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## A Comparative Analysis of Same-Sex Partnerships in Brazil

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# Do alternative households improve paid employment outcomes? A comparative analysis of same-sex partnerships in Brazil

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## Abstract

This paper explores the labor market implications of household formation among same-sex married couples in Brazil, comparing them with different-sex married couples and unpartnered individuals. Using data from the *Pesquisa Nacional por Amostra de Domicílios Contínua* (PNAD-C) from 2016 to 2019, the study provides a descriptive overview of same-sex households and analyzes patterns of partnership formation, racial and educational endogamy/homogamy, and paid employment outcomes. Despite data limitations, findings suggest that same-sex couples may benefit from household formation by adopting alternatives to traditional patriarchal dynamics. Women in same-sex partnerships exhibit greater labor market participation and earnings, while men may experience reduced pressure to conform to traditional breadwinner roles. All married/partnered individuals earn a wage premium, relative to unpartnered individuals, but this premium varies by type of couple, sex, and the partner's education and employment status. The paper highlights the importance of recognizing diverse household structures to fully understand economic well-being and inequities. Further research on the broader spectrum of "families of choice" is necessary to better capture the economic experiences of the LGBTI community in Brazil.

**Key Words**: Same-sex partnerships; Household formation; Labor market outcomes; Economic inequality; Gender roles; Brazil

**JEL Codes:** J12; J16; D10

## 1. Introduction

Household formation and the so-called "marriage market" have been studied from divergent perspectives, from cooperative optimal resource allocation to the replication of patriarchal institutions. Economic benefits associated with household formation include resource pooling, risk management, economies of scale, and household public goods production. Yet traditional households arising from marriage have also been institutions that replicate patriarchal institutions, kinship-based inequalities, traditional gender identities and power differentials. Individuals from groups with alternative sexual orientations and gender identities often value the possibility of constructing "families of choice" that have the potential to realize the economic benefits of household formation and cooperation while challenging dominant norms surrounding gender roles in families and marriage.

In 2013, same-sex couples were able to get legally married in Brazil. Although same-sex marriages represent less than 1 percent of all unions registered in the country, the number of reported same-sex couple has grown about three times from 2014 to 2022[1]. However, research into who these couples are, the dynamics of household formation, and the associated economic consequences remains limited. This paper helps to fill this gap. Because of data limitations, we do not have full representative information on all types of LGBTI households in the Brazilian context, so this paper focuses on a subset: same-sex households (SS) with couples who identify as being married.

Using the *Pesquisa Nacional por Amostra de Domicílios Contínua* (PNAD-C), an annual household survey in Brazil, we present a comparative analysis of same-sex married couples, different-sex married couples, and unpartnered individuals. Pooling data from 2016 to 2019, comparable sample years, yields 2,360 households formed by married same-sex partners (59 percent are female couples and 41 percent male couples). This paper (a) presents a descriptive overview of these same-sex households and compares them to other married couple households; (b) analyzes patterns of partnership formation with regard to individual characteristics and the degree of endogamy/homogamy (educational attainment and race); (c) identifies potential relationships with employment and livelihood outcomes that impact household and individual material well-being, such as participation in paid labor markets, employment, informality,

[1] According to the official records, available at: https://registrocivil.org.br/

individual earnings, and household income; and (d) explore how the so-called "marriage premium/penalty" varies by partnership type in the Brazilian context.

This paper is structured in 8 sections, including this introduction. Section 2 discusses theoretical issues relating to the economic implications of household and partnership formation for LBGTI people. Section 3 summarizes some of the existing literature on LGBTI individuals in Brazil. Section 4 presents the descriptive statistics of characteristics of LGBI individuals and households that we generate from the PNAD data. Section 5 summarizes patterns of endogamy and homogamy in same-sex and different-sex households and Section 6 presents the core econometric analysis and results. Section 7 provides more detailed analysis of the nature of the "partnership" premium in Brazil. Section 8 concludes with some reflections on the implications of these findings.

## 2. Household and partnership formation: implications for livelihood and inequalities

Many economic theories of household formation stress the benefits of cooperation as a core motivation. People voluntarily elect to form a household, for example through the institution of marriage, because their individual economic outcomes would be better within a household than it would be if they tried to go it alone. Such benefits often exist in the face of significant intra-household inequalities. Becker's early and influential theories stress the potential gains from specialization within the household as the primary benefit – with one partner, most often identified as a man, specializing in paid market work and the other, typically identified as a woman, specializing in unpaid household production (Becker, 1973, 1981). Other theories extend these economic benefits beyond specialization to include the ability to take advantage of economies of scale (it is cheaper for a person to live as part of a household than as an individual), risk management, benefits of pooling income and savings, and the production of public goods within the household (e.g. Weiss, 1997).

However, households and marriages have another economic function – they reproduce patriarchal institutions and dynamics – including gender-based economic inequalities. In traditional heteronormative partnerships, women may be better off within a marriage than by themselves, but this often is because of a dearth of quality economic opportunities outside of the traditional family. This weaker fallback position frequently results in persistent inequalities in bargaining power and exploitative gender relations (Folbre, 1986, 1994; Sen, 1987). Through

various mechanisms, patriarchal households limit the economic choices and opportunities of some members while protecting the privileges of others. Traditional households and families also play essential roles in social reproduction, representing sites of control over sexuality and reproductive choice. They shape differential investments in future generations, for instance, differences in the educational achievement of boys and girls. Children who express non-conforming gender or sexual identities can be subject to sanctions or expulsion from the household (Baams, Wilson, and Russell, 2019). The ability to escape traditional patriarchal households by taking advantage of outside economic opportunities has played a critical role in the emergence of new identities based on sexual orientation (D'Emilio, 1983).

Most theories of households as economic institutions assume, either explicitly or implicitly, heteronormative, opposite-sex households – with gendered identity assumed to be binary and equated to sex. This leaves important unanswered questions about the economic consequences of alternative forms of household formation – specifically, those based on same-sex/gender partnerships or partnerships involving non-conforming gender identities. Individuals from groups with alternative sexual orientation and gender identities often value the opportunity to construct "families of choice" that have the potential to realize the economic benefits of household formation while challenging dominant patriarchal dynamics associated with traditional marriages and families. Studies have highlighted the benefits of chosen families for LGBTI individuals (Hailey, Burton, and Arscott, 2020; Huynh, 2023). However, this research has focused on individual perceptions of self, health, and well-being and on the impact of chosen family on a person's ability to navigate discriminatory and hostile social environments. We suggest that, in addition to these important psychological and social benefits, alternative household arrangements also have positive economic consequences that can translate into better labor market outcomes. In this regard, alternative households represent a way of off-setting the negative impacts of discrimination in employment, labor markets, and other parts of the market economy.

Relaxing patriarchal constraints within the household allows for a greater range of choice and more egalitarian outcomes. Furthermore, patriarchal households may generate efficiency loses compared to more egalitarian households when male household heads act to appropriate a larger share of the gains from cooperation (Braunstein and Folbre, 2001). For these reasons, we expect that the economic benefits realized through household formation would differ between alternative households and more traditional heterosexual marriages. These differences in the size and

distribution of the benefits from cooperation would impact other economic outcomes – such as labor force participation and employment decisions. For example, specialization within a traditional different-sex, heteronormative marriage leads to lower labor force participation of women and higher labor force participation among men (who are expected to adopt the role of "breadwinner"). If this specialization is driven, at least in part, by patriarchal dynamics, we would expect different outcomes with regard to labor force participation for households based on partnerships between two men (or two people who identify as men) and between two women (or two people who identify as women). In the latter case, women would not be bound by the same patriarchal constraints within the household and we would predict higher labor force participation. Similarly, in the former case, men would not be bound by masculinist identities as "breadwinners" and may have lower labor force participation rates or may make occupational choices where earnings are prioritized less. In both these cases, specialization in paid and unpaid work remains relevant, but we hypothesize the reproduction of patriarchal structures would play a much smaller or negligible role in determining the division of labor.

One common finding of studies of earnings in labor markets is the existence of a "marriage premium" for men in traditional marriages (Chun and Lee, 2001; Gupta, Smith, and Stratton, 2007; Casale and Posel, 2010). Married men are often found to have higher earnings than non-married men, controlling for individual characteristics. Several explanations are typically offered for the existence of this premium. Men who are selected into marriage may have unobserved personal characteristics that contribute to higher earnings. The patriarchal division of labor between paid and unpaid work can mean that men, as the "breadwinner," are motivated to work harder and increase their productivity in ways that translate into higher earnings. However, there is also the possibility that households, as economic institutions, produce cooperative benefits that translate into better labor market outcomes, such as an earnings premium.

Most studies documenting the male "marriage premium" focus on traditional, different-sex, heteronormative partnerships. Studies of a marriage premium for same-sex partnerships are uncommon and have found a significant (but smaller) premium for male and female same-sex partnerships (e.g. Martell and Nash, 2020). The Martell and Nash study argues that variations in the marriage premium are based on differences in a division of labor rooted in gender-based comparative advantage, and there are no significant distinctions between same-sex and different-sex partnerships. Clearly, the implications of non-traditional partnerships for individual earnings

and household income are currently not well understood and represent an important area for research.

While non-traditional partnerships provide opportunities to escape patriarchal household constraints by capturing other benefits of household formation, LGBTI individuals still face other forms of economic discrimination – e.g. in housing and labor markets (Badgett, Carpenter, and Sansone. 2021). This raises the question of what role non-traditional households play in helping LGBTI people navigate economic marginalization elsewhere in their lives. This paper aims to provide some initial insights into this question in the context of households with same-sex partnerships in Brazil.

## 3. What we currently know: data and research on LGBTI people in Brazil

In Brazil, the social stigma that still prevails against individuals who do not conform to heteronormative standards, coupled with the fear of discrimination and violence, causes many LGBTI individuals to avoid self-identifying as such or to feel uncomfortable disclosing their identity verbally to others. This presents a significant challenge for ensuring robust data collection on the LGBTI population, especially in developing countries like Brazil, where discussions on gender and sexual orientation have regressed considerably due to a growing conservative discourse. Our study is not immune to these problems of selective self-identification.

A methodological evaluation by the Brazilian Institute of Geography and Statistics (IBGE) highlights potential biases resulting from data collection processes for individuals with non-conforming sexual orientation and gender identities. For instance, although there was a recommendation for respondents to personally complete some modules related to sexual orientation, in actuality, the interviewer fills out the forms, which could lead to responses that are more socially acceptable rather than reflective of reality. Furthermore, terms such as "sexual orientation," "heterosexual," and "homosexual" may still be confusing, particularly for the less educated, older populations living in rural areas and small cities (IBGE, 2022).

The only nationally representative data source that explores individual identity with regard to sexual orientation in Brazil is a supplement to the National Health Survey (PNS)[2] conducted by the Brazilian Institute of Geography and Statistics (IBGE) in 2019. According to this survey, among individuals aged 18 and older, 94.8 percent identified as heterosexual, 1.2 percent as

[2] Acronym of Pesquisa Nacional de Saúde, in Portuguese.

homosexual, and 0.7 percent as bisexual. Additionally, 1.1 percent were unsure of their sexual orientation, 2.3 percent chose not to respond, and 0.1 percent declared another sexual orientation. Notably, 3.6 million people opted not to disclose their sexual orientation, surpassing the total number of those identifying as homosexual or bisexual (2.9 million) highlighting the empirical challenges in addressing the characteristics and relationships that may differentiate LGBTI individuals in Brazil (IBGE, 2022).

The PNS data revealed that the proportion of individuals identifying as homosexual, or bisexual was higher among those with higher education and income levels. Young adults aged 18 to 29 had the highest percentage of individuals identifying as homosexual or bisexual (4.8 percent) and also had the highest rates of uncertainty about their sexual orientation (2.1 percent) or choosing not to respond (3.2 percent). Regional variations were observed, with 2.1 percent of individuals in the Southeast declaring themselves as homosexual or bisexual compared to 1.5 percent in the Northeast. This survey marked the first time the IBGE collected data on sexual orientation, and the results, presented on an experimental basis, align with similar international analysis. The survey did not collect data on gender identity, but the IBGE is exploring methodologies to incorporate this into future research. At the end of 2023, data collection began for the new National Demographic and Health Survey (PNDS) conducted by IBGE, which includes variables on sexual orientation and gender identity. But as of the time of writing, there is no estimate for when the results or microdata will become available (IBGE, 2023).

We identified two other data sources that allow the identification of same-sex couple households in Brazil: the national census (*Censo Demográfico*) and the National Household Sample Survey (PNAD). Although these data do not permit inferences about individual identity regarding sexuality or gender (beyond sex), they enable us to explore differences between households based on the type of partnerships: same-sex spouses or different-sex spouses. Thus, considering all the limitations and biases present in surveys in the country, it is natural that evidence and studies on the topic are also limited and scarce. On one hand, health surveys are making progress in identifying individual sexual orientation despite being highly underreported. On the other hand, the published results are still preliminary, have low representativeness, and a vailable variables focus more on health issues rather than economic ones.

As a result, the research agenda commonly explored with these data tends to focus more on issues related to health, violence, and access to services (Carvalho and Barreto, 2021). The only

evidence we found regarding the economic effects on this sample was the study by Suilano, Filho and Irffi (2021). The authors analyzed wage differences based on sexual orientation using anthropometric and health measures. Their analysis showed that gay men worked the same average hours (38) as heterosexual men, but lesbian women worked 33 percent more than heterosexual women. Overall, homosexuals were more educated, but women have worse health outcomes compared to men, and gay men outperform heterosexual men on health indicators. The differential wage was favorable for lesbians compared to their sexual counterparts, and they did not find statistical significance for gay and heterosexual men.

The Brazilian Census (IBGE, 2010) data confirms similar patterns as other studies regarding partnership type. Individuals in same-sex partnerships were more likely to be white and more educated than those in opposite sex partnerships although male-male households were more likely to be enrolled in higher education than women in same sex partnerships. Also, men in opposite-sex households have the highest average individual incomes and women in these households the lowest. Households composed of two men and those composed of two women have similar average income.

Using census data, Silva and Santos (2016) decomposed the difference in family income among same-sex and different sex couples. They found that SS couples have higher levels of family income compared to other couples. Comparing male and female SS households, male SS households have higher incomes than female SS households. Lena and Oliveira (2015) examine the marital patterns among heterosexual and homosexual couples in Brazil. They found that DS couples have higher endogamy rates compared to SS couples for all combinations of educational attainments, race/ethnicity, and age cohorts. Also, Lena (2021) explored migration patterns among same-sex couples and found that individuals in households with same-sex partnerships are more concentrated in the more developed part of Brazil. Her findings also show that people in same-sex partnerships tend to migrate predominantly towards medium-sized cities.

Although still limited in terms of capturing sexual identity, economic studies more commonly utilize census data or data from the PNAD, the main recurring household survey. The advantage of using these data lies in the rich details provided about individuals, including demographic information, labor market status, household composition, and more. However, these surveys do not allow for the observation of individuals with different sexual orientations and gender identities, capturing only those who declare themselves to be married to same-sex partners.

Although this survey faces similar limitations to the census, it has some advantages. Since the survey is carried annually in the country, it allows pooling different years – controlling by observable characteristics – and building a bigger and statistically more robust sample of same-sex couples.

Using the PNAD data, Cavalcante, Suliano and Rodrigues (2021) explored the income differences among SS and DS couples in Brazil using the Oaxaca decomposition method. The authors confirm that SS couples have higher incomes compared to DS couples with regard to observable characteristics. However, they found no effect attributable to unobserved characteristics. Graves and Trond (2024) estimated the impact of Brazilian legislation that prohibits employment discrimination based on sexual orientation on labor market outcomes (employment gaps, formal sector employment, hours worked and individual earnings) for SS individuals. Pooling PNAD data from 1996 to 2011, they found positive income effects of the policy for male individuals in SS partnerships, while women in SS partnerships had lower labor force participation or reduced hours, but those that remained employed enjoyed higher hourly earnings and income.

From a broader perspective, Bogusz and Gromadzki (2024) constructed a pooled sample with international data representing "more than two-thirds of the world's population with access to same-sex marriage on three continents", including PNAD data from 2011-2013. Different from the national estimations presented, the authors find that men in SS couples are 60 percent more likely to be unemployed than men in DS partnerships, but the gaps could not be explained by occupational sorting or observable characteristics.

In general, these important, yet limited and inconclusive, pieces of evidence confirm that the type of partnership matters for socioeconomic outcomes. These differences are crucial to understanding how household-level factors impact economic results and how gender dynamics limit choices within the traditional family roles assigned to women. They underscore the importance of research that considers a broader range of variables related sexual orientation, despite the inherent data limitations. In this paper, we aim to contribute to the scarce Brazilian literature with an explicit focus on the economic effects of SS and DS partnerships.

## 4. Data, Variables and Descriptive Statistics

The Brazilian Continuous National Household Sample Survey (PNAD-C)[3] monitors the fluctuations of the labor force and socioeconomic indicators in Brazil. The survey produces quarterly indicators on household, family, and special characteristics of the population. This paper pools data from 2016 to 2019, comparable years in the survey[4], to increase the number of observations of same-sex couples, which represents less than 1% of the total sample (IBGE, 2024).

Data on gender identity is not available in PNAD-C and therefore we use sex as a proxy for gender and we are limited to a binary classification (female, male). Therefore, in this study, we use the terms male and female rather than man/men and woman/women. We divide primary household partnerships into two groups: same sex households (SS), when the people forming couples (heads of the household and their spouses) are the same sex, and different sex households (DS) when the people forming couples are different sexes. SS households can be further divided into male-male households (MM) and female-female households (FF). For the purpose of our analysis, we restrict the sample to individuals over 16 years old, the minimum age of marriage in Brazil, although we retain variables capturing the presence of younger household members. From 2016 to 2019, the 2,360 individuals who declared living with same-sex partners as spouses comprised less than 1% of total couples in the sample, of which 1,400 are households formed by two females (FF) and 960 by two males (MM). Table 1 summarizes the sample by type of partnership.

***Table 1 - Individuals by partnership category, PNAD 2016-2019.***

| Variable | N | |
|---|---|---|
| **Same Sex (SS)** | **2,360** | **0.167%** |
| Male-Male (MM) | 960 | 0.067% |
| Female-Female (FF) | 1,400 | 0.100% |
| **Different Sex (DS)** | **776,002** | **54.89%** |
| **Unmarried/Other** | **632,955** | **44.77%** |

[3] Portuguese, acronym for Pesquisa Nacional por Amostra de Domicílios Contínua (PNAD-C)

[4] PNAD data before 2015 adopted a different methodology, based on annual visits. From 2016 and on, the survey became continuous, which was planned to produce quarterly indicators on the workforce and annual indicators on permanent supplementary themes investigated in a specific quarter or applied every quarter in a part of the sample and accumulated to generate annual results (IBGE, 2024). In 2020 and 2021, the methodology was designed to capture the pandemic effects, which would require inferences that are not in the scope of this research.

It is important to note that the PNAD-C survey data does not allow us to define variables capturing sexual orientation independently of an individual being part of a same-sex partnership. Therefore, the statistics reported in Table 1 for individuals in same-sex partnerships capture only a fraction of the people who might identify as LGBTI if the survey included such a question. Also, the questions in the PNAD-C survey identifying same-sex and different-sex partnerships are framed in terms of people who identify as spouses. Other types of partnerships (e,g. same-sex intimate co-habitating relationships that are not considered marriages or equivalent to marriages) cannot be accurately parsed out of the data. Individuals in these relationships are included in the "other" category for the purposes of our analysis.

Table 2 summarizes several dimensions of individual characteristics by partnership type. One of these dimensions is racial identity based on the classifications of the PNAD-C survey. We see that the majority (54 percent) of individuals in MM partnerships (same-sex male) identify as white, a notably higher proportion compared to other partnership categories in which white individuals account for 36 to 42 percent of the total. Across these other partnership types, the largest shares of individuals identify as *pardos*[5]. The Asian and Indigenous population represents less than 1% of all individuals across partnership types –with these racial groups accounting for a slightly larger share of SS couples compared to DS couples. Individuals in SS couples are also significantly more educated on average than those in DS partnerships or those in the "unmarried/other" category, especially for males in same-sex partnerships. This is particularly noticeable for post-secondary education; 42.4 percent of males reporting that they are in same-sex partnerships have some form of higher education – a significantly higher share than other partnership categories. Individuals in DS couples are concentrated in the lower educational ranges, and females in these partnerships, on average, have higher educational attainment than males. Finally, we see that, on average, individuals in SS partnerships are younger than individuals in DS partnerships.

[5] In Brazil, the term "negro" is officially used to describe two different ethnic groups: pardos and pretos (black). "Pardo" refers to a broad category of mixed heritage and can encompass a wide range of skin tones, while "preto" is used to describe individuals of African descent with darker skin. Understanding these distinctions is crucial for analyzing labor market data, as racial and ethnic backgrounds can significantly influence employment opportunities and outcomes.

***Table 2 - Individual Characteristics, by type of partnership in Brazil (2016-2019)***

| | | Different Sex | | Same Sex | | Unpartnered/other | |
|---|---|---|---|---|---|---|---|
| | **Variable** | **Women** | **Men** | **Women** | **Men** | **Women** | **Men** |
| Color/race | White | 41.2% | 40.5% | 41.6% | 53.6% | 39.8% | 36.5% |
| | *Pretos* | 7.8% | 9.3% | 9.8% | 8.4% | 9.4% | 9.2% |
| | Asian | 0.5% | 0.5% | 0.7% | 0.7% | 0.5% | 0.4% |
| | *Pardos* | 50.0% | 49.2% | 47.4% | 36.4% | 49.7% | 53.3% |
| | Indigenous | 0.5% | 0.4% | 0.6% | 0.6% | 0.4% | 0.5% |
| | Unknown | 0.0% | 0.0% | 0.0% | 0.2% | 0.0% | 0.0% |
| Educ. | Less than primary | 41.5% | 49.6% | 14.4% | 8.2% | 34.8% | 35.3% |
| | Primary | 14.5% | 14.0% | 13.9% | 7.9% | 17.8% | 22.5% |
| | Secondary | 29.8% | 25.9% | 47.9% | 41.5% | 34.3% | 34.0% |
| | Higher | 14.2% | 10.5% | 23.8% | 42.4% | 13.1% | 8.2% |
| Age | Mean Age | 44.3 | 47.9 | 35.2 | 36.2 | 42.2 | 34.2 |

Geographically, SS households are more concentrated in the Southeast region (Table 3), where the majority of non-agricultural economic activity in Brazil is located. Apart from this, SS and DS households are similarly distributed among the Brazilian regions with small variations. Individuals in SS partnerships represent a highly urbanized population compared to other individuals – over 93 percent of SS households are located in urban areas.

SS households are less likely to have children, under 16 or under 5 years of age, compared to the households of individuals in other partnership categories. However, females in SS partnerships are significantly more likely to live in households with children than males in SS households. This corresponds with similar findings from studies of other countries, in which females in same-sex partnerships are more likely have children compared to males, and the most common path for females in SS partnerships to have children is to bring them from an earlier relationship (Moore and Stambolis-Ruhstorfer, 2013). For those households in which children are present, the average number of children is similar across partnership type, with the average number of children being slightly lower for SS households.

*Table 3 – Individuals by household characteristics and type of partnership (2016-2019)*

| | Different sex | | Same sex | | Unpartnered/other | |
|---|---|---|---|---|---|---|
| | **Females** | **Males** | **Females** | **Males** | **Females** | **Male** |
| **Region and urban location of household** | | | | | | |
| North | 12.7% | 12.7% | 13.7% | 7.3% | 12.6% | 14.5% |
| Northeast | 32.3% | 32.3% | 28.1% | 21.0% | 35.0% | 34.2% |
| Southeast | 26.4% | 26.3% | 31.3% | 38.3% | 27.9% | 26.6% |
| South | 18.5% | 18.5% | 15.6% | 22.7% | 15.2% | 15.2% |
| Mid-east | 7.9% | 7.9% | 7.9% | 8.3% | 7.5% | 7.6% |
| Unknown | 2.3% | 2.3% | 3.4% | 2.3% | 1.9% | 2.0% |
| % urban | 69.5% | 69.5% | 93.4% | 94.6% | 81.7% | 72.7% |
| **Household Size and presence of children** | | | | | | |
| Average household size | 3.45 | 3.45 | 2.78 | 2.25 | 3.54 | 3.62 |
| Children under 16 years old | 51.4% | 51.4% | 31.4% | 5.4% | 40.4% | 31.6% |
| Children under 5 years old | 21.7% | 21.7% | 8.3% | 2.5% | 15.4% | 10.2% |
| Ave number children (<16) | 1.64 | 1.64 | 1.43 | 1.54 | 1.64 | 1.62 |
| Ave number children (<5) | 1.15 | 1.15 | 1.03 | 1.50 | 1.20 | 1.20 |

Note: Average number of children per household excludes households without any children.

Turning to labor-market indicators, females and males with SS partners have higher labor force participation rates and employment-population ratios compared to other females and males. This is particularly notable when we compare females in SS partnerships and females in DS partnerships. However, unemployment rates, which are conditional on labor force participation, are higher for females and males in SS partnerships compared to females in DS couples. Average individual monthly earnings for employed persons are also significantly higher for females and males in SS partnerships compared to females and males in DS partnerships. Another way to look at earnings is to consider earnings at the household level using per capita earnings – i.e. total household earnings of all employed people divided by the household size. Per capita household earnings follow a similar pattern as individual earnings: they are significantly higher for females and males in SS partnerships compared to females and males in DS partnerships.

***Table 4 - Work, Income and Vulnerability Characteristics, by type of household in Brazil (2016-2019)***

| | Different Sex | | Same Sex | | Unpartnered/Other | |
|---|---|---|---|---|---|---|
| | **Women** | **Men** | **Women** | **Men** | **Women** | **Men** |
| **Labor Market Indicators** | | | | | | |
| Labor force participation | 51.5% | 77.6% | 86.1% | 87.6% | 49.6% | 66.8% |
| Employed | 46.8% | 73.5% | 76.1% | 79.6% | 40.7% | 56.2% |
| Unemployment rate | 9.2% | 5.3% | 11.7% | 9.2% | 17.9% | 15.8% |
| Earnings (of employed) | 1,865 | 2,386 | 2,522 | 3,993 | 1,611 | 1,645 |
| **Per Capita Household Earnings** | | | | | | |
| Per capita earnings | 925 | 925 | 1,652 | 3,040 | 714 | 865 |

## 5. Endogamy and homogamy in same-sex and different sex partnerships

Patterns of partnership formation have potentially important consequences for individual and collective economic well-being. Endogamy (exogamy) refers to marriage or partnership formation within (outside of) social groups based on specific forms of collective identity. A closely related concept is homogamy (heterogamy) which refers to marriage or partnership formation between people with similar (different) individual characteristics. Here we examine patterns of racial endogamy/exogamy and educational homogamy/heterogamy among different-sex and same sex partnerships in Brazil.

Homogamy/endogamy can reinforce existing socio-economic stratifications and, as a result, has implications for individual economic well-being. For instance, intermarriage among members of the dominant racial group, which has often been accompanied by formal and informal restrictions on interracial partnerships, helps to cement existing racial hierarchies at the household level. Similarly, partnerships formed between two people with similar educational attainments exacerbate inter-household income inequalities (e.g. Esping-Andersen, 2007; Greenwood et al., 2014). Since employment income is strongly correlated with education, when two highly educated, employed individuals form a household, total household income becomes the sum of two incomes at the upper end of the distribution. Similarly, two people with low educational attainment would be pooling incomes at the bottom of the distribution. The result of this kind of homogamy is greater income polarization than would be the case if we considered everyone as individuals (as opposed to partners pooling incomes). In contrast, educational heterogamy (highly educated/high income

people partnering with lower educated/low income individuals) would represent an equalizing force with regard to inter-household inequality.

Tables 5A and 5B summarize patterns of racial endogamy/exogamy using the 2016-19 PNAD data for different-sex (1A) and same-sex (1B) partnerships. The rows of the table represent the race of one partner and the columns the race of the other. The cells show each type of partnership by race reported in the data as a share of all different-sex or same-sex partnerships. The tables also show the hypothetical shares of partnerships by race if partnerships were determined purely by random matching.[6] For example, in Table 1A, 28.69 percent of different sex-partnerships were endogamous white-white couples. If partnerships were randomly determined, we would have expected only 16.69 percent of partnerships to be comprised of two white individuals.

***Table 5. Different sex (A) and Same Sex (B) partnerships, racial endogamy/exogamy. Actual compared to hypothetical random matching (hypothetical in parentheses).***

5A – Different sex partnerships

| | white | *preto* | asian | *pardo* | indig |
|---|---|---|---|---|---|
| white | 28.69% (16.69) | | | | |
| *preto* | 3.95% (6.99) | 3.77% (0.73) | | | |
| asian | 0.27% (0.43) | 0.07% (0.09) | 0.19% (<0.01) | | |
| *pardo* | 19.93% (40.54) | 5.48% (8.49) | 0.33% (0.52) | 36.59% (24.62) | |
| indig | 0.19% (0.37) | 0.06% (0.08) | <0.00% (<0.01) | 0.32% (0.44) | 0.16% (<0.01) |

Overall racial endogamy, 69.4%, overall racial exogamy 30.6%

5B – Same Sex partnerships

| | white | *preto* | asian | pardo | indig |
|---|---|---|---|---|---|
| white | 30.36% (17.13) | | | | |
| *preto* | 7.21% (7.27) | 2.46% (0.76) | | | |
| asian | 0.68% (0.52) | 0.34% (0.11) | 0.08% (<0.01) | | |
| *pardo* | 24.09% (40.3) | 6.02% (8.59) | 0.25% (0.61) | 27.40% (23.68) | |
| indig | 0.34% (0.43) | <0.00% (0.09) | <0.00% (0.01) | 0.68% (0.51) | 0.08% (<0.01) |

Overall racial endogamy, 60.4%, overall racial exogamy 39.6%

[6] Random matching for different-sex couples is based on the pool of all individuals in different-sex partnerships – and then randomly matching women to men. For same-sex couples, men in same-sex partnerships are randomly matched with other men in same-sex partnerships and women in same-sex partnerships are randomly matched with other women in same-sex partnerships. The hypothetical values reported in Tables 1A, 1B, 2A, and 2B are weighted averages of the shares for same-sex men and same-sex women.

The two tables show significant racial endogamy for both different-sex and same-sex couples. In other words, the actual share of partnerships between individuals of the same race exceeds, sometimes significantly, the share of same-race couples we would expect if partnerships had been determined randomly. Overall, different-sex couples show a higher degree of endogamy than same-sex couples – 69.4 percent of different-sex couples are of the same race compared to 60.4 percent of same-sex couples. However, in both different-sex and same-sex partnerships, the degree of endogamy among white individuals is similar. The greater exogamy among same-sex couples is driven to a significant extent by greater exogamy among *pardos* in same-sex partnerships.

***Table 6. Different sex (A) and Same Sex (B) partnerships, educational homogamy/heterogamy. Actual compared to hypothetical random matching (hypothetical in parentheses).***

6A - Different Sex Partnerships

| | > primary | primary | secondary | *higher* |
|---|---|---|---|---|
| > primary | 34.84% (20.58) | | | |
| Primary | 9.78% (12.97) | 4.60% (2.02) | | |
| secondary | 9.90% (25.54) | 8.09% (7.92) | 14.91% (7.72) | |
| *higher* | 1.72% (11.42) | 1.39% (3.51) | 7.92% (6.82) | 6.86% (1.5) |

Overall educational homogamy, 61.2%, overall educational heterogamy 38.8%.

6B - Same Sex Partnerships

| | > primary | primary | secondary | *higher* |
|---|---|---|---|---|
| > primary | 6.96% (5.99) | | | |
| Primary | 3.90% (7.86) | 3.65% (2.01) | | |
| secondary | 5.09% (24.15) | 10.52% (11.07) | 28.07% (14.27) | |
| *higher* | 0.85% (11.92) | 1.27% (5.42) | 18.83% (13.91) | 20.87% (3.39) |

Overall educational homogamy, 59.5%, overall educational heterogamy 40.5%.

Tables 6A and 6B summarize patterns of educational homogamy/heterogamy using the 2016-19 PNAD data for different-sex (2A) and same-sex (2B) partnerships. As with racial endogamy, both different-sex and same-sex partnerships show a significant degree of educational homogamy. Overall, the degree of homogamy is similar for different-sex (61.2%) and same-sex (59.5%) couples. However, there is a crucially important distinction. For different-sex couples, homogamy is concentrated among individuals with lower-educational attainment (less than primary education or primary education). For same-sex couples, homogamy is concentrated among individuals with higher educational attainment (secondary or higher education). This is, in part, due to the greater educational attainment, on average, of individuals reporting to be part of a same-

sex partnership. Nevertheless, taking this into account, there is still a strong tendency towards homogamy among more highly educated members of same-sex partnerships compared to random matching. This suggests that differences in patterns of household formation, not simply differences in educational attainment, would be important to consider when analyzing inequalities between different-sex and same-sex households.

## 6. Labor Market outcomes for same-sex and different sex partners

### *6.1 Empirical model and techniques*

The simple descriptive analysis presented in the previous sections show that there are significant differences in individual (e.g. education) and household (e.g. presence of children) characteristics between SS and DS households that will impact labor-market outcomes and incomes. Therefore, it is important to perform multivariate analysis to provide clarity on the correlations between our key variables. Using the same data described above, we consider individuals 16 years or older based on their type of partnership: same sex-spouses, different-sex spouses and people without an identified spouse. As discussed earlier, we are not able to unambiguously identify other partnerships which are not considered spousal. A set of labor market outcome indicators are modeled as dependent variables and include labor force participation, employment, informality and wages. We also consider household per capita income. Table 7 summarizes the variables used in the analysis.

Our basic empirical model can be described as follows:

$$y_{i,lm} = \alpha_{lm} + ToP_{j,i,lm}\beta_{i.lm} + X'_{i,lm}\gamma_0 + \varepsilon_{lm} \qquad 1$$

where $y_{i,lm}$ is the dependent variable for each outcome *lm* and individuals *i;* $ToP_{j,i,lm}$ represents the effects of each *j* Type of Partnership (*j* = same or different sex), the main effect of interest, represented by the respective parameter $\beta_{j,i.lm}$; $X'_{i,lm}$ represents a vector of control variables (described in Table 7) and their respective parameters $\gamma_0$; $\varepsilon_{lm}$ is the error term.

For each labor market outcome, we generated estimates conditional on different groups: all sample, only same-sex households, only females and only males. The estimations of the binary dependent variables (employment, participation and informality) are generated through the application of a probit model, while earnings and income regressions followed a simple linear regression model (OLS). For informality and individual wages, only employed individuals are

included in the analysis presented here (i.e. the coefficient estimates are conditional on being employed). Moreover, wages and earnings are expressed as natural logarithms which allow estimated coefficients to be interpreted as percent changes.

***Table 7 - Variables descriptions***

| Variable | Description |
|---|---|
| **Dependent Variables** | |
| Employment | =1 if the individual was employed at the week the survey was carried on; 0 otherwise. |
| Participation | =1 if the individual was active in the labor force at the week the survey was carried on; 0 otherwise. |
| Informality | =1 if the individual did not have *carteira assinada* (a social security document in Brazil) or are own-account workers (working in micro-enterprises with no paid employees); 0 otherwise. |
| Wages | Effective monthly earnings from all jobs (only for those who received payment in cash, products, or goods from any job). |
| Income per capita | Effective monthly earnings from all jobs divided by the number of residents of the households. |
| **Partnership** | |
| Same-sex Partnership (SS) | =1 if the head of the household and the spouse are the same sex (male and male or female and female); 0 otherwise |
| Different-Sex Partnership (DS) | =1 if the head of the household and the spouse are different sex (male female); 0 otherwise |
| **Control Variables** | |
| Age | Individual age in years |
| Age Squared | Squared of individual age (divided by 100) |
| Female | =1 if the reported sex is female; 0 if the reported sex is male. |
| Urban | =1 if the individual lives in urban areas; 0 otherwise. |

| | |
|---|---|
| Higher | =1 if the individual highest educational attainment is High Education; 0 otherwise. |
| Secondary | =1 if the individual highest educational attainment is secondary; 0 otherwise. |
| Primary | =1 if the individual highest educational attainment is primary; 0 otherwise. |
| White | =1 if the individual declared race/color White; 0 otherwise. |
| Preto | =1 if the individual declared race/color Preto; 0 otherwise. |
| Asian | =1 if the individual declared race/color Asian; 0 otherwise. |
| Indig. | =1 if the individual declared race/color Indigenous; 0 otherwise. |
| < 16 years old | =1 if in the household lives a child younger than 16 years old; 0 otherwise. |
| < 5 years old | =1 if in the household lives a child younger than 5 years old; 0 otherwise. |
| North | =1 if in the household lives in the North region; 0 otherwise. |
| Northeast | =1 if in the household lives in the Northeast region; 0 otherwise. |
| South | =1 if in the household lives in the South region; 0 otherwise. |
| Midwest | =1 if in the household lives in the Midwest region; 0 otherwise. |

*6.2 Main results*

Given limitations of the data, including the availability and definitions of variables and the overall structure of the PNAD, our aim for this analysis is modest: to explore correlations between the variables at our disposal with multivariate controls in place. In many respects, the results discussed here represent an enhanced descriptive analysis. We are not aiming to identify causal relationships in this paper. We discuss these and other caveats in more detail later.

Table 8 focuses on the differences of the type of partnerships and sex. The results are presented for the estimations (A) with and (B) without the covariates. Individuals in same-sex partnerships are more likely to be employed, active in the paid labor force, and have higher salaries and per capita household income compared to those in different-sex partnerships or when compared to unpartnered individuals. On average, the results are less favorable for females, regardless of the type of partnerships. As expected, given the differences in individual characteristics, the effects remain similar but are of lesser magnitude when covariates are included, underscoring the importance of a multivariate approach.

***Table 8 - Labor Market Effects by type of partnership and gender - with (A) and without (B) covariates***

| Variable | Participation | Employment | Per capita income | Wages |
|---|---|---|---|---|
| **A) With Covariates** | | | | |
| Same Sex | 0.150*** | 0.163*** | 0.336* | 0.225*** |
| | (0.011) | (0.010) | (0.019) | (0.018) |
| Different Sex | 0.060*** | 0.029*** | 0.169** | 0.146*** |
| | (0.001) | (0.001) | (0.002) | (0.002) |
| Female | -0.282*** | -0.295*** | -0.114** | -0.407*** |
| | (0.001) | (0.001) | (0.002) | (0.002) |
| **B) Without Covariates** | | | | |
| Same Sex | 0.288*** | 0.281*** | 0.882*** | 0.575*** |
| | (0.007) | (0.006) | (0.025) | (0.023) |
| Different Sex | 0.120*** | 0.066*** | 0.094*** | 0.201*** |
| | (0.001) | (0.001) | (0.002) | (0.002) |
| Female | -0.219*** | -0.222*** | -0.037*** | -0.160*** |
| | (0.001) | (0.001) | (0.002) | (0.002) |

* Significant at 10%, ** significant at 5%, *** p-value < 1%

Table 9 presents estimates of correlations with labor market outcomes, but restricted to those in same-sex relationships. Older individuals tend to have better economic outcomes (up to a point), while the effect of sex was only significant for income variables. Additionally, the effects of education are positive for higher levels of education, and individuals with lower education attainment (less than high school) do not differ from those with no education (illiterate and incomplete primary education). In terms of race or color, compared to *pardos*, the effects are only significant for white individuals, who tend to have better economic outcomes. The presence of

***Table 9 Labor Market Effects Conditionings on Same Sex Couples***

| | | Participation | Employment | Informality | Per Capita Income | Wages |
|---|---|---|---|---|---|---|
| Demographic | Age | 0.038*** | 0.024*** | 0.018*** | 0.049*** | 0.045*** |
| | | (0.005) | (0.003) | (0.005) | (0.010) | (0.013) |
| | Age Squared | -0.053*** | -0.037*** | -0.024*** | -0.052*** | -0.037* |
| | | (0.006) | (0.004) | (0.006) | (0.013) | (0.016) |
| | Female | 0.001 | 0.002 | 0.003 | -0.220*** | -0.247*** |
| | | (0.019) | (0.015) | (0.02) | (0.038) | (0.038) |
| | Urban | 0.041 | 0.021 | -0.023 | 0.345*** | 0.259** |
| | | (0.037) | (0.027) | (0.04) | (0.079) | (0.084) |
| Educational | Higher | 0.211*** | 0.126*** | -0.139*** | 1.613*** | 1.440*** |
| | | (0.022) | (0.016) | (0.029) | (0.067) | (0.069) |
| | Secondary | 0.084*** | 0.054** | -0.098*** | 0.848*** | 0.708*** |
| | | (0.026) | (0.019) | (0.029) | (0.063) | (0.067) |
| | Primary | 0.02 | 0.036** | 0.038 | 0.446*** | 0.323*** |
| | | (0.031) | (0.019) | (0.039) | (0.079) | (0.084) |
| Color/Race | White | 0.045** | 0.026* | 0.026 | 0.167*** | 0.110** |
| | | (0.02) | (0.015) | (0.022) | (0.041) | (0.041) |
| | *Preto* | 0.034 | 0.029 | 0.013 | -0.039 | 0.030 |
| | | (0.029) | (0.02) | (0.034) | (0.064) | (0.065) |
| | Asian | -0.101 | -0.083 | 0.041 | 0.188 | 0.031 |
| | | (0.116) | (0.097) | (0.115) | (0.206) | (0.226) |
| | Indig. | 0.143** | 0.088*** | 0.19 | 0.286 | 0.048 |
| | | (0.056) | (0.026) | (0.136) | (0.220) | (0.227) |
| Dependents | < 16 years old | 0.004 | 0 | -0.012 | -0.486*** | 0.023 |
| | | (0.025) | (0.019) | (0.027) | (0.052) | (0.053) |
| | < 5 years old | -0.153*** | -0.115*** | -0.032 | -0.258** | -0.021 |
| | | (0.05) | (0.044) | (0.043) | (0.088) | (0.095) |
| Region | North | 0.014 | -0.025 | 0.037 | -0.199** | -0.153* |
| | | (0.028) | (0.025) | (0.034) | (0.061) | (0.063) |
| | Northeast | 0.008 | -0.032* | 0.094*** | -0.374*** | -0.373*** |
| | | (0.022) | (0.019) | (0.026) | (0.047) | (0.047) |
| | South | 0.033 | -0.006 | 0.03 | 0.022 | 0.005 |
| | | (0.024) | (0.02) | (0.028) | (0.051) | (0.051) |
| | Midwest | 0.059** | 0.033 | 0.02 | 0.043 | -0.027 |
| | | (0.029) | (0.023) | (0.037) | (0.068) | (0.067) |

* Significant at 10%, ** significant at 5%, *** p-value < 1%

children is associated with lower per capita income (in part due to larger households), while the presence of younger children in the household reduces the likelihood of individuals in SS partnerships being employed or active in the labor force. Finally, in geographic terms, only the Northeast region showed a significant result, associated with worse outcomes (lower chances of being employed, higher informality, and lower earnings).

Given that females and males experience different labor market constraints due to the gender division of labor, discrimination, norms, and patriarchal institutions, it is important to perform separate analyses for females and males. Table 10 presents this analysis. The base of comparison is unpartnered individuals or individuals in other (non-spousal) partnership arrangements. The results show that the type of partnership has different effects for males and females. Being in a same-sex partnership is associated with the largest positive increase in the likelihood of being employed for females (compared to males in SS partnerships or individuals in DS partnerships), although it also is associated with these females having a higher likelihood of working informally. Being in a partnership is associated with a higher likelihood of being employed or in the labor market for males, but this effect is larger for males in DS partnerships compared to SS partnerships. However, earnings and household per capita income are higher for males in same-sex partnerships, compared to other males, controlling for educational attainment and other factors. Females in different-sex partnerships are the only group with lower chances of being employed or active in the labor market compared to unpartnered individuals.

Age is associated with higher probabilities of being in the labor force, being employed, and with higher wages up to a point –the effect eventually diminishes and begins to decline (i.e. the coefficient on age squared is negative). Residing in urban areas increases the chances of females being employed while reducing those for males, although it is associated with higher earnings for both. More educated individuals tend to be more likely to be employed and active in the labor market. Wages and per capita income rise with the level of educational attainment.

White and *pretos* individuals have higher likelihoods of being in the labor market compared to *pardos*. However, *pretos* individuals have lower individual wages while white and Asian individuals enjoy a wage premium (relative to *pardos*). The presence of children increases the chances of males being employed or in the labor force, while it has a negative effect for females. These effects are even more significant when considering the presence of children under 5 years old. The presence of children in the household is associated with lower per capita income (most

likely due to larger household sizes and the lower probability of women earning incomes from paid work). Having children under 5 years old in the household has no significant effect on individual wages for either males or females. Interesting, the presence of children under 16 years old is associated with lower individual wages for both males and females, with the effect being larger for females.

Finally, the results from the wage regressions indicate that individuals in all partnership types (DS male, DS female, SS male and SS female) demonstrate the so-called "marriage premium". That is, employment earnings are higher compared to their unpartnered (i.e. without a spouse) counterparts. Females in SS partnerships have a substantially higher premium than females in DS partnerships, who have the lowest premiums across all partnered individuals. Although males in SS partnerships also have a higher average premium than those in DS partnerships, the difference is not statistically significant. Interestingly, the average premium for females in SS partnerships, controlling for other factors, is significantly higher than that of males – although the base of comparison is different (i.e. unpartnered females versus unpartnered men). In the next section we explore further effects of the "marriage premium" among partnered individuals.

***Table 10 – Effects of labor market outcomes for males and females***

| | | Male | | | | | Female | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Employ. | Particip. | Informality | Income (pc) | Wages | Employ. | Particip. | Informality. | Income (pc) | Wages |
| **Partnership** | Same Sex | 0.068*** | 0.064*** | 0.017 | 0.342*** | 0.182*** | 0.178*** | 0.21*** | 0.052 *** | 0.338*** | 0.226*** |
| | | (0.015) | (0.014) | (0.016) | (0.029) | (0.027) | (0.015) | (0.016) | (0.010) | (0.024) | (0.024) |
| | Different Sex | 0.171*** | 0.141*** | 0.039*** | 0.087*** | 0.218*** | -0.029*** | -0.064*** | -0.021 *** | 0.242*** | 0.054*** |
| | | (0.002) | (0.001) | (0.001) | (0.003) | (0.003) | (0.001) | (0.001) | (0.001) | (0.003) | (0.003) |
| **Demographic** | Age | 0.049*** | 0.042*** | 0.028*** | 0.033*** | 0.054*** | 0.056*** | 0.053*** | 0.021*** | 0.058*** | 0.058*** |
| | | (0.000) | (0.000) | (0.000) | (0.009) | (0.001) | (0.000) | (0.000) | (0.000) | (0.001) | (0.001) |
| | Age Squared | -0.061*** | -0.055*** | -0.034*** | -0.033*** | -0.053*** | -0.069*** | -0.07*** | -0.026 *** | -0.003*** | -0.060*** |
| | | (0.000) | (0.000) | (0.000) | (0.000) | (0.001) | (0.000) | (0.000) | (0.000) | (0.000) | (0.001) |
| | Urban | -0.053*** | -0.013*** | -0.110*** | 0.413*** | 0.305*** | 0.061*** | 0.099*** | 0.033 *** | 0.458*** | 0.330*** |
| | | (0.001) | (0.001) | (0.001) | (0.003) | (0.003) | (0.002) | (0.002) | (0.001) | (0.003) | (0.004) |
| **Educational** | Higher | 0.187*** | 0.154*** | -0.178*** | 1.365*** | 1.299*** | 0.353*** | 0.354*** | -0.072 *** | 1.320*** | 1.377*** |
| | | (0.002) | (0.002) | (0.002) | (0.004) | (0.004) | (0.002) | (0.002) | (0.001) | (0.004) | (0.004) |
| | Secondary | 0.116*** | 0.115*** | -0.114*** | 0.628*** | 0.550*** | 0.184*** | 0.204*** | -0.009 *** | 0.624*** | 0.618*** |
| | | (0.002) | (0.001) | (0.001) | (0.003) | (0.003) | (0.002) | (0.002) | (0.001) | (0.003) | (0.004) |
| | Primary | 0.040*** | 0.032*** | -0.042*** | 0.340*** | 0.295*** | 0.068*** | 0.069*** | 0.011 *** | 0.317*** | 0.305*** |
| | | (0.002) | (0.002) | (0.002) | (0.004) | (0.004) | (0.002) | (0.002) | (0.001) | (0.004) | (0.005) |
| **Color/race** | White | 0.017*** | 0.000 | 0.015*** | 0.183*** | 0.140*** | 0.010*** | -0.008*** | 0.000 | 0.201*** | 0.135*** |
| | | (0.001) | (0.001) | (0.001) | (0.003) | (0.003) | (0.001) | (0.002) | (0.001) | (0.003) | (0.003) |
| | *Preto* | 0.011*** | 0.021*** | -0.003 | 0.014*** | -0.009** | 0.036*** | 0.056*** | 0.018 *** | -0.018*** | -0.018** |
| | | (0.002) | (0.002) | (0.002) | (0.004) | (0.004) | (0.002) | (0.002) | (0.002) | (0.004) | (0.005) |
| | Asian | -0.003 | -0.021** | 0.037*** | 0.186*** | 0.157*** | 0.007 | -0.004 | 0.026 *** | 0.199*** | 0.183*** |
| | | (0.009) | (0.009) | (0.009) | (0.017) | (0.017) | (0.009) | (0.009) | (0.006) | (0.016) | (0.018) |
| | Indig | 0.008 | -0.004 | 0.027** | -0.057** | -0.042** | 0.014 | -0.02 | 0.004 | -0.047* | 0.012** |
| | | (0.009) | (0.009) | (0.009) | (0.018) | (0.018) | (0.009) | (0.035) | (0.007) | (0.017) | (0.023) |
| **Dependants** | < 16 years old | 0.008*** | 0.009*** | -0.017*** | -0.433*** | -0.015*** | -0.004** | -0.004** | 0.002 | -0.417*** | -0.057*** |
| | | (0.002) | (0.001) | (0.001) | (0.003) | (0.003) | (0.002) | (0.002) | (0.001) | (0.003) | (0.003) |
| | < 5 years old | 0.040*** | 0.044*** | 0.024*** | -0.156*** | 0.003 | -0.061*** | -0.072*** | -0.016 *** | -0.158*** | 0.004 |
| | | (0.002) | (0.002) | (0.002) | (0.004) | (0.003) | (0.002) | (0.002) | (0.001) | (0.003) | (0.004) |

| | | Male | | | | | Female | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Employ. | Particip. | Informality | Income (pc) | Wages | Employ. | Particip. | Informality. | Income (pc) | Wages |
| **Region** | North | -0.009*** | -0.032*** | 0.078*** | -0.319*** | -0.26***1 | -0.046*** | -0.072*** | -0.011 *** | -0.316*** | -0.172*** |
| | | (0.002) | (0.002) | (0.002) | 0.004 | 0.004 | (0.002) | (0.002) | (0.001) | (0.004) | (0.005) |
| | Northeast | -0.115*** | -0.116*** | 0.010*** | -0.585*** | -0.500*** | -0.085*** | -0.109*** | -0.006 *** | -0.562*** | -0.403*** |
| | | (0.002) | (0.002) | (0.002) | 0.003 | 0.003 | (0.002) | (0.002) | (0.001) | (0.003) | (0.004) |
| | South | 0.026*** | -0.004** | -0.012*** | 0.139*** | 0.093*** | 0.062*** | 0.04*** | -0.007 *** | 0.141*** | 0.108*** |
| | | (0.002) | (0.002) | (0.002) | 0.004 | 0.003 | (0.002) | (0.002) | (0.001) | (0.004) | (0.004) |
| | Midwest | 0.038*** | 0.017*** | 0.021*** | 0.148*** | 0.117*** | -0.003 | -0.024*** | -0.001 | 0.113*** | 0.066*** |
| | | (0.002) | (0.002) | (0.002) | 0.005 | 0.004 | (0.002) | (0.003) | (0.002) | (0.004) | (0.005) |

## 7. Partnership Premiums

As discussed earlier, the existence of a "marriage premium" for men is a common result in studies of wage determination, where married men earn a premium relative to unmarried men with similar characteristics (Korenman and Neumark, 1991; Chun and Lee, 2001; Gupta, Smith, and Stratton, 2007; Casale and Posel, 2010). For women, there is less evidence of a marriage premium and studies often find a "marriage penalty" instead, in which married women earn less than equivalent unmarried women (Loughran and Zissimopoulos, 2009). However, the evidence of the existence of a marriage wage penalty for women is mixed and some studies find it depends on household structures (Budig and Lim, 2016). Our results for Brazil suggest that a marriage/partnership premium exists for both men and women in same-sex and different-sex couples, although the premium is smallest for women in different-sex households.

There are a number of possible explanations for the existence of a marriage or partnership premium. One theory holds that it is a by-product of specialization within the household. If one partner specializes in unpaid, non-market household work and the other in paid, market work, the person specializing in paid work may put more effort into ensuring that sufficient income is coming into the household, resulting in a wage premium. An alternative explanation argues that individual unobserved characteristics affect both marriage and labor market outcomes, so that individuals (i.e. men) with greater earnings potential due to some factor (e.g. drive or ambition) are also more likely to be successful in the marriage market, creating the observed premium (Nakosteen and Zimmer, 1987). In this paper, we offer a third possible explanation: household formation generates collective benefits which support better labor market outcomes, but may be unequally distributed because of traditional gender dynamics. In this case, we expect to observe differences between same-sex and different-sex couples.

To better understand these dynamics in the Brazilian context, we expand our earlier specifications to examine how partner characteristics affect an individual's estimated partnership premium or penalty. Specifically, we look at whether the partner's employment status or the partner's educational attainment affects the premium or penalty. We do this by introducing interactions between the employment status of the partner and the type of relationship (same-sex and different-sex) and between the educational attainment of the partner and the type of

relationship. If the specialization theory holds, we would expect the premium to be higher for individuals in couples where the partner is not working or, similarly, where their partner has lower educational attainment (and hence lower earnings potential).

Table 11 presents the results of this exercise for males and females separately, focusing only on the estimates of the partnership premium or penalty. The full regression results can be found in the appendix. Note that for all these estimates, the sample is restricted to employed individuals for which wages are observed. Therefore, these results are conditional on the individuals being employed and should be interpreted as such (they cannot be generalized to the full sample). For both males and females in same-sex couples, we find a partnership premium, but the interaction with their partner's employment status is not statistically significant. For males in different-sex couples, there is a partnership premium and this premium *increases* when their partner is also employed. For females in different-sex couples, there is a partnership penalty, and the interaction term is positive, statistically significant and larger in magnitude than the baseline penalty. This implies that the partnership penalty in this case disappears, at least at the mean, when the male partner is employed. These results are not consistent with the specialization hypothesis and point towards alternative explanations for the existence of premiums and penalties. The only results that are consistent with a specialization argument are those for females in same-sex couples (the coefficient on the interaction term is negative), but in this case the interaction is not significant.

**Table 11. Partnership premium by partner's employment status and education**

| | Female | | Male | |
|---|---|---|---|---|
| | SS | DS | SS | DS |
| **Partnership premium/penalty with partner's employment status interaction** | | | | |
| Base partnership premium/penalty | 0.263*** | -0.023*** | 0.171*** | 0.199*** |
| Partner employment interaction | -0.055 | 0.092*** | 0.002 | 0.028*** |
| **Partnership premium/penalty by partner's education** | | | | |
| < Primary | 0.032 | -0.100*** | -0.355*** | 0.017*** |
| Primary | 0.146** | 0.022*** | -0.012 | 0.174*** |
| Secondary | 0.233*** | 0.082*** | 0.229*** | 0.255*** |
| Tertiary | 0.345*** | 0.335*** | 0.366*** | 0.485*** |

* Significant at 10%, ** significant at 5%, *** p-value < 1%

For partner's education, the results are even more interesting. In all cases, while controlling for own-education, the partnership premium increases with the partner's education (again, not

consistent with the specialization hypothesis). The patterns with respect to females in different-sex couples and men in same-sex couples are similar. There is evidence of a partnership penalty in both cases when the partner has very low educational attainment. This penalty disappears and becomes a premium when the partner has a higher level of education. Women in same-sex partnerships and men in different-sex partnerships also share similar patterns. In these cases, the partnership premium is low (yet positive) when the partner's educational attainment is low, but increases significantly with higher levels of attainment. The highest partnership premiums are observed for men in different-sex couples for all levels of partner education.

These results are consistent with the argument that, by pooling income and savings, taking advantage of economies of scale and managing risks through multiple income streams, people in partnerships enjoy benefits that support better labor market outcomes compared to similar, unpartnered individuals. We would expect such partnership benefits to rise for individuals when their partners are employed or have higher levels of education. In different-sex couples, where traditional gender roles are expected to be more pronounced, the differences between males and females with regard to partnership premiums/penalties is sizeable, suggesting that the benefits of household formation are not equally distributed. The patterns of educational homogamy presented earlier in the paper also affect the interpretation of these patterns. For same-sex couples, particular male couples, educational homogamy is concentrated among people with high educational attainment, where the partnership premium is greatest. For different-sex couples, educational homogamy is concentrated at lower levels of educational attainment, where we expect to see lower partnership premiums or the existence of partnership penalties.

Given limitations of the data, we are not able to dismiss the argument that unobserved characteristics at the individual level drive both labor market outcomes (in this case, earnings) and the likelihood of having a "high quality" partner – e.g. with good education and employment prospects. The best we can show with this exercise is a set of informative correlations. However, the differences in the partnership premiums/penalties between males in same-sex and different-sex couples and between females in same-sex and different-sex couples suggest that more is going than can be explained solely by individual-level unobserved characteristics.

## 8. Discussion and Conclusions

Before discussing the possible implications of our results, it is important to keep in mind several limitations of the current data and analysis. First is the challenge posed by selection. We can only observe individuals in reported same-sex spousal partnerships, we do not have data on all people who would identify as LGBTI. Moreover, not all LGBTI individuals will reveal this aspect of their identities in a government-administered national survey. Those individuals who we are able to identify in the PNAD data may share characteristics that are not fully representative of the Brazilian LGBTI community.

Second, we do not have panel data that would allow us to control for unobserved individual characteristics, which may be correlated with LGBTI identity or partnership status and therefore influence our results. Being able to trace the economic histories of LGBTI people across time would greatly strengthen what kind of research is possible.

Finally, there are potential issues of endogeneity. Do same-sex partnerships have characteristics that influence labor market and livelihood outcomes (as we suggest), or do individual labor market attributes influence the likelihood of forming a partnership? In the analysis presented here, we are unable to sort out these pathways of causation, and therefore focus only on the correlations that emerge from the data.

Keeping these caveats in mind, the results are suggestive of the existence of linkages between type of partnership/household and labor market outcomes. These theoretical linkages could be summarized as follows. Both SS and DS partnerships realize similar benefits from household formation: risk management, pooling income and savings, household public goods, and greater scope for specialization. These benefits can support better labor market outcomes. However, traditional heteronormative households are also institutions that enforce patriarchal dynamics and gender roles. Same sex partnerships have the potential to capture the benefits of household formation, while relaxing patriarchal constraints.

The results presented here are remarkably consistent with this argument – even if we are unable to decisively rule out that the outcomes are driven purely by unobserved individual characteristics linked to household formation, rather than differences in household dynamics. We argue that, in the Brazilian context, households and partnerships represent important economic institutions that impact on employment, economic development, distribution, and livelihoods. The idea of constructing "families of choice" represents a potentially important cornerstone of the

economic strategies available to LGBTI people – with important implications for the rest of the Brazilian population. Our analysis stresses the importance of looking beyond the individual, to the household, to fully understand economic well-being and inequities – as suggested by differences in homogamy/endogamy between same-sex and different sex households.

While our primary focus in this paper is the differences between individuals in same-sex and different-sex partnerships, the results also highlight other, intersectional, dimensions of stratification. Females generally have less favorable outcomes compared to males, although for females in same-sex partnerships, their labor market disadvantages appear to be attenuated by less restrictive gender constraints at home. Race remains a critical factor in Brazil which influences labor market participation and income, with black individuals experiencing negative income effects, Asian individuals showing higher earnings effects, and the white population exhibits economic privilege compared to most other racial identities. Higher household incomes for males in same-sex partnerships may be partly explained by the higher likelihood that white males will pair with other white males, compared to purely random matching.

Despite the current data limitations, we feel we present a strong case that more research on alternative households and the role of households in shaping economic outcomes is needed to create a more complete understanding of LGBTI economic development and empowerment in Brazil – and elsewhere. Going forward, it would be important to expand beyond same-sex partnerships and explore a fuller array of "families of choice." as core economic institutions. Future research should also explore other dimensions that correlate with household formation and division of tasks/labor within the household (i.e. unpaid labor as well as paid labor). We are hopeful that, given the potential importance of these findings for all Brazilians, beyond the LGBTI community, improvements in data collection and variable definition will allow for better and more impactful analysis in the future.

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## Appendix

**Table A1 – Marriage/partnership wage premiums, partner employment and education effects.**

| | | Male | | Female | |
|---|---|---|---|---|---|
| | | Employment interaction | Education interaction | Employment interaction | Education interaction |
| **Partnership** | Same Sex | 0.171*** | ----- | 0.263*** | ----- |
| | | (0.065) | | (0.056) | |
| | Different Sex | 0.199*** | ----- | -0.023*** | ----- |
| | | (0.003) | | (0.005) | |
| **Demographic** | Age | 0.047*** | 0.045*** | 0.053*** | 0.054*** |
| | | (0.001) | (0.001) | (0.001) | (0.001) |
| | Age Squared | -0.045*** | -0.042*** | -0.054*** | -0.056*** |
| | | (0.001) | (0.001) | (0.001) | (0.001) |
| | Urban | 0.281*** | 0.256*** | 0.313*** | 0.273*** |
| | | (0.003) | (0.003) | (0.004) | (0.004) |
| **Educational** | Higher | 1.269*** | 1.086*** | 1.360*** | 1.232*** |
| | | (0.004) | (0.005) | (0.005) | (0.005) |
| | Secondary | 0.508*** | 0.412*** | 0.580*** | 0.519*** |
| | | (0.003) | (0.003) | (0.004) | (0.004) |
| | Primary | 0.283*** | 0.228*** | 0.307*** | 0.279*** |
| | | (0.004) | (0.004) | (0.005) | (0.005) |
| **Color/race** | White | 0.141*** | 0.129*** | 0.136*** | 0.122*** |
| | | (0.003) | (0.003) | (0.003) | (0.003) |
| | *Preto* | -0.009** | -0.009** | -0.016*** | -0.016*** |
| | | (0.004) | (0.004) | (0.005) | (0.005) |
| | Asian | 0.159*** | 0.143*** | 0.189 | 0.165*** |
| | | (0.017) | (0.017) | (0.019) | (0.019) |
| | Indig | -0.034* | -0.032* | -0.005 | -0.008 |
| | | (0.019) | (0.009) | (0.025) | (0.025) |
| **Dependents** | < 16 years old | -0.006* | -0.006** | -0.051*** | -0.055*** |
| | | (0.003) | (0.003) | (0.004) | (0.004) |
| | < 5 years old | -0.003 | -0.013*** | -0.002 | -0.014*** |
| | | (0.004) | (0.004) | (0.004) | (0.004) |

Continued on next page

| | | Male | | Female | |
|---|---|---|---|---|---|
| | | Employment interaction | Education interaction | Employment interaction | Education interaction |
| **Region** | North | -0.259*** | -0.263*** | -0.177*** | -0.170*** |
| | | (0.004) | (0.004) | (0.005) | (0.005) |
| | Northeast | -0.471*** | -0.471*** | -0.396*** | -0.390*** |
| | | (0.003) | (0.003) | (0.004) | (0.004) |
| | South | 0.093*** | 0.098** | 0.111*** | 0.115*** |
| | | (0.004) | (0.004) | (0.004) | (0.004) |
| | Midwest | 0.121*** | 0.115*** | 0.068*** | 0.073*** |
| | | (0.005) | (0.005) | (0.006) | (0.006) |
| **Interaction Employment** | Emp x SS | 0.002 | ----- | -0.055 | ----- |
| | | (0.073) | | (0.063) | |
| | Emp x DS | 0.028*** | ----- | 0.092*** | ----- |
| | | (0.003) | | (0.005) | |
| **Interaction Education** | < Primary x SS | ----- | -0.355*** | ----- | 0.032 |
| | | | (0.126) | | (0.076) |
| | Primary x SS | ----- | -0.012 | ----- | 0.146*** |
| | | | (0.112) | | (0.069) |
| | Secondary x SS | ----- | 0.229*** | ----- | 0.233*** |
| | | | (0.043) | | (0.036) |
| | Tertiary x SS | ----- | 0.366*** | ----- | 0.345*** |
| | | | (0.046) | | (0.052) |
| | < Primary x DS | ----- | 0.017*** | ----- | -0.100*** |
| | | | (0.004) | | (0.004) |
| | Primary x SS | ---- | 0.174*** | ----- | 0.022*** |
| | | | (0.004) | | (0.006) |
| | Secondary x DS | ----- | 0.255*** | ----- | 0.082*** |
| | | | (0.004) | | (0.004) |
| | Tertiary x DS | ----- | 0.485*** | ----- | 0.335*** |
| | | | (0.005) | | (0.006) |

* Significant at 10%, ** significant at 5%, *** p-value < 1