# Commuting to work and gender norms by sexual orientation☆

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A R T I C L E   I N F O

A B S T R A C T

We assess the role of gender-conforming social norms in household decision-making and gender inequalities in the labor market with a parsimonious household model that endogenizes commuting time. Using the American Community Survey 2008–2019, we test the model predictions and find that women in same-sex couples have a longer commute to work than working women in different-sex couples, whereas the commute to work of men in same-sex couples is shorter than the one of working men in different-sex couples, even after controlling for demographic characteristics, partner's characteristics, location and urbanicity, fertility, marital status, industry and occupation. These differences among men and women amount to a sizable portion of the gender commuting gap estimated in the literature, and are particularly stark among married couples with children. Within-couple gaps in commuting time are also significantly smaller in same-sex couples, and labor supply disparities mimic the commuting ones. According to our model, these differences are interpreted as gender-conforming social norms leading women in different-sex couples into jobs with a shorter commute and fewer hours worked while their male partners or spouses hold jobs with a longer commute and more hours worked, thus reinforcing gender inequalities.

## 1. Introduction

The gender commuting gap and the broader gender inequality in labor market outcomes have been the focus of recent literature and of social and political concerns about persistent inequities on the basis of gender. Gender roles affecting couples' specialization in the labor market and in the household, and thus job characteristics such as commuting and long hours, feed into the still sizable inequality in labor market outcomes of men and women (Bertrand, 2020; Goldin, 2021). Indeed, Barbanchon et al. (2021) show that women choose jobs with a shorter commute and that they are willing to trade-off shorter commutes with wages, while Lundborg et al. (2017) estimate that women move to lower-paying jobs closer to home after having children. Relatedly, Black et al. (2014) and Farré et al. (2020) find that married women exhibit a lower labor force participation in US metropolitan areas with longer commutes. Similarly, Albanese et al. (2022) note that a large fraction of the child penalty can be explained by women being less likely to work in jobs with long commute after the birth of their first child.

Researchers analyzing labor market outcomes, intra-household specialization, and fertility have estimated that the child penalty and the degree of specialization among same-sex couples is much lower than for different-sex couples. This suggests that gender-conforming social norms may be less relevant among same-sex couples. In this regard, Andresen and Nix (2022) show that the child penalty is much lower for women in same-sex couples and indicate gender norms and preferences as the main mechanisms. Evertsson et al. (2021) analyze the child penalty in income trajectories and reveal that in Scandinavian countries the social construction of gender and identity theory is much stronger in different-sex than in female same-sex couples. Although Giddings et al. (2014) document that the specialization gap between same-sex and different-sex couples has declined over time in the US, and Oreffice (2011) that these couples are similarly functioning in terms of intra-household bargaining in their labor supply decisions, Jepsen and Jepsen (2022) estimate that women in same-sex couples still work more hours per week, and men fewer hours, than married women and men in different-sex couples.

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Our goal in this paper is to better understand the existing gender commuting gap and labor market inequalities, by studying commuting as a household decision and incorporating gender-conforming social norms, among other channels. We build a simple model where households choose their commuting time, labor supply, and time allocated to the household sector, allowing for gender-conforming social norms to shape these decisions. A household member may take up different roles in the household and in the labor market because these norms affect the trade-off between their utility from the household public good (including but not limited to children) and their utility from their career (private consumption). In different-sex couples, these norms may lead women to believe that the former utility is relatively higher for them and thus to settle for closer-to-home less-rewarding jobs in order to take up heavier caring responsibilities in the household, while their male partners or spouses settle for farther, more-rewarding jobs (Bertrand, 2020). However, this may not be true among same-sex couples, for whom these norms may not bind.

We develop testable implications on commuting time and hours worked by comparing male and female same-sex to different-sex households, through which we can identify the preference mechanism of gender-conforming social norms vis-à-vis biological differences, productivity differences, parenthood, and gender norms/preferences. Specifically, different commuting behavior and labor supply choices may arise also when men and women are equally productive in the household and market sectors, and among childless couples.[1] We then present novel evidence on commuting by sexual orientation, comparing the work commute behavior of same-sex couples and different-sex couples, using data from the American Community Survey (ACS) 2008–2019. We complement this analysis with evidence on hours worked.

Although there is a lack of (large) datasets containing information on travel time to work, labor market outcomes and sexual orientation, same-sex couples can be identified in the ACS by matching household heads with their same-sex spouses or unmarried partners. We consider the variable reporting the total amount of time that it usually took the respondent to get from home to work, available for the respondent as well as for their unmarried partner or spouse, if working. We build a sample with detailed demographic and labor information on respondents and their partners or spouses in same-sex couples, along with standard samples of respondents and their partners or spouses in different-sex couples, focusing on employed adult individuals aged 18–64. The ACS is the only available data set in the US with commuting time, proxies for sexual orientation, and large sample sizes: for instance, the General Social Survey (GSS) asks about commuting only in 1986, while the sample size for sexual minorities is tiny.

Testing our model predictions, we find that working women in same-sex couples commute longer to work than working women in different-sex couples, whereas the commute to work of working men in same-sex couples is shorter than that of working men in different-sex couples. These differences persist after controlling for demographic characteristics, partner's characteristics, location and urbanicity, fertility, marital status, industry and occupation. Therefore, these commuting patterns do not seem to arise only because men or women in same-sex couples live in high-amenity places in city centers instead of the suburbs where different-sex couples with young children usually live in the US (Black et al., 2002) or solely for sorting into occupations/industries with different job flexibility.

These gaps are particularly stark among married couples with children: on average, almost 3 min more one-way to work for married mothers in same-sex couples, and nearly 2 min less for married fathers in

same-sex couples. Within-couple commuting gaps are also smaller in same-sex couples. These disparities by sexual orientation amount to a sizable portion of the gender commuting gap estimated in the literature (Crane, 2007).

Our estimates are robust to focusing on secondary-earners only, main earners only, household heads, partners or spouses only, individuals forty years old or older, couples with both partners working, to controlling for family income, homeownership, LGBTQ-related policies, mode of transportation to work, or to excluding those working from home.

Reassuringly, when we additionally focus on the hours worked of men and women across types of couples, we find the same patterns as with commuting to work: working women in same-sex couples work longer hours per week than working women in different sex couples, whereas working men in same-sex couples work fewer hours per week than working men in different-sex couples, in line with Jepsen and Jepsen (2022). In addition, we find that the largest labor supply gaps exist among working women and men in married couples with children, and the disparity by couple type is always of opposite sign by sex, regardless of marital or parental status.

Interpreting this evidence through our household model highlights the crucial role of gender-conforming social norms among different-sex couples: by increasing these women's utility from the household public good relatively to the utility from their career, these norms nudge them to commute less and work less, even in the absence of productivity differences, and especially in the presence of children who may further boost the former utility. The larger estimated difference by sexual orientation among women than men supports the social norms implications that the pressure of work-family balance is primarily on women, who settle into different (worse) jobs associated with a shorter commute to accommodate family duties (Crane, 2007). These gender-conforming norms that are reinforced by parenthood are clearly present among most working couples (Bertrand, 2020; Kleven et al., 2021), rather than among traditional couples only, as instead suggested by Hofmarcher and Plug (2022). Finally, we also establish that these differences by sexual orientation are not consistent with biological channels, productivity differences, or with general constraints imposed by parenthood: we consider individuals within gender across types of couples, compare them by parental status, and control for demographic and socioeconomic characteristics.

## 2. A model of household decisions with commuting time

### 2.1. General setting and intuition

Our model of household decision-making is inspired by Bertrand et al. (2021), is augmented with commuting time decisions, and allows for different types of households by sexual orientation. A household is composed of two decision makers, each having a distinct utility function on private consumption, and on a public good (including but not limited to children) produced in the household sector with the time of both members. Preferences are caring in that one member's utility also depends on the other household member's utility from private consumption, and members may differ on their degree of altruism. They decide non-cooperatively how to allocate their time between work in the labor market and household production, as in Bertrand et al. (2021).

Moreover, when household members work in the labor market, they choose their commuting time: longer commutes allow for better labor market outcomes and increase earnings and private consumption, but at the cost of producing less of the public good. This is in line with Albanese et al. (2022), Barbanchon et al. (2021), Manning (2003), and Petrongolo and Ronchi (2020), among others, who highlight that women may settle for lower earnings and shorter commutes due to work-family balance, making earnings and commuting time positively correlated. In particular, Barbanchon et al. (2021) highlight that it is women overall who demand jobs with shorter commutes, rather than firms not offering

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[1] We cannot empirically disentangle preferences for the household public good from the gender-conforming norms, a common challenge in this literature. Andresen and Nix (2022) feature the same pattern: their model cannot distinguish preferences from gender norms either.

high-commute and high-earnings jobs to women. Without loss of generality, we disregard an additional general disutility from commuting, since the main cost of commuting is specifically to decrease household production, while the general disutility would not affect the trade-offs between the household's choice variables.

An important feature of this model is to allow for the role of gender-conforming social norms in shaping households' commuting to work and labor supply decisions: gender-conforming social norms may induce a household member to take up different roles in the household and in the labor market because they lead them to believe that the trade-off between their utilities from the household public good and their career is different from the other household member's trade-off. These gender-conforming social norms may be different between same-sex and different-sex households. In different-sex couples, gender-conforming social norms may push women to settle for less demanding (rewarding) and closer-to-home jobs, while their male partners or spouses settle for farther, more demanding (rewarding) jobs (Bertrand 2020).

Each individual $g = i, j$ in household $H \in \{D, S\}$ (different-sex or same-sex household) has one unit of time to allocate between producing the household public good $Q^H(t_g^H)$ – where $t_g^H$ is the time dedicated to household production – and working in the market $(1 - t_g^H)$. Hours worked in the market are paid $w_g^H$ per hour: wages may vary by household type $H$ and gender of individual $g$ to allow for discrimination in the labor market, in line with the literature on wage gaps by gender and sexual orientation (Badgett et al., 2021; Bertrand 2020). Each individual's consumption of the private composite good $X_g^H$ (whose price is normalized to unity) is equal to their earnings times their commuting time:

$$X_g^H = \left(1 - t_g^H\right) w_g^H \left(1 + c_g^H\right)$$

where $c_g^H$ is the non-negative time spent commuting to work, a choice variable if $g$ works in the market sector. It represents the benefits in terms of job opportunities that commuting farther may provide. We parsimoniously consider a multiplicative benefit of commuting time on wages.

The two household members are perfect substitutes in the production of the public good $Q^H$, as in Bertrand et al. (2021). Given the total time investment in the public good $(t_i^H + t_j^H)$, and the commuting coordination costs $(c_i^H + c_j^H)$ in terms of lower production of $Q^H$, each household member obtains

$$Q^H = \left[\left(t_i^H + t_j^H\right) - \left(c_i^H + c_j^H\right)\right]$$

of the public good. Finally, we follow convention and assume that the utility from companionship (match quality) is additive and thus does not influence the trade-offs between private and public consumption (commuting and hours worked).

Formally, the optimal allocations of commuting times and hours worked of individual $i$ in household $H$ are determined by the following maximization program:

$$\max_{c_i^H, t_i^H} V_i^H \left(w_i^H, w_j^H, \alpha_i^H, \beta_i^H\right) = \log\left[X_i^H\right] + \alpha_i^H \log\left[X_j^H\right] + \beta_i^H \log\left[Q^H\right] =$$

$$\log\left[\left(1 - t_i^H\right) w_i^H \left(1 + c_i^H\right)\right] + \alpha_i^H \log\left[\left(1 - t_j^H\right) w_j^H \left(1 + c_j^H\right)\right]$$
$$+ \beta_i^H \log\left[\left(\left(t_i^H + t_j^H\right) - \left(c_i^H + c_j^H\right)\right)\right]$$

Similarly, the optimal allocations for individuals $j$ in household $H$ are determined by the following program:

$$\max_{c_j^H, t_j^H} V_j^H \left(w_i^H, w_j^H, \alpha_j^H, \beta_j^H\right) = \log\left[X_j^H\right] + \alpha_j^H \log\left[X_i^H\right] + \beta_j^H \log\left[Q^H\right] =$$

$$\log\left[\left(1 - t_j^H\right) w_j^H \left(1 + c_j^H\right)\right] + \alpha_j^H \log\left[\left(1 - t_i^H\right) w_i^H \left(1 + c_i^H\right)\right]$$
$$+ \beta_j^H \log\left[\left(\left(t_i^H + t_j^H\right) - \left(c_i^H + c_j^H\right)\right)\right]$$

where each member $g = i, j$ takes the decisions of the other partner/spouse as given, $0 \leq \alpha_g^H < 1$ and $\beta_g^H > 0$. The parameter $\alpha_g^H$ loosely represents the weight that $g$ puts on their partner's or spouse's private consumption and earnings, which may be less important than their own.

Our key parameter of interest is $\beta_g^H$: how valuable is the public good, relative to the private one, to individual $g$ in household $H$. It characterizes the gender-conforming social norms that may lead an individual in some household type to adopt the traditional belief that they value more the public good than their private consumption and earnings/career, while their partner or spouse does not. That is, $\beta_g^H$ captures the pressure that a household member feels in terms of work-family balance (trade-off of the utility from providing the private versus the public good).[2] Specifically, women in different-sex households may have higher preferences for home production because these gender-conforming social norms lead them to believe that they derive greater utility from $Q^H$ than from their private good. They internalize their more traditional role in their household and exhibit:

$$\beta_F^D > \beta_M^D$$

where $g \in \{M, F\}$ (man or woman) and $H = D$ (different-sex household).

Instead, women in same-sex households may not be exposed as much to these gender-conforming social norms and gendered preferences for the household public good (Giddings et al., 2014), so that their utility of the public good with respect to their private consumption is smaller:

$$\beta_F^S < \beta_F^D$$

where $g = i = j = F$ (woman) and $H \in \{D, S\}$ (different-sex or same-sex household).

Interesting differences may arise also among men across household types: traditionally, men in different-sex households may have lower utility for home-produced goods than their private consumption and career because of gender-conforming social norms. Therefore, men in same-sex households who may not be exposed as much to these gender roles would exhibit:

$$\beta_M^S > \beta_M^D$$

where $g = i = j = M$ (man) and $H \in \{D, S\}$ (different-sex or same-sex household).

Our framework is general enough to allow for these gender-norms to vary among working individuals: for instance, they do not preclude women in different-sex household from working in the labor market.[3] Here we focus on *working* household members who want to allocate some time to the household sector even when they work in the labor market (interior solutions for $c_g^H$ and $t_g^H$). Our goal is to compare the

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[2] We define gender-conforming social norms as the perception of how men and women should behave in a society (United Nations Statistics Division 2018): gender stereotypes are prescriptive and may directly affect one's preferences. Bertrand (2020) states: "Gender stereotypes are beliefs, shared by men and women, about what men and women should or ought to do (or how they should or ought to be). The prescriptive nature of gender stereotypes motivates men and women to adjust their self-view to what seems appropriate for their gender group."

[3] Note that we do not assume that gender norms are irrelevant for same-sex households, as Andresen and Nix (2021) do in their comparison with female same-sex couples. Moreover, smaller βs do not imply that individuals in a same-sex couple care less about their children than different-sex couples do.

optimal choices of commuting time and work hours by gender and across types of households.

### 2.2. Main predictions by gender and household types: the role of gender-conforming social norms

Let us consider the first-order conditions for the optimal choice of $c_g^H$ and $t_g^H$ of the worker $g$ living in household $H$. The first-order condition with respect to $c_g^H$ is:

$$\frac{1}{1+c_g^H} - \beta_g^H \frac{1}{(t_i^H+t_j^H)-(c_i^H+c_j^H)} = 0$$

While the first-order condition with respect to $t_g^H$ is:

$$-\frac{1}{1-t_g^H} + \beta_g^H \frac{1}{(t_i^H+t_j^H)-(c_i^H+c_j^H)} = 0$$

Now, by taking the ratio of the above first-order conditions with respect to the corresponding first-order conditions of worker $g$ in household $H'$, we obtain:

$$\frac{1+c_g^H}{1+c_g^{H'}} = \frac{\beta_g^H}{\beta_g^{H'}}$$

$$\frac{1-t_g^H}{1-t_g^{H'}} = \frac{\beta_g^H}{\beta_g^{H'}}$$

assuming $Q^H = Q^{H'}$: the same quantity of public good is generated in all types of households.[4] However, differences in commuting decisions and labor supply may well emerge within and across types of households. Let us compare the optimal allocations of commuting time and hours worked in the market within gender: we individually compare men and women in different-sex households to men in same-sex households and women in same-sex households, respectively. That is, $i=j=\{M, F\}$, $H = D$ and $H' = S$.

This yields two main testable implications on the commuting behavior of working men and women:

$$\frac{1+c_F^D}{1+c_F^S} = \frac{\beta_F^S}{\beta_F^D} \Rightarrow c_F^S - c_F^D > 0 \tag{1}$$

$$\frac{1+c_M^D}{1+c_M^S} = \frac{\beta_M^S}{\beta_M^D} \Rightarrow c_M^S - c_M^D < 0 \tag{2}$$

namely that women in same-sex households have jobs with longer commutes to work than working women in different-sex households, while men in same-sex households have shorter commutes to work than working men in different-sex households. A woman in a different-sex households has a higher marginal utility of the public good, she believes to enjoy it more: their $\beta$ is higher than those of women in same-sex couples. In Prediction 1, $\frac{\beta_F^S}{\beta_F^D} < 1$ implies that women in $H=D$ choose jobs with shorter commutes than those in $H'=S$: $c_F^S - c_F^D > 0$. They reduce their commuting time to work and exhibit a more traditional division of labor than women in same-sex households. These differences hold also among childless couples.

Prediction 2 reveals that among men the lower marginal utility from the consumption of the public good in different-sex households leads them to commute longer, as their $\beta$ is lower than those of men in same-sex households: $\frac{\beta_M^S}{\beta_M^D} > 1$ implies that men in $H=D$ choose jobs with longer commutes than those in $H'=S$: $c_M^S - c_M^D < 0$. It is optimal from

their standpoint to have jobs associated with longer commutes.

In addition, our model yields two testable implications on their labor supply behavior:

$$\frac{1-t_F^D}{1-t_F^S} = \frac{\beta_F^S}{\beta_F^D} \Rightarrow t_F^S - t_F^D < 0 \tag{3}$$

$$\frac{1-t_M^D}{1-t_M^S} = \frac{\beta_M^S}{\beta_M^D} \Rightarrow t_M^S - t_M^D > 0 \tag{4}$$

namely that women in same-sex households work more hours than working women in different-sex households, while men in same-sex households work fewer hours than working men in different-sex households. That is, women in different-sex households have a higher marginal utility of the public good than that of women in same-sex households, while for men the opposite holds: $\beta_F^S < \beta_F^D$ while $\beta_M^S > \beta_M^D$. These disparities in the extent to which home production is relevant to individuals of different household types may undermine women's ability in different-sex households to have a higher earning job and commute longer to work, while the opposite holds for men. Predictions 1–4 thus imply a positive correlation between hours worked and commute to work. Gender-conforming social norms in different-sex households make the public good more important to women and less important to men with respect to private consumption than in their same-sex counterparts.

While the direction of labor supply differences by sexual orientation has been empirically documented in, among the others, Jepsen and Jepsen (2022) and Oreffice (2011), the implications on commuting behavior by gender and sexual orientation are novel. Moreover, our model shows that men and women may be equally productive in the household sector (and possibly in the market sector), but tradition-leaning choices of commuting and labor supply may still arise in the 21st century due to the powerful force of gender-conforming social norms.

### 2.3. Additional predictions for within-household commuting gaps

Since $\beta_F^D > \beta_M^D$, for different-sex households we have:

$$\frac{1+c_F^D}{1+c_M^D} = \frac{\beta_M^D}{\beta_F^D} \Rightarrow c_M^D - c_F^D > 0$$

On the other hand, individuals in same-sex households may have similar preferences for home production, that is, $\beta_i^S \approx \beta_j^S$:

$$\frac{1+c_i^S}{1+c_j^S} = \frac{\beta_j^S}{\beta_i^S} \approx 1 \Rightarrow c_i^S \approx c_j^S$$

Therefore, our model yields an additional testable implication on the within-couple commuting gaps. Work commute differences within different-sex households are larger than the commuting gap within same-sex households, namely:

$$\left(c_M^D - c_F^D\right) > \left(c_i^S - c_j^S\right) \tag{5}$$

for $i=j=M$ or $i=j=F$: this implication holds for women in same-sex households as well as for men in same-sex households. Finally, we note that Prediction 5 does not require the assumption $Q^H = Q^{H'}$: here we compare commuting times within households instead of across households, so that the quantity of public good produced in a household may vary by household type.

### 2.4. The role of children

Men and women in different-sex households may be induced to take up different roles in the household and in the labor market with parenthood: childrearing may increase even more these women's

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[4] We believe this to be empirically plausible after conditioning on observables (see Table 1 and Section 4).

marginal utility of the public good and possibly decrease their partner's or spouse's, relatively to mothers and fathers in same-sex households. This strengthening of gender-conforming social norms may widen the household preference gap within different-sex households but especially by sexual orientation for mothers and fathers alike. Men and women across types of households share the same biological sex and household status. However, individuals in same-sex households may not be subject to the same degree of gender-conforming social norms that intensify the trade-off between the utilities from the household public good and own career, leading mothers in different-sex household to settle for even closer-to-home jobs, while their male partners or spouses settle for farther more rewarding jobs than workers in same-sex households. These norms strengthened by parenthood (Bertrand, 2020) would imply larger differences in the β parameters across household types: our Conjecture 1 states that the differences in commuting time and labor supply in Predictions 1–5 would hold and may be magnified by the presence of children, increasing $\beta_F^D$ and decreasing $\beta_M^D$ more than $\beta_F^S$ and $\beta_M^S$ (Evertsson et al., 2021), a mechanism that can be tested in the data.

*2.5. Remarks*

We will take the five Predictions and the Conjecture to the data. The main purpose of our parsimonious model is to have a simple – albeit realistic – framework to guide our empirical analysis of commuting time differences and labor market inequities by gender, to understand the role of different channels, and especially of gender-conforming social norms. These features also allow us to disentangle the alternative explanation of biological differences between men and women as the driving force of the observed commuting and labor supply patterns by gender and sexual orientation. Our testable implications are not consistent with the observed gender gaps in labor market outcomes being driven by biological effects because they hold across household types within the same gender. If women had shorter commutes and worked fewer hours than men simply because of their gender, then we would predict and observe the same patterns for their counterparts in same-sex households.[5]

Our model of household decisions with commuting time is more general than Black et al. (2014) and Farré et al. (2020) because in their framework commuting represents a merely exogenous cost parameter. We endogenize commuting and allow for it to improve labor market outcomes and thus private consumption, but at the cost of producing less public good.[6] Our approach is in the spirit of Andresen and Nix (2022) and Siminski and Yetsenga (2022) in that partners and spouses choose their division of labor and we do not explicitly model leisure: leisure time is determined outside of the model and does not affect commuting decisions or the time allocation between market and household productions. Moreover, as in Andresen and Nix (2022), we do not estimate our model, but its testable predictions are useful insofar as they allow us to formally compare across household types and within gender to disentangle mechanisms of gender inequity. We too are able to consider biology, productivity differences, parenthood, and gender norms/preferences in our model, while characterizing preferences for the public good and gender-conforming norms into a single channel, as they do. However, we allow for these differences across households to be present also in childless couples, we consider private consumption, and we explicitly model commuting decisions, simultaneously by gender and

sexual orientation. We therefore see our model as complementary to Andresen and Nix (2022).

## 3. Data description and methodology

Our dataset is the version of the ACS publicly available through IPUMS-USA (Ruggles et al., 2021). The ACS is a nationally-representative repeated cross-section that has been conducted every year since 2000 in the US. It contains demographic, economic, social, work, and housing information. Since 2005, it has included a 1% random sample of the US population.

Although the ACS does not contain direct questions on sexual orientation, it is possible to identify married and unmarried same-sex couples living together. Indeed, household members can be classified as "unmarried partners" when recording their relationships to the household head, because roommates and unmarried partners are treated as two separated categories. Since 2012, same-sex couples have been allowed to report their actual marital status (between 2000 and 2012, same-sex married spouses were imputed as unmarried partners).

Unmarried "heads" and "unmarried partners", married "heads" and "spouses" were extracted from the ACS data using the variable "relationship to household head". The household head, or primary reference person, is defined in the ACS as "the person living or staying here in whose name this house or apartment is owned, being bought, or rented". Using the variable "sex",[7] couples with the head and the unmarried partner (or the spouse) sharing the same sex were then classified as same-sex couples, and those of different sex as different-sex couples. This practice is common in the literature (Badgett et al., 2021): previous research has shown that most individuals in same-sex couples are indeed in a romantic relationship (Carpenter, 2004).

We use data until 2019, discarding the 2020 wave because the COVID-19 pandemic disrupted the 2020 ACS data collection and affected data quality in 2020 (Daily et al., 2021). We start from 2008 because the US Census Bureau implemented several changes between 2007 and 2008 to reduce the number of different-sex couples misclassified as same-sex couples (due to reporting errors in the sex question), which resulted in more reliable estimates and identification of same-sex couples. We drop observations with imputed values for the variables sex or relation to the household head, along with their partners' or spouses' observations, to further reduce such measurement errors, following common practice in this literature (Black et al., 2007; Oreffice, 2011). Notwithstanding these issues, the US Census and the ACS remain the largest and most reliable data on same-sex couples (Sansone, 2019). Furthermore, these IPUMS-USA data sources have been commonly used for decades in urban planning and transportation studies on the gender commuting gaps (MacDonald, 1999).

We focus on employed adults aged 18 to 64 who worked the week before the survey interview. All variables used in our empirical analysis are described in Section A of the Online Appendix, while Table B1 reports sample sizes by year, sex, couple type, and marital status. As previewed in the Introduction, our main variable of interest is "Travel time to work", reporting the total amount of time, in minutes, that it usually took the respondent to get from home to work, in the week preceding the survey interview, for all individuals who worked during that week. This information is available for the respondent as well as for their unmarried partner or spouse, if working in the week preceding the interview. The commuting time of those working from home is set to zero. No travel frequency variable or record of hours specifically worked at the office is available in the ACS or US Census data.

The following regression equation is estimated by OLS for each individual $i$ living in state $s$ at time $t$:

$$y_{ist} = \gamma_0 + \gamma_1 SSC_{ist} + \delta_s + \mu_t + \gamma_2 x'_{ist} + \varepsilon_{ist}$$

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[5] In Appendix C, we extend our model to allow for differences by gender in home productivities (men and women may not be perfect substitutes in the production of the public good), or in coordination costs of commuting in the production of the public good. We show that the model's key testable implications by gender and household type hold well.

[6] Gutierrez (2018) endogenizes commuting time but only treats it as a cost, does not model private consumption, and assumes that only the mother devotes time to childrearing.

[7] The ACS survey does not distinguish between sex and gender.

where the dependent variable $y_{ist}$ is the time in minutes of a one-way commute to work for individual $i$ living in state $s$ at time $t$. In line with our theoretical framework, we focus on individuals working at the time of the survey, and thus commuting. These consist of all working individuals in same-sex and different-sex couples, also those whose partner or spouse is not working.[8] To test Predictions 1–2 and Conjecture 1, most of the empirical analysis examines whether and how a binary indicator for being in a same-sex couple ($SSC_{ist}$) is associated to commuting time to work, by gender as well as by marital status and fertility. The other main regressors are state and year fixed effects ($\delta_s$ and $\mu_t$), and the individual-level controls ($x_{ist}$): the respondent's age, race, ethnicity, and education, their partner's or spouse's characteristics, the couple's marital status and the number of own (total and younger than 5) children living in the household, and a set of dummy variables for occupation or industry. Standard errors clustered at the household level are used throughout, as well as individual weights. In our sensitivity analyses, we control for family income, urbanicity, homeownership, LGBTQ-related policies, or mode of transportation to work. We also restrict our sample to secondary-earners only, main earners only, household heads, partners/spouses only, to those who do not work from home, or to dual-earner couples, and we investigate heterogeneities by race and ethnicity, age groups, education levels, and geographical location.

To test Prediction 5, we compute the variable commuting gap as an additional outcome of interest, defined as the absolute difference of the commuting time in minutes within a couple. This specification allows us to further measure intra-household specialization and to investigate whether same-sex couples are more egalitarian or not. To this end, only dual-earner couples are included.

We then run standard labor supply regressions for men and women separately, to test Predictions 3–4. Hours worked are defined as the number of hours that an individual usually worked per week in the 12 months preceding the ACS interview, if the person worked during the 12 months preceding the interview. We use the same regression specifications as in our commuting analysis, except for adding the control for hourly wage. As sensitivity analysis, we include commuting time as a regressor.

## 4. Results

### 4.1. Descriptive statistics

Table 1 and Fig. 1 report the summary statistics of our sample by type of couple and sex in terms of commuting patterns. Working men systematically have longer work commutes than working women do, on average a difference of 4 min on a one-way journey from home to the workplace. When we break down this gap to distinguish between individuals in same-sex couples and individuals in different-sex couples, we find that commuting disparities by gender are more nuanced. On average, working women in same-sex couples have a 2.5-minute longer commute than working women in different-sex couples (when counting those working from home as zeros), whereas working men in same-sex couples have a 1.5-minute shorter commute than working men in different-sex couples (Table 1 row 1 and Fig. 1 panel A), in line with Predictions 1–2. Given that 4 min represent the average gender commuting gap in the sample, these gaps by sexual orientation are sizable. These conclusions remain qualitatively similar when excluding individuals working from home (Table 1 row 2 and Fig. 1 panel B).[9]

Women in same-sex couples are also more likely to have particularly long commutes than women in different-sex couples: they are almost 5 percent points more likely to have a one-way 15-minute commute to work, a similar higher probability of having a 30-minute commute, and a 2 percentage points higher probability of having a 60-minute commute. Men in same-sex couples have instead a 1–2 percentage points lower likelihood of having such long commutes (Table 1 rows 3–5 and Fig. 1 panels C-D). Furthermore, commuting differences by sexual orientation are larger among parents than in households with no children (Table 1 rows 6–7). However, it is worth noting that men in same-sex couples commute longer than women in same-sex couples: the gender commuting gap holds even among individuals in same-sex couples across rows in Table 1.

Measuring the within-couple commuting gap reveals that in same-sex couples, commute times to work are more similar than in different-sex couples, as expected from Prediction 5. For instance, the disparity within couples is almost 2-minute shorter when the woman lives in a same-sex couple (Table 1 row 8 and Fig. 1 Panel E).[10] When looking instead at the total commuting time of the two members of the couple, the gender gap in commuting time implicates that couples with two men have the highest overall commuting time, followed by couples with two women, and then by different-sex couples (Table 1 row 9 and Fig. 1 Panel F).

Finally, among those working, the number of weekly hours worked is higher for women in same-sex couples than those in different-sex couples (41 h/week versus 38 h/week on average), while it is lower for men in same-sex couples than men in different-sex couples (42 versus 44 h/week), consistent with Predictions 3–4.[11]

### 4.2. Regression analysis of commuting: main results

#### 4.2.1. Baseline results

Table 2 reports the main regression results of commuting time to work in minutes on a binary indicator for being in a same-sex couple, separately for working women (Panel A) and working men (Panel B). Starting from the basic correlation in Column 1, controls are incrementally added, from state and year fixed effects (Column 2) to the respondent's age, race, ethnicity, and education (Column 3), their partner's or spouse's characteristics (Column 4), their marital status and the number of own – total and younger than 5 – children living in the household (Column 5), occupation and industry fixed effects (Columns 6–8).

Being in a same-sex couple is associated with opposite commuting patterns for men and women: women in same-sex couples commute longer to work than women in different-sex couples, 2.5 min more one way on average, whereas men in gay couples have a shorter commute to work than men in different-sex couples, 1.4 min less on average (Column 1), as predicted by our model (Predictions 1–2). The mean commuting time to work is 23.2 min for women and 27.7 min for men in our overall sample: the 2.5-minute increase in commute time to work among working women in same-sex couples (Column 1) represents an 11% increase with respect to women in different-sex couples, and the 1.4-minute decrease (Column 1) among men represents a 5% decrease

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[8] Estimations based on alternative samples including only dual-earners couples are discussed in Section 4.3.

[9] These differences by gender and couple type also emerge from the probability density functions plotted in Figure B1. Moreover, these gaps in commuting time by couple type also seem not to vary substantially across years in the 2008-2019 period considered in this study (Figure B2).

[10] Similarly, the probability density functions depicted in Figure B3 clearly show that female same-sex couples are more egalitarian and are concentrated at lower levels of within-couple commute gaps.

[11] Considering the other variables in our ACS sample augmented with individuals not working (and thus with missing values for commuting time), men and women in same-sex couples are on average younger, more educated, more likely to be white, less likely to have children or be married, and – at least for women – more likely to be employed, than men and women in different-sex couples (Table B2). This is in line with what previous literature on sexual orientation has documented in the US (Badgett, Carpenter, and Sansone 2021; Oreffice 2011).

**Table 1**
Descriptive statistics on commuting time.

| | | Women | | | Men | | |
|---|---|---|---|---|---|---|---|
| | | Same-sex couples | Different-sex couples | | Same-sex couples | Different-sex couples | |
| | Variable | (1) | (2) | Gap | (3) | (4) | Gap |
| 1 | Commute time | 25.626 | 23.163 | 2.463*** | 26.258 | 27.692 | −1.435*** |
| 2 | Commute time (w/o working from home) | 27.072 | 24.581 | 2.491*** | 28.168 | 29.043 | −0.874*** |
| 3 | Commute time$\geq$15 | 0.720 | 0.675 | 0.045*** | 0.723 | 0.738 | −0.015*** |
| 4 | Commute time$\geq$30 | 0.368 | 0.323 | 0.045*** | 0.384 | 0.407 | −0.024*** |
| 5 | Commute time$\geq$60 | 0.084 | 0.065 | 0.020*** | 0.089 | 0.106 | −0.017*** |
| 6 | Commuting time – w/ children | 25.765 | 23.037 | 2.728*** | 26.785 | 28.283 | −1.498*** |
| 7 | Commuting time – w/o children | 25.561 | 23.344 | 2.216*** | 26.177 | 26.621 | −0.444*** |
| 8 | Within-couple commute gap | 15.409 | 17.170 | −1.761*** | 16.656 | 17.170 | −0.514*** |
| 9 | Total couple commute time | 50.877 | 50.222 | 0.654*** | 52.179 | 50.222 | 1.956*** |
| | N | 68,403 | 4,343,006 | | 66,059 | 5,144,777 | |

Unless otherwise specified, commuting time includes individuals working from home (commuting time imputed as zero). Weighted statistics. Sample size (N) refers to the total number of respondents in the relevant sub-group (i.e., those working in the week preceding the ACS interview and who reported their commuting time). See also notes in Fig. 1. Source: ACS 2008–2019. * $p < 0.10$ ** $p < 0.05$ *** $p < 0.01$.

with respect to men in different-sex couples.

Our estimates are robust to controlling for demographic characteristics, partner's or spouse's characteristics, fertility, and marital status, although their magnitude decreases from columns 1 to 5. These controls for age, education, race, ethnicity, fertility also capture a productivity channel through which differences by sexual orientation may arise in work outcomes. In Column 5, working women in same-sex couples exhibit a one-way commute to work 1.8 min longer than working women in different-sex couples, while for working men in same-sex couples the commute is 1 min shorter than working men in different-sex couples. All these estimated coefficients by sexual orientation are significant at the 1% level, and are still comparable to the existing gender commuting gap, which is deemed sizable and noteworthy in the literature and among policy-makers (e.g., Black et al., 2014; Madden, 1981). For instance, in our ACS sample the average gender commuting gap is 4 min, and it used to be about 2 min in 2005 (Crane 2007), while in the UK the median gender commuting gap was 5 min in 2018 (ONS 2019). In Belgium, Albanese et al. (2022) report an average gender commuting gap of 4 min.

If we then compare this one-way commute to other time-use activities, Smart et al. (2017) use American Time Use surveys (ATUS) data 2003–2012 and report that men spend 11 min and women 14 min on average on financial, civic, and religious activities, while spending 37 and 42 min on household-serving travel, respectively. In their analysis, they consider these 3- and 5-minute differences as sizable. Even for household cleaning and maintenance, the gender gap is only 14 min, and smaller in percentage terms than the commuting gap we estimate. Russell et al. (2007) report 4.8 min of personal health self-care and 20 min of sports, exercise, recreation in daily activities in the ATUS. Furthermore, according to ATUS 2019, the average time on a weekday spent in sports, exercise and recreation activities is 13 min for women and 22 min for men. Thus, our commuting time difference by sexual orientation among women would correspond to around 25% of their average daily exercise time, which is not negligible. Indeed, the measure of commuting time recorded in the ACS data is one-way commuting time: thus, the average daily difference in total commute to and from work among women would be around 3–5 min, which in turn is 15–25 min per week, on average.

Another way to measure the economic significance of our estimates is to compare them to the changes in commuting time over the past years. In fact, 2–3 min correspond to the increase in the average or median commuting time in the past 15 years in the US and UK alike, and this magnitude is considered alarming by the US Bureau of Transportation and by the UK Office for National Statistics (ONS 2019). Specifically, according to the US Census Bureau, the average one-way commute time is at an all-time high in 2019, and from 2006 to 2019 it has increased by about 2.6 min, which corresponds to our main

difference by sexual orientation (US Census 2021).

Overall, our estimates are consistent with the idea that same-sex couples may be more egalitarian (Badgett et al., 2021) and particularly with commuting decisions being shaped by gender-conforming social norms and their prescribed household roles, in line with our theoretical framework. Although it is not possible to empirically disentangle preferences for the household public good from the gender-conforming norms, we observe that the utility from the household public good is perceived differently across household types. These gendered social expectations are much weaker in same-sex couples, and especially women benefit from this, implementing commuting work patterns more similar to men. Moreover, this evidence allows us to disentangle the alternative explanation of biological differences between men and women as the driving force of the observed commuting patterns by gender and sexual orientation because they hold across household types within the same gender; the observed disparities are not consistent with productivity differences either, as we control for a rich set of individual and partner's characteristics that capture productivity differences in the home and market sectors, expanding to occupation, industry, and urbanicity location in the next subsection.

*4.2.2. Gender norms mechanisms: occupation, industry, location, marriage, and parenthood*

We control for detailed occupation and/or industry fixed effects in columns 6 to 8 to shed light on the key drivers of the estimated disparities in commuting time. Broadly, gender differences in occupation and industry have been identified as important factors in explaining the gender wage gap, and for instance Kleven et al. (2021) find that the child penalty emerges also because women move to jobs with lower-ranked occupations, although Andresen and Nix (2022) find that occupational flexibility alone cannot explain the large child penalty and Evertsson et al. (2021) do not control for occupation.

In columns 6–8, we observe that the significant commuting differences by sexual orientation are estimated to be smaller than in our main specifications in columns 1–5. Nevertheless, we note that job flexibility or workplace location differences across occupations and industries do not completely explain away our findings of commuting differences by sexual orientation. Especially among women, sorting into occupations with different degrees of flexibility does not seem to be the main channel through which women in different-sex couples fulfill gender-conforming norms: the estimated coefficient associated to same-sex couples in columns 6–7 is still 1.4 min and significant at the 1% level for women. Instead, men in same-sex couples seem to sort into occupations or industries that allow them to have a shorter commute to work than men in different-sex couples: their estimated gap by couple type shrinks to less than half a minute. Thus, different gender norms by sexual orientation among men may result into different sorting into occupation or industry
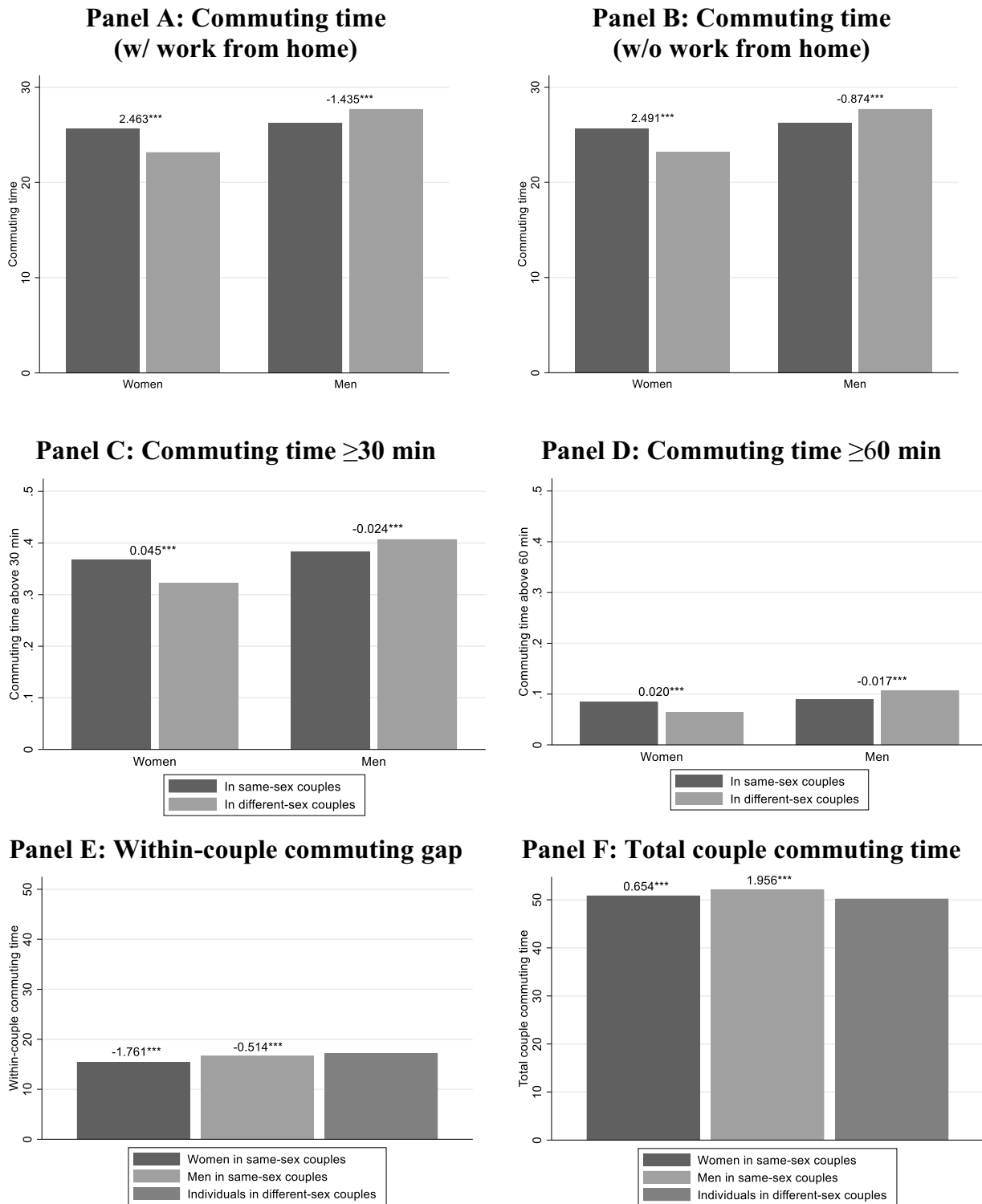
**Fig. 1.** Commuting time by sex and couple type.

Unless otherwise specified, commuting time includes individuals working from home (commuting time imputed as zero). The number above each bar is the difference between the commuting time for women or men in same-sex couples vs. in different-sex couples. Weighted statistics. Respondents younger than 18 or older than 64 have been excluded. For Panels E and F, only household heads have been included, and couples in which at least one member was not working at the time of the survey have been excluded. Source: ACS 2008–2019. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$.

driving their commuting patterns.

Including occupation and industry fixed effects separately (column 6 and 7, respectively) or together (column 8) does not alter these conclusions. Specifically, the magnitude of the estimated coefficient for same-sex couples decreases by approximately 16% between columns 2

and 5 for women and 52% for men: that is, when differences in "productive" characteristics such as age and education, and in marriage and parenthood are accounted for. Moving from column 5 to columns 6,7 or 8, shows that 64% of the remaining commuting gap among men is also explained by sorting into occupation and industry, whereas for women it

**Table 2**

Commuting time. By sex and couple type.

| | (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) |
|---|---|---|---|---|---|---|---|---|
| *Panel A: Women in SSC and DSC* | | | | | | | | |
| In a same-sex couple | 2.463*** | 2.108*** | 2.046*** | 2.145*** | 1.761*** | 1.365*** | 1.477*** | 1.303*** |
| | (0.113) | (0.111) | (0.111) | (0.111) | (0.114) | (0.113) | (0.113) | (0.113) |
| Observations | 4,411,409 | 4,411,409 | 4,411,409 | 4,411,409 | 4,411,409 | 4,411,409 | 4,411,409 | 4,411,409 |
| Mean of dependent variable | 23.201 | 23.201 | 23.201 | 23.201 | 23.201 | 23.201 | 23.201 | 23.201 |
| $R^2$ | 0.000 | 0.020 | 0.025 | 0.026 | 0.027 | 0.050 | 0.050 | 0.057 |
| *Panel B: Men in SSC and DSC* | | | | | | | | |
| In a same-sex couple | −1.435*** | −2.131*** | −1.974*** | −2.059*** | −1.021*** | −0.345*** | −0.384*** | −0.363*** |
| | (0.122) | (0.120) | (0.120) | (0.120) | (0.123) | (0.122) | (0.122) | (0.122) |
| Observations | 5,210,836 | 5,210,836 | 5,210,836 | 5,210,836 | 5,210,836 | 5,210,836 | 5,210,836 | 5,210,836 |
| Mean of dependent variable | 27.675 | 27.675 | 27.675 | 27.675 | 27.675 | 27.675 | 27.675 | 27.675 |
| $R^2$ | 0.000 | 0.019 | 0.019 | 0.019 | 0.020 | 0.045 | 0.043 | 0.052 |
| *Controls for:* | | | | | | | | |
| State and year FE | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| Demographic controls | | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| Partner/spouse controls | | | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| Fertility and marital status | | | | ✓ | ✓ | ✓ | ✓ | ✓ |
| Student and army status | | | | | ✓ | ✓ | ✓ | ✓ |
| Occupation FE | | | | | | ✓ | | ✓ |
| Industry FE | | | | | | | ✓ | ✓ |

"SSC" indicates same-sex couples, "DSC" indicates different-sex couples. Commuting time includes individuals working from home (commuting time imputed as zero). Standard errors clustered at the household level in parentheses. Weighted regressions and statistics. Respondents younger than 18 or older than 64 have been excluded. *Demographic controls* include respondent's age, race, ethnicity, and education. *Partner/spouse controls* include spouse's or unmarried partner's age, race, ethnicity, and education. *Fertility* includes the number of own children (of any age or marital status) residing with the respondent, as well as the number of own children age 4 and under residing with the respondent. *Occupation* includes a series of 455 binary indicators. *Industry* includes a series of 225 binary indicators. All variables are described in detail in Section A of the Online Appendix. Source: ACS 2008–2019. * $p < 0.10$ ** $p < 0.05$*** $p < 0.01$.

only explains 26% of the remaining gap. Nevertheless, even after accounting for these channels, there is a substantial residual gap in commuting among men and among women.

Table 3 extends Table 2 by controlling for urbanicity, and then by splitting the sample between respondents living in the city center or outside of it. Home and workplace location decisions may also reflect gender-conforming social norms. The specification in Column 1 includes a series of binary variables corresponding to each metropolitan status - excluding those with "Metropolitan status indeterminable (mixed)": "Not in metropolitan area", "In central/principal city", "Not in central/principal city", "Central/principal city status indeterminable (mixed)".[12] It is worth noting that the range in the estimated differences between men or women in same-sex versus different-sex couples does not vary substantially between Column 1 of Table 3 and those in Table 2.

Column 2 of Table 3 reports the commuting differences by couple type among couples living in city centers and Column 3 among those who do not. Among city dwellers, if anything, men in same-sex couples commute even less than men in different-sex couples. This suggests that these distinctive commuting patterns cannot be fully explained by sexual minority men's preference to live in high-amenity places rather than in the suburbs (Black et al., 2002). Women in same-sex couples living in city centers still commute longer to work than women in different-sex couples, but the estimated difference amounts to 1 min. Women in different-sex couples that choose to live downtown may exhibit work and commuting patterns that are less gendered or less dictated by social norms and household specialization by sex (Costa and Kahn 2000;

Simon 2019). Indeed, the gap by sexual orientation among women who embrace life in the suburbs (Column 3) is larger than in the full sample, and much larger than for city dwellers. On the contrary, among men living outside of the city center there is no difference between same-sex couples and different-sex couples: it may be the case that men in same-sex couples who decide to live in the suburbs exhibit a more traditional way of life, thus commuting as much as men in different-sex couples.

These comparisons are reassuring and suggest that our main results are not completely driven by location choices, especially among women; we do note, however, that among men location choices do play a role in explaining the commuting gap. Home location decisions may also be a result of gender norms, as one of the channels through which gender-conforming social norms shape household work and family balance time allocations. We need to flag that there is a drawback to including urbanicity as a control variable: urbanicity is not available for all respondents in the ACS data. Indeed, for a significant share of respondents the metropolitan status is indeterminable: the number of female respondents drops by around 13% and the number of male respondents drops by around 12% after adding urbanicity. Moreover, the missing metropolitan status is non-random because it is due to the respondents' specific location and boundaries of the Public Use Microdata Areas where they live.[13]

Table 4 illustrates these commuting differences but separately by marriage and parenthood. The coefficient of the dummy variable for same-sex couples is always statistically significant at the 1% level. These estimates reveal that the largest gaps exist among women in married couples with children: married mothers in same-sex couples commute almost 3 min longer than those in different-sex couples, while for married fathers the difference is −1.7 min (Column 1). This disparity by couple type is always of opposite sign by sex, regardless of marital or

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[12] In other words, "Metropolitan status indeterminable (mixed)" indicates that a respondent's county group or PUMA lies only *partially* within metropolitan areas, so it is unclear whether the respondent lives in an urban or rural area and, as such, is excluded from this analysis. On the other hand, "Central/principal city status indeterminable (mixed)" indicates that the respondent does live in an urban area, so it is included in the analysis: it is not possible to infer whether the respondent lives in a central urban area, or in a peripheral urban area (but they do live in an urban area).

[13] Table B3 extends Table 3 by including occupation and industry fixed effects. As also noted for Table 2, accounting for occupation and industry sorting reduces the commuting gap more for men than for women.

**Table 3**
Commuting time. By location.

| | Respondents with urbanicity information (1) | City center (2) | Not city center (3) |
|---|---|---|---|
| *Panel A: Women in SSC and DSC* | | | |
| In a same-sex couple | 1.771*** | 0.986*** | 2.376*** |
| | (0.118) | (0.251) | (0.202) |
| Observations | 3,852,237 | 452,789 | 1,991,694 |
| Mean of dependent variable | 23.444 | 25.702 | 24.086 |
| $R^2$ | 0.032 | 0.094 | 0.030 |
| *Panel B: Men in SSC and DSC* | | | |
| In a same-sex couple | −0.836*** | −1.208*** | −0.323 |
| | (0.125) | (0.220) | (0.242) |
| Observations | 4,571,778 | 547,612 | 2,336,237 |
| Mean of dependent variable | 27.796 | 28.066 | 29.228 |
| $R^2$ | 0.025 | 0.066 | 0.023 |
| *Controls for:* | | | |
| State and year FE | ✓ | ✓ | ✓ |
| Demographic controls | ✓ | ✓ | ✓ |
| Partner/spouse controls | ✓ | ✓ | ✓ |
| Fertility and marital status | ✓ | ✓ | ✓ |
| Urbanicity | ✓ | | |

See also notes in Table 2. *Urbanicity* includes a series of binary variables corresponding to each metropolitan status - excluding those with "Metropolitan status indeterminable (mixed)": "Not in metropolitan area", "In central/principal city", "Not in central/principal city", "Central/principal city status indeterminable (mixed)". Column 2 includes respondent whose metropolitan status is coded as "In central/principal city". Column 3 includes respondents whose metropolitan status is coded as "Not in central/principal city" or "Not in a metropolitan area". Both Columns 2 and 3 exclude respondents with "Metropolitan status indeterminable (mixed)" or "Central/principal city status indeterminable (mixed)". Source: ACS 2012–2019. *$p < 0.10$, **$p < 0.05$, ***$p < 0.01$.

parental status.

Furthermore, when comparing couples with and without children in the household (columns 1 and 3 to 2 and 4), we find that the commuting difference associated to same-sex couples is always larger in couples with children than in those without, as implied by the Conjecture 1 in our model. Commuting to work decisions reflect couples' fertility behavior in that couples with no children exhibit the smallest commuting disparity by sexual orientation, supporting our interpretation that the prevalent gender commuting gap reflects gender-conforming social norms, which may be reinforced by parenthood (Borghorst et al., 2021; Farré et al., 2020). Indeed, same-sex couples may be more egalitarian and less subject to strong division of labor and work-family balance constraints than different-sex couples are (Andresen and Nix 2022; Evertsson et al., 2021). The smallest estimated difference in commuting time between same-sex and different-sex couples is actually among unmarried couples without children: the women in cohabiting different-sex couples without children may feel less pressure to adhere to gender social norms and take on more unpaid work. Overall, our findings do not support the biological difference or productivity differences explanations among household types, and they

**Table 4**
Commuting time. By marital status and fertility.

| | Married w/ children (1) | Married w/o children (2) | Unmarried w/ children (3) | Unmarried w/o children (4) |
|---|---|---|---|---|
| *Panel A: Women in SSC and DSC* | | | | |
| In a same-sex couple | 2.765*** | 1.771*** | 1.133*** | 0.553** |
| | (0.320) | (0.245) | (0.365) | (0.217) |
| Observations | 1,518,968 | 1,049,278 | 144,190 | 227,662 |
| Mean of dependent variable | 23.406 | 23.560 | 23.738 | 24.319 |
| $R^2$ | 0.029 | 0.026 | 0.027 | 0.032 |
| *Panel B: Men in SSC and DSC* | | | | |
| In a same-sex couple | −1.662*** | −1.284*** | −2.020*** | −0.933*** |
| | (0.498) | (0.246) | (0.767) | (0.199) |
| Observations | 1,972,381 | 1,092,622 | 166,510 | 235,897 |
| Mean of dependent variable | 28.683 | 27.156 | 27.570 | 25.945 |
| $R^2$ | 0.022 | 0.018 | 0.015 | 0.020 |
| *Controls for:* | | | | |
| State and year FE | ✓ | ✓ | ✓ | ✓ |
| Demographic controls | ✓ | ✓ | ✓ | ✓ |
| Partner/spouse controls | ✓ | ✓ | ✓ | ✓ |

See also notes in Table 2. Source: ACS 2012–2019. *$p < 0.10$, **$p < 0.05$, ***$p < 0.01$.

question Hofmarcher and Plug (2022)'s assessment that differences between same-sex and different-sex couples are present only among traditional different-sex couples: we focus on working individuals in couples, control for age, education, race, ethnicity, spouse's or partner's characteristics, fertility, occupation, industry, location, and we still find a sizable difference by sexual orientation in commute time to work, even among couples that should be less traditional and similarly productive.[14]

*4.3. Regression analysis of commuting: heterogeneity and robustness checks*

Table A1 presents the same regression analysis as in Table 2, but on sub-samples of household heads, partners and spouses, main earners, or secondary earners in the couple. The largest same-sex couple differences in commuting time by household role are associated with secondary earners among women (Column 4), and with partners and spouses among men (Column 2): many women in different-sex couples are secondary earners in their household, as gender norms dictate,[15] while different-sex couples in which the man is not the primary earner seem to

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[14] Expanding Table 4 to include urbanicity does not change our main findings (Table B4). In line with our discussion in Table 2, including occupation and industry fixed effects does not substantially reduce most of the estimated gaps for women, but it does have a more important role in explaining the commuting gaps for men, even leading to insignificant estimates for some sub-populations (Table B5).

[15] Indeed, being the household head is correlated with being the primary earner in the couple, although such correlation is not perfect. For instance, among the 4,004,896 male primary earners listed in Column 3 Panel B Table A1, 2,572,650 are household heads (64%). Among the 2,657,920 female secondary earners listed in Column 4 Panel A Table A1, only 926,472 are household heads (35%).

conform less to gender norms.[16]

In Table A2, we include additional controls for student status and being in the military (Column 1), family income (Column 2), home-ownership (Column 3), LGBTQ+ policies (Column 4), and mode of transportation to work (Column 5). All estimated differences for same-sex couples are very close to those of Column 5 of Table 2. The last column includes a set of indicator variables measuring the main mode of transportation to work in the week preceding the ACS interview.[17] The disparity in commuting time between men in same-sex and different-sex couples is, if anything, larger after controlling for mode of transportation. The gap among women decreases slightly but remains large and statistically significant. Therefore, in this context, mode of transportation to work does not seem to be the factor driving the commuting time differences between same-sex and different-sex couples.

The Online Appendix includes additional robustness checks. Table B7 presents the commuting time regressions for younger couples (aged 18 to 40), older couples (aged 41 to 64), and for our main sample but excluding individuals younger than 25. Excluding these very young couples is immaterial to our findings, whereas splitting the sample by age groups reveals much larger commuting differences among couples in their forties or older. Younger women in same-sex couples are more similar to women in different-sex couples also when controlling for number of children in the household. This is consistent with household decisions of older generations of different-sex couples conforming to gender norms more strongly. Parenthood does affect long-term labor market outcomes of women older than 40 in different-sex couples (Black et al., 2014; Giddings et al., 2014), and this can lead to persistently shorter commutes than women in same-sex couples.

Given the large commuting differences by race estimated in the literature (Bunten et al., 2023), Table B7 also presents regression analyses similar to those in Table 2 separately for White, Black, Asian, and Hispanic individuals. While Hispanic individuals exhibit the same type of disparities by sexual orientation as White individuals do, the commuting gap is smaller among Hispanic women, and larger among Hispanic men, than among White respondents, although on average they commute 1–2 min longer than White individuals. The commuting gaps of Black or Asian women are not significant and are smaller, also considering that their commutes are longer on average. The fact that the Hispanic commuting differences by couple type is the only significant one among racial/ethnic minorities, and for men it is even larger, is consistent with the fact that traditionally Hispanic families have stronger gender norms in place among different-sex couples.

Table B8 presents a battery of robustness checks confirming that same-sex couples exhibit a longer commute to work among women, and a shorter one among men. These checks include excluding students or military personnel from our sample, focusing on the 2012–2019 ACS samples (since the US Census Bureau started recording married same-sex couples from 2012), using heteroskedasticity-robust standard errors, not using weights, or flexibly including all demographic and fertility controls as series of indicator variables.

Tables B9 and B10 focus on the subsample of dual-earner couples: the estimated coefficients associated to being in a same-sex couple remain significant and of the same sign, of the same magnitude among women and slightly smaller among men (for men the sample size is almost halved due to the several different-sex couples where the wife

does not work in the labor market). Even among dual-earner different-sex couples, who should be less prone to conforming to traditional gender norms, we observe this powerful force that is instead much less present among same-sex couples.

Table B11 presents an additional robustness check: we exclude women and men who work from home from our sample, finding the same significant pattern of differences by sexual orientation in commuting time.[18]

### 4.4. Regression analysis of within-couple commuting gap

In Table 5 the dependent variable is the difference in minutes between the commute to work of the two partners or spouses in a couple. If members of same-sex couples have more similar work behavior and labor market outcomes by conforming less to gender norms, then we may expect individuals in same-sex couples to exhibit more similarities within couples also in terms of commuting time (Prediction 5). All the specifications in Table 5 confirm this pattern: the estimated coefficient associated to being in a same-sex couple rather a different sex couple is always negative, among men and women. The commuting time within female same-sex couples is more similar by almost two minutes, whereas for male same-sex couples is more similar by less than half a minute in the richer specification of column 5.[19]

Related to our findings so far, it is worth mentioning that in the transportation literature Smart et al. (2017) find in the ATUS from 2003 to 2012 that household-related travel time of same-sex couples lies in between men's and women's travel time in different-sex couples. However, their sample has only 133 men and 168 women in same-sex couples, considers years in which same-sex couples could not be classified as married in the data (the ATUS only has information about one of the members of the couple, rather than about both as in the ACS data we use), and controls used in their analysis are not provided.

### 4.5. Regression analysis of hours worked and hourly wages

In Table 6 we test Predictions 3–4 with the same set of controls and sub-samples by marital status and fertility as in our commuting analysis (plus the control for hourly wages). We report the same pattern of results as Table 2: women in same-sex couples usually work more hours than women in different-sex couples, whereas men in same-sex couples work fewer hours per week across all specifications, as our model predicts. The dummy variable for same-sex couples is always statistically significant at the 1% level. When we add the control for commuting time (columns 3, 5, and 6), we estimate a positive significant association

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[16] Most of the estimates in Table A1 do not change substantially when including controls for urbanicity. On the other hand, controlling for occupation and industry fixed effects does reduce the size of the estimated gaps, especially among men (Table B6).

[17] This is motivated by two recent studies: Bunten et al. (2023) emphasize the role of commuting by car in explaining commuting patterns by demographic characteristics, while Oreffice and Sansone (2022) find that working individuals in same-sex couples are less likely to drive to work than individuals in different-sex couples.

[18] Table B12 illustrates the commuting disparities among same-sex and different-sex couples by educational sorting of the couples. Women matched with a high-educated man seem to respond more to work-family balance pressure: both low-educated and high-educated women in different-sex couples choose shorter commutes when matched with a high-educated men. The gender-conforming social norms do not seem salient for the less traditional couples of high-educated women and low-educated men and are looser for women in couples where both are low-educated. The commuting differences become much smaller among men, except among low-educated couples. When controlling for occupation fixed effects, these differences for men become negligible except for men in low-educated couples.

[19] The estimated difference in within-couple commuting time between women in same-sex couples and individuals in different-sex couples remains of similar magnitude and statistically significant even after controlling for urbanicity, occupation, and industry (Table B13). The estimated difference between men in same-sex couples and individuals in different-sex couples is instead particularly sensitive to the inclusion of urbanicity. In addition, Table B14 reports the regressions separately by marital status and fertility for these within-couple differences in commuting time. The within-couple gaps are slightly more similar among married women, while among unmarried cohabiting women their within-couple commuting gaps are still quite different by sexual orientation.

**Table 5**

Within-couple commuting gap. By sex and couple type.

|  | (1) | (2) | (3) | (4) | (5) |
|---|---|---|---|---|---|
| *Panel A: Women in SSC and DSC* | | | | | |
| In a same-sex couple | −1.761*** | −2.028*** | −2.103*** | −2.102*** | −1.537*** |
|  | (0.143) | (0.142) | (0.142) | (0.142) | (0.145) |
| Observations | 3,613,685 | 3,613,685 | 3,613,685 | 3,613,685 | 3,613,685 |
| Mean of dependent variable | 17.157 | 17.157 | 17.157 | 17.157 | 17.157 |
| $R^2$ | 0.000 | 0.011 | 0.011 | 0.011 | 0.012 |
| *Panel B: Men in SSC and DSC* | | | | | |
| In a same-sex couple | −0.514*** | −1.000*** | −1.125*** | −1.078*** | −0.375** |
|  | (0.157) | (0.156) | (0.156) | (0.156) | (0.158) |
| Observations | 3,612,771 | 3,612,771 | 3,612,771 | 3,612,771 | 3,612,771 |
| Mean of dependent variable | 17.166 | 17.166 | 17.166 | 17.166 | 17.166 |
| $R^2$ | 0.000 | 0.011 | 0.011 | 0.011 | 0.012 |
| *Controls for:* | | | | | |
| State and year FE |  | ✓ | ✓ | ✓ | ✓ |
| Demographic controls |  |  | ✓ | ✓ | ✓ |
| Partner/spouse controls |  |  |  | ✓ | ✓ |
| Fertility and marital status |  |  |  |  | ✓ |

See also notes in Table 2. Within-couple commute gaps are the same for women and men in different-sex couples (by construction), so Panel A compares women in same-sex couples to both men and women in different-sex couples, while Panel B compares men in same-sex couples to both men and women in different-sex couples. Source: ACS 2008–2019. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$.

**Table 6**

Hours worked. By sex and couple type.

|  | (1) | (2) | (3) | (4) | (5) | (6) |
|---|---|---|---|---|---|---|
| *Panel A: Women in SSC and DSC* | | | | | | |
| In a same-sex couple | 3.079*** | 2.941*** | 2.863*** | 2.144*** | 2.088*** | 2.399*** |
|  | (0.053) | (0.053) | (0.053) | (0.054) | (0.054) | (0.050) |
| Commuting time |  |  | 0.039*** |  | 0.038*** | 0.034*** |
|  |  |  | (0.000) |  | (0.000) | (0.000) |
| Observations | 4,411,409 | 4,411,409 | 4,411,409 | 4,411,409 | 4,411,409 | 4,411,409 |
| Mean of dependent variable | 37.766 | 37.766 | 37.766 | 37.766 | 37.766 | 37.766 |
| $R^2$ | 0.001 | 0.035 | 0.040 | 0.045 | 0.050 | 0.146 |
| *Panel B: Men in SSC and DSC* | | | | | | |
| In a same-sex couple | −1.831*** | −2.082*** | −2.050*** | −0.955*** | −0.936*** | −1.114*** |
|  | (0.056) | (0.055) | (0.055) | (0.057) | (0.057) | (0.053) |
| Commuting time |  |  | 0.017*** |  | 0.016*** | 0.017*** |
|  |  |  | (0.000) |  | (0.000) | (0.000) |
| Observations | 5,210,836 | 5,210,836 | 5,210,836 | 5,210,836 | 5,210,836 | 5,210,836 |
| Mean of dependent variable | 44.199 | 44.199 | 44.199 | 44.199 | 44.199 | 44.199 |
| $R^2$ | 0.000 | 0.019 | 0.020 | 0.023 | 0.024 | 0.127 |
| *Controls for:* | | | | | | |
| Hourly wages |  | ✓ | ✓ | ✓ | ✓ | ✓ |
| State and year FE |  | ✓ | ✓ | ✓ | ✓ | ✓ |
| Demographic controls |  | ✓ | ✓ | ✓ | ✓ | ✓ |
| Partner/spouse controls |  | ✓ | ✓ | ✓ | ✓ | ✓ |
| Fertility and marital status |  |  |  | ✓ | ✓ |  |
| Student and army status |  |  |  |  |  | ✓ |
| Occupation FE |  |  |  |  |  | ✓ |
| Industry FE |  |  |  |  |  | ✓ |

See also notes in Table 2. The dependent variable is the number of hours per week that the individual usually worked (if the person worked during the 12 months preceding the interview). Respondents with non-missing commuting time have been included in the analysis. Source: ACS 2008–2019. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$.

between hours worked and commuting time both among men and among women, while the estimated coefficients for same-sex couples on hours worked remain significant and sizable. Being in a same-sex couple is associated to about 8% more hours worked per week for women, and 5% less for men, and these gaps go in the same direction as our estimated commuting disparities by sexual orientation. Taken together with our commute-to-work findings, these disparities in labor supply by sexual orientation point to household work decisions being shaped by gender-conforming social norms that shift the pressure of work-family balance on heterosexual women by increasing their marginal utility of the household public good.[20]

Table A3 illustrates these labor supply differences separately by

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[20] As in the previous analysis for commuting time, also for hours worked the gap among women in same-sex and different-sex couples is not substantially affected by the inclusion of controls for urbanicity, occupation, and industry (Table B15). The gap among men in same-sex and different-sex couples can instead be at least partially explained by different sorting by occupation and industry.

marriage and parenthood. These estimates reveal that the largest disparities exist among women and men in married couples with children: married mothers in same-sex couples work almost 3.5 h longer per week than in different-sex couples, while for men the difference is 2.3 h less per week (Column 1).[21] Moreover, the estimated work hour difference by sexual orientation is always larger in couples with children than in those without children, as it was the case for commuting time (Table 4). All these work patterns support our model interpretation that the prevalent gender commuting gap reflects gender-conforming social norms among different-sex couples rather than biological differences between men and women or productivity differences across households. Indeed, same-sex couples may be more egalitarian and less subject to strong division of labor and work-family balance pressure than different-sex couples: differences in their marginal utilities of the public good are amply reflected in their choice of job characteristics such as location and hours worked.[22]

Table A4 measures how wages and commuting time are related, by type of couple and separately for men and women: longer commutes are associated to higher wages across the board in all specifications.[23] This evidence is consistent with our model and the recent literature showing that shorter commutes are associated to lower wages and earnings (especially for women): see, for instance, Albanese et al. (2022) Barbanchon et al. (2021), Lundborg et al. (2017), Meekes and Hassink (2022). Furthermore, the same-sex indicator is sizable, statistically significant, and largely unaffected by the inclusion of commuting time as additional control.

## 5. Discussion and conclusions

We build a parsimonious household model of commuting time that allows for gender-conforming social norms to shape households' time allocation decisions. We use it to study commuting behaviors and labor supply across household types to assess the role of these social norms in the persistent gender labor market inequalities. We present novel evidence that working women in same-sex couples commute longer to work than working women in different-sex couples, whereas the commute to work of working men in same-sex couples is shorter than of working men in different-sex couples. These differences are sizable, especially when compared to the gender commuting gap estimated in the literature. They are particularly stark among married couples with children, while within-couple commuting gaps are also smaller in same-sex couples.

Moreover, these disparities by sexual orientation cannot be explained by women facing different job opportunities and commuting options due to their employability or labor market skills: we control for a rich set of individual characteristics such as age, educational attainment, race, ethnicity, spouse's or partner's characteristics, location, fertility, marital status, occupation or industry, urbanicity, as well as for family income, homeownership, or mode of transportation in our sensitivity analysis. We then estimate similar gaps in labor supply by sexual orientation: not only travel time to work (job location), but the overall work time allocation decisions of different-sex couples is influenced by gender-conforming social norms.

Our paper adds to the concerns on the persistent gender inequality in labor market outcomes, and to a few strands of literature: the gender differences in commuting acknowledged in economics and in the transportation and health literatures; the literature on child penalty, household specialization and labor supply decisions more generally, the literature on sexual orientation and labor market outcomes, and the very recent literature on gender-conforming social norms and couple inequity (Bertrand, 2020; Goldin, 2021). Our analysis could inform policy makers and especially managers and executives tackling gender inequalities in the workplace: if managers are mindful of how these gender-conforming social norms still impact women's work behavior, they may be able to allow for more flexibility on the job and offer less "greedy" jobs and positions to women and mothers, with less strict office schedules (Kleven et al., 2021; Goldin, 2021). Our evidence also strongly adds to the call for policymakers to set up a strategy to weaken the gender-conforming social norms altogether.

We acknowledge that our household model does not structurally estimate the various channels or analyze couple formation. We note that only LGBTQ+ individuals in same-sex partnerships or marriages can be identified in the ACS data (unpartnered LGBTQ+ individuals cannot), while the lack of gender identity data prevents the analysis of differences between transgender and cisgender individuals. Still, we see our paper as a useful parsimonious approach in a relevant direction: to make sense of the pervasive gender inequalities in the labor market by endogenizing commuting decisions and assessing various forces that may drive inequalities through commuting and labor supply behavior.

## Declaration of Competing Interest

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

## Data availability

Data are publicly availailable. Our Stata do file will be made available upon publication.

## Supplementary materials

Supplementary material associated with this article can be found, in the online version, at doi:10.1016/j.labeco.2023.102451.

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[21] Similar estimates are obtained when excluding commuting time from the set of regressors (Table B16), or when controlling for urbanicity (Table B17). As in the previous tables, including occupation and industry fixed effects affects the estimated gaps for men more than for women (Table B17).

[22] Jepsen and Jepsen (2022) estimate that women in same-sex couples work more hours per week, and men fewer hours, than *married* women and men in different-sex couples as recently as 2019. Jepsen and Jepsen (2015) had previously found that in the year 2000 *married* different-sex couples specialized more than other couple types. Giddings et al. (2014) use the within-couple difference in hours worked in the 1990 US Census and the 2000–2011 ACS data to compare same-sex to different-sex couples and find that the former specialize less, and partners are more similar than in different-sex couples (although they do not control for wages). In Norway, Andresen and Nix (2022) estimate that among mothers in different-sex couples there is a sizable drop in labor supply due to children that is not present among same-sex mothers.

[23] This remains true also after controlling for urbanicity, occupation and industry (Table B18).

## Appendix

### Table A1
Commuting time. By position in the household.

| | Household head (1) | Spouse or partner (2) | Main earner (3) | Second earner (4) |
|---|---|---|---|---|
| *Panel A: Women in SSC and DSC* | | | | |
| In a same-sex couple | 1.818*** | 1.669*** | 1.050*** | 2.235*** |
| | (0.146) | (0.146) | (0.126) | (0.218) |
| Observations | 1,846,540 | 2,564,869 | 1,753,489 | 2,657,920 |
| Mean of dependent variable | 23.318 | 23.115 | 25.084 | 21.913 |
| $R^2$ | 0.028 | 0.026 | 0.028 | 0.026 |
| *Panel B: Men in SSC and DSC* | | | | |
| In a same-sex couple | −0.910*** | −1.130*** | −0.964*** | −0.448* |
| | (0.155) | (0.164) | (0.137) | (0.230) |
| Observations | 3,173,588 | 2,037,248 | 4,004,896 | 1,205,940 |
| Mean of dependent variable | 27.422 | 28.053 | 28.044 | 26.427 |
| $R^2$ | 0.022 | 0.018 | 0.021 | 0.021 |
| *Controls for:* | | | | |
| State and year FE | ✓ | ✓ | ✓ | ✓ |
| Demographic controls | ✓ | ✓ | ✓ | ✓ |
| Partner/spouse controls | ✓ | ✓ | ✓ | ✓ |
| Fertility and marital status | ✓ | ✓ | ✓ | ✓ |

See also notes in Table 2. Column 3 includes only respondents whose individual income was greater or equal than 50% of the family income. Column 3 Panel A compares female main earners in same-sex couples to female main earners in different couples, while Column 3 Panel B compares male main earners in same-sex couples to male main earners in different couples. Columns 4 includes only respondents whose individual income was less than 50% of the family income. Column 4 Panel A compares female second earners in same-sex couples to female second earners in different couples, while Column 4 Panel B compares male second earners in same-sex couples to male second earners in different couples. Source: ACS 2008–2019. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$.

### Table A2
Commuting time. Additional controls.

| | (1) | (2) | (3) | (4) | (5) |
|---|---|---|---|---|---|
| *Panel A: Women in SSC and DSC* | | | | | |
| In a same-sex couple | 1.754*** | 1.843*** | 1.707*** | 1.762*** | 1.539*** |
| | (0.114) | (0.114) | (0.113) | (0.114) | (0.104) |
| Observations | 4,411,409 | 4,411,409 | 4,411,409 | 4,411,409 | 4,411,409 |
| Mean of dependent variable | 23.201 | 23.201 | 23.201 | 23.201 | 23.201 |
| $R^2$ | 0.027 | 0.028 | 0.028 | 0.027 | 0.168 |
| *Panel B: Men in SSC and DSC* | | | | | |
| In a same-sex couple | −1.012*** | −1.108*** | −1.194*** | −1.021*** | −1.214*** |
| | (0.123) | (0.123) | (0.123) | (0.123) | (0.113) |
| Observations | 5,210,836 | 5,210,836 | 5,210,836 | 5,210,836 | 5,210,836 |
| Mean of dependent variable | 27.675 | 27.675 | 27.675 | 27.675 | 27.675 |
| $R^2$ | 0.020 | 0.021 | 0.022 | 0.020 | 0.133 |
| *Controls for:* | | | | | |
| State and year FE | ✓ | ✓ | ✓ | ✓ | ✓ |
| Demographic controls | ✓ | ✓ | ✓ | ✓ | ✓ |
| Partner/spouse controls | ✓ | ✓ | ✓ | ✓ | ✓ |
| Fertility and marital status | ✓ | ✓ | ✓ | ✓ | ✓ |
| Student and army status | ✓ | | | | |
| Family income | | ✓ | | | |
| Homeownership | | | ✓ | | |
| LGBTQ+ policies | | | | ✓ | |
| Mode of transportation to work | | | | | ✓ |

See also notes in Table 2. *LGBTQ+ policies*: constitutional and statutory bans on same-sex marriage, same-sex marriage legalization, same-sex domestic partnership legalization, same-sex civil union legalization, LGBTQ+ anti-discrimination laws, and LGBTQ+ hate crime laws Source: ACS 2008–2019. *$p < 0.10$, **$p < 0.05$, ***$p < 0.01$.

### Table A3
Hours worked. By marital status and fertility.

| | Married w/ children (1) | Married w/o children (2) | Unmarried w/ children (3) | Unmarried w/o children (4) |
|---|---|---|---|---|
| *Panel A: Women in SSC and DSC* | | | | |
| In a same-sex couple | 3.523*** | 1.812*** | 1.771*** | 0.993*** |
| | (0.150) | (0.110) | (0.175) | (0.104) |

*(continued on next page)*

**Table A3** (*continued*)

|  | Married w/ children (1) | Married w/o children (2) | Unmarried w/ children (3) | Unmarried w/o children (4) |
|---|---|---|---|---|
| Commuting time | 0.043*** | 0.032*** | 0.024*** | 0.020*** |
|  | (0.001) | (0.001) | (0.002) | (0.001) |
| Observations | 1,518,968 | 1,049,278 | 144,190 | 227,662 |
| Mean of dependent variable | 37.263 | 38.693 | 37.643 | 39.168 |
| $R^2$ | 0.048 | 0.045 | 0.050 | 0.052 |
| *Panel B: Men in SSC and DSC* |  |  |  |  |
| In a same-sex couple | −2.256*** | −1.494*** | −1.343*** | −1.029*** |
|  | (0.203) | (0.115) | (0.326) | (0.094) |
| Commuting time | 0.016*** | 0.018*** | 0.022*** | 0.024*** |
|  | (0.000) | (0.001) | (0.002) | (0.001) |
| Observations | 1,972,381 | 1,092,622 | 166,510 | 235,897 |
| Mean of dependent variable | 44.678 | 43.949 | 42.682 | 42.748 |
| $R^2$ | 0.024 | 0.014 | 0.024 | 0.020 |
| *Controls for:* |  |  |  |  |
| Hourly wages | ✓ | ✓ | ✓ | ✓ |
| State and year FE | ✓ | ✓ | ✓ | ✓ |
| Demographic controls | ✓ | ✓ | ✓ | ✓ |
| Partner/spouse controls | ✓ | ✓ | ✓ | ✓ |

See also notes in Table 6. Source: ACS 2012–2019. *$p < 0.10$, **$p < 0.05$, ***$p < 0.01$.

**Table A4**

Log of hourly wages. By sex and couple type.

|  | (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) |
|---|---|---|---|---|---|---|---|---|
| *Panel A: Women in SSC and DSC* |  |  |  |  |  |  |  |  |
| In a same-sex couple | 0.074*** | 0.028*** | 0.025*** | 0.076*** | 0.073*** | 0.026*** | 0.032*** | 0.029*** |
|  | (0.004) | (0.003) | (0.003) | (0.003) | (0.003) | (0.003) | (0.002) | (0.002) |
| Commuting time |  |  | 0.002*** |  | 0.002*** | 0.001*** |  | 0.002*** |
|  |  |  | (0.000) |  | (0.000) | (0.000) |  | (0.000) |
| Observations | 2,797,527 | 2,797,527 | 2,797,527 | 2,797,527 | 2,797,527 | 2,797,527 | 4,145,921 | 4,145,921 |
| Mean of dependent variable | 2.748 | 2.748 | 2.748 | 2.748 | 2.748 | 2.748 | 2.676 | 2.676 |
| $R^2$ | 0.000 | 0.252 | 0.260 | 0.256 | 0.264 | 0.433 | 0.410 | 0.413 |
| Panel B: Men in SSC and DSC |  |  |  |  |  |  |  |  |
| In a same-sex couple | 0.049*** | −0.060*** | −0.057*** | 0.047*** | 0.049*** | −0.038*** | −0.039*** | −0.037*** |
|  | (0.004) | (0.003) | (0.003) | (0.003) | (0.003) | (0.003) | (0.003) | (0.003) |
| Commuting time |  |  | 0.002*** |  | 0.002*** | 0.001*** |  | 0.001*** |
|  |  |  | (0.000) |  | (0.000) | (0.000) |  | (0.000) |
| Observations | 4,356,263 | 4,356,263 | 4,356,263 | 4,356,263 | 4,356,263 | 4,356,263 | 4,813,049 | 4,813,049 |
| Mean of dependent variable | 2.955 | 2.955 | 2.955 | 2.955 | 2.955 | 2.955 | 2.925 | 2.925 |
| $R^2$ | 0.000 | 0.260 | 0.264 | 0.269 | 0.273 | 0.408 | 0.399 | 0.400 |
| *Controls for:* |  |  |  |  |  |  |  |  |
| State and year FE |  | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| Demographic controls |  | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| Partner/spouse controls |  | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| Fertility and marital status |  |  |  | ✓ | ✓ |  |  |  |
| Student and army status |  |  |  |  |  | ✓ | ✓ | ✓ |
| Occupation FE |  |  |  |  |  | ✓ | ✓ | ✓ |
| Industry FE |  |  |  |  |  | ✓ | ✓ | ✓ |
| Include part-time workers |  |  |  |  |  |  | ✓ | ✓ |

See also notes in Table 2. The dependent variable is the logarithm of the respondent's total pre-tax wage and salary income in the 12 months preceding the ACS interview divided by the estimated number of hours worked in the same 12 months. All wages have been adjusted for inflation using the FRED Consumer Price Index for All Urban Consumers (All Items). Respondents whose hourly wages were above the 99th percentile of the hourly wage distribution for the relevant sample have been excluded. Unless otherwise noted, only respondents with a positive hourly wage and working at least 40 h/week have been included in the analysis. Both married and unmarried couples have been included in this sample. Only respondents with non-missing commuting time have been included in the analysis. Source: ACS 2008–2019. *$p < 0.10$, **$p < 0.05$, ***$p < 0.01$.

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