. Standard errors are in parentheses.

Table 2. OLS Regression Analysis of Log-Wages on Sexual Orientation and Transgender Status (Designated Males at Birth): nijj VOICE 2018

	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6
Heterosexual (Ref.)	----- (-----)	----- (-----)	----- (-----)	----- (-----)	----- (-----)	----- (-----)
Same-sex	0.803* (0.099)	1.057 (0.106)	1.049 (0.101)	1.067 (0.100)	1.012 (0.096)	1.039 (0.097)
Bisexual	0.692** (0.135)	0.798† (0.132)	0.845 (0.126)	0.850 (0.124)	0.811† (0.120)	0.818† (0.120)
Other sexual orientation	0.991 (0.153)	1.138 (0.149)	1.116 (0.143)	1.126 (0.140)	1.148 (0.137)	1.154 (0.136)
Cisgender (Ref.)	----- (-----)	----- (-----)	----- (-----)	----- (-----)	----- (-----)	----- (-----)
Transgender	0.906 (0.146)	0.952 (0.141)	0.945 (0.136)	0.922 (0.135)	0.933 (0.130)	0.935 (0.131)
X-gender	0.713* (0.136)	0.788† (0.132)	0.884 (0.126)	0.879 (0.124)	0.929 (0.121)	0.920 (0.121)
Partnership		1.281* (0.097)	1.143 (0.093)	1.127 (0.093)	1.073 (0.090)	1.090 (0.090)
Parenthood		1.608** (0.136)	1.402** (0.130)	1.340* (0.129)	1.346* (0.124)	1.306* (0.124)
High school or less (Ref.)			----- (-----)	----- (-----)	----- (-----)	----- (-----)
Junior college			1.014 (0.136)	1.038 (0.138)	1.262† (0.135)	1.254† (0.137)
University			1.534** (0.101)	1.397** (0.105)	1.385** (0.098)	1.335** (0.102)
Graduate school			1.745** (0.119)	1.504** (0.124)	1.597** (0.114)	1.484** (0.120)
Experience			1.041* (0.018)	1.041* (0.017)	1.027 (0.017)	1.026 (0.017)
(Experience) ² /100			0.960 (0.037)	0.951 (0.036)	0.974 (0.035)	0.970 (0.035)
Managerial (Ref.)			----- (-----)	----- (-----)	----- (-----)	----- (-----)
Professional			0.779* (0.125)			0.795† (0.121)
Clerical			0.684** (0.134)			0.732* (0.131)
Sales			0.678* (0.172)			0.736† (0.167)
Service			0.518** (0.159)			0.611** (0.156)
Blue-collar			0.606** (0.178)			0.796 (0.178)
Other occupation			0.557** (0.199)			0.636* (0.193)

Permanent (Ref.)		-----	(-----)	-----	(-----)
Temporary		0.717**	(0.118)	0.757*	(0.119)
Part-time		0.490**	(0.112)	0.519**	(0.118)
Constant	0.252** (0.084)	0.176** (0.099)	0.069** (0.221)	0.112** (0.258)	0.147** (0.255)
N =	449	449	449	449	449
Adjusted R ²	0.027	0.100	0.199	0.227	0.278
BIC	1146	1122	1095	1109	1088

† $p < .10$; * $p < .05$; ** $p < .01$ (two-tailed tests).

Notes: Unstandardized regression coefficients are exponentiated to indicate factor changes. Standard errors are in parentheses.

Figures

Figure 1. Sexual/Gender Minority Statuses and Earnings in Japan by Gender Assigned at Birth.

Notes: Horizontal lines show 90% confidence intervals. Data source: niiji VOICE 2018

Appendices

Table A. Coding of the Control Variables: niji VOICE 2018

Variable	Coding
Education	<p>This variable is measured in terms of four categories for the highest degree earned¹¹:</p> <ul style="list-style-type: none"> -High school or less (reference) -Junior college/College of technology (Junior college, hereafter) -University -Graduate school. <p>For those who answered that their highest degree earned was from a professional training college, a non-degree granting higher educational institution not recognized by the first article of the School Education Law, Japan, even though there is a separate question asking whether the respondents have been enrolled in such schools, I consider that they received a high school diploma, which is most likely to be their highest degree earned from degree-granting “article-1 schools,” or <i>ichijoko</i>.</p>
Potential work experience	<p>Potential work experience is calculated as age minus six minus years of education. This is based on an assumption that first grade starts at six and one starts working upon completion of schooling without any gap years.</p> <p>When calculating years of education, those with high school diploma are considered to have 12 years of education, those who graduated from junior or technical college are considered to have 14 years of education, those with four-year college degree are considered to have 16 years of education, and those with more advanced degree are considered to have 18 years of education. For those who answered that their highest degree earned was from a professional training college, I assume that they complete 12 years of education.</p>
Occupation	<p>This variable consists of the following seven categories:</p> <ul style="list-style-type: none"> -Managerial workers (reference) -Professional and engineering workers -Clerical workers

¹¹ Kawaguchi (2011) shows that dummy variables of educational background should be used as a measure of educational attainment, rather than years of education, when the Japanese data are used to study earnings. His analysis indicates that one year of additional education under each educational institution cannot be considered to be equivalent across different educational institutions in Japan.

	<ul style="list-style-type: none"> -Sales workers -Service workers -Blue collar workers including security workers, agriculture, forestry, and fishery workers, manufacturing process workers, transport and machine operation workers, construction and mining workers, and carrying, cleaning, packaging workers -Other workers.
Employment status	<p>This variable consists of the following three categories:</p> <ul style="list-style-type: none"> -Permanent (reference) -Temporary -Part-Time.
Partnership and parenthood statuses	<p>Partnership status and parenthood status are measured by the question “For each relationship, please choose the number of people who currently lives together with you. Please enter “0” if not applicable.” This question asks the number of partners, children, children’s partner, father, mother, father-in-law, mother-in-law, siblings, grandchildren, other relatives, and other people currently living together with the respondent. The choices are 0, 1, 2, and 3 or more. For partnership status, those who answered 1, 2, or 3 or more for the number of partners are coded as 1 (partnered). For parenthood status, those who answered 1, 2, or 3 or more for the number of children are coded as 1 (parent).</p>

Table B. Descriptive Statistics of Variables Used in the Analysis: niji VOICE 2018

Variable	Designated females at birth (n = 827)		Designated males at birth (n = 449)	
	Mean	Std. Dev.	Mean	Std. Dev.
Hourly wages in ¥10,000	0.26	0.46	0.30	0.48
Log wages	-1.79	0.84	-1.60	0.84
Annual earnings	406.37	417.62	513.83	423.76
Hours worked per week	39.56	18.09	42.77	17.64
Heterosexual	0.29	-----	0.23	-----
Same-sex	0.24	-----	0.52	-----
Bisexual	0.26	-----	0.14	-----
Other sexual orientation	0.21	-----	0.10	-----
Cisgender	0.69	-----	0.80	-----
Transgender	0.08	-----	0.08	-----
X-gender	0.23	-----	0.11	-----
Partnership	0.37	-----	0.35	-----
Parenthood	0.14	-----	0.16	-----
High school or less	0.21	-----	0.18	-----
Junior college	0.17	-----	0.13	-----
University	0.47	-----	0.48	-----
Graduate school	0.15	-----	0.21	-----
Experience	19.71	10.12	22.83	10.19
Managerial	0.08	-----	0.12	-----
Professional	0.30	-----	0.35	-----
Clerical	0.26	-----	0.21	-----
Sales	0.09	-----	0.08	-----
Service	0.15	-----	0.12	-----
Blue-collar	0.05	-----	0.07	-----
Other occupation	0.06	-----	0.05	-----
Permanent	0.67	-----	0.74	-----
Temporary	0.12	-----	0.10	-----
Part-time	0.21	-----	0.16	-----