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# ABSTRACT

## Commuting to Work and Gender-Conforming Social Norms: Evidence from Same-Sex Couples

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, fertility, and marital status. These differences among men and women amount to 50%, and 100%, respectively, 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/spouses hold jobs with a longer commute and more hours worked, thus reinforcing gender inequalities.

**JEL Classification:** D10, J15, J16, J22, R20, R41

**Keywords:** commute, household decisions, labor supply, LGBTQ+, specialization, travel time

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## 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, Rathelot, and Roulet (2021) show that women choose jobs with a shorter commute and that they are willing to trade-off shorter commutes with wages, while Lundborg, Plug, and Rasmussen (2017) estimate that women move to lower-paying jobs closer to home after having children. Relatedly, Black, Kolesnikova, and Taylor (2014) and Farré, Jofre-Monseny, and Torrecillas (2020) find that married women exhibit a lower labor force participation in US metropolitan areas with longer commutes.

Interestingly, 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, Moberg, and Vleuten (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.

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 their utility from the household public good (relative to their utility from private consumption). In different-sex couples, these norms may lead women to believe that this utility is 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/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.

Our parsimonious framework incorporates biological differences, specialization within households, parenthood, and gender norms/preferences. 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 mechanism of gender-conforming social norms vis-à-vis the other channels. 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. 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 present and working. We build the largest 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.

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 of working men in different-sex couples. These differences persist after controlling for demographic characteristics, partner's characteristics, location,

fertility, and marital status. They are particularly stark among married couples with children: on average, almost 3 minutes more one-way to work for married mothers in same-sex couples, and nearly 2 minutes less for married fathers in same-sex couples. Within-couple commuting gaps are also smaller in same-sex couples. These disparities by sexual orientation are sizable and represent an 11% increase with respect to the average commuting time of women in different-sex couples (12% among parents), and a 5% decrease with respect to the average commuting time of men in different-sex couples. The figure for women actually corresponds to the whole gender commuting gap, estimated in the literature to be about 10%, while for men it is half as large but still substantial (Crane 2007).

Our estimates are robust to focusing on secondary-earners only, main earners only, household heads, partners/spouses only, individuals forty years old or older, to controlling for occupation or industry, family income, urbanicity, homeownership, LGBTQ-related policies, mode of transportation to work, or to excluding those working from home. We then analyze couples who live in the city center separately from those who do not, ruling out that these commuting patterns arise 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).

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 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 women's utility from the household public good, they 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 this utility. Indeed, the commuting gap among men is opposite to the gap among women, and larger in absolute value for couples with children. 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, Landais, and Søgaard 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 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 they 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 public good. This is in line with Barbanchon, Rathelot, and Roulet (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. 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 their utility from the public good is higher than the other household member's utility. 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/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, Carpenter, and Sansone 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:

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

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

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

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 individuals *i* and *j* in household *H* are determined by the following programs:

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

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

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

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

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/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 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/spouse does not. That is, $\beta_g^H$ captures the pressure that a household member feels in terms of work-family balance (utility from providing the private versus the public goods).[1] 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 $Q^H$. They internalize their more traditional role in their household and exhibit:

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

[1] 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."

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.[2] 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 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:

[2] 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.

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

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

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

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.[3] 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:

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

$$\frac{1+c_{\mathrm{M}}^{\mathrm{D}}}{1+c_{\mathrm{M}}^{\mathrm{S}}} = \frac{\beta_M^S}{\beta_M^D} \Rightarrow c_{\mathrm{M}}^{\mathrm{S}} - c_{\mathrm{M}}^{\mathrm{D}} < 0 \quad (2)$$

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

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

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 β 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 $H' = S$: $\mathrm{c_F^S} - \mathrm{c_F^D} > 0$. 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 β 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 $H' = \mathrm{S}$: $c_{\mathrm{M}}^{\mathrm{S}} - c_{\mathrm{M}}^{\mathrm{D}} < 0$. Their preferences are aligned with gender-conforming social norms, and 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:

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

$$\frac{1-t_{\mathrm{M}}^{\mathrm{D}}}{1-t_{\mathrm{M}}^{\mathrm{S}}} = \frac{\beta_M^S}{\beta_M^D} \Rightarrow t_{\mathrm{M}}^{\mathrm{S}} - t_{\mathrm{M}}^{\mathrm{D}} > 0 \quad (4)$$

namely that women in same-sex households work more hours in the market than working women in different-sex households, while men in same-sex households work fewer hours than working men in different-sex households. 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 Time Gaps

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

$$\frac{1 + c_{\mathrm{F}}^{\mathrm{D}}}{1 + c_M^{\mathrm{D}}} = \frac{\beta_M^{\mathrm{D}}}{\beta_{\mathrm{F}}^{\mathrm{D}}} \Rightarrow c_{\mathrm{M}}^{\mathrm{D}} - c_{\mathrm{F}}^{\mathrm{D}} > 0$$

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

$$\frac{1 + c_{\mathrm{i}}^{\mathrm{S}}}{1 + c_j^S} = \frac{\beta_j^{\mathrm{S}}}{\beta_{\mathrm{i}}^{\mathrm{S}}} \approx 1 \Rightarrow c_{\mathrm{i}}^S \approx c_j^{\mathrm{S}}$$

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

$$\left(c_{\mathrm{M}}^{\mathrm{D}} - c_{\mathrm{F}}^{\mathrm{D}}\right) > \left(c_{\mathrm{i}}^{\mathrm{S}} - c_j^S\right) \quad (5)$$

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 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 leading mothers in different-sex household to settle for even closer-to-home jobs, while their male partners/spouses settle for even 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, Moberg, and Vleuten 2021), a mechanism that can be tested in the data.

### 2.5 Remarks

We will take all 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.[4]

Our model of household decisions with commuting time is more general than Black, Kolesnikova, and Taylor (2014) and Farré, Jofre-Monseny, and Torrecillas (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

[4] 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.

less public good.[5] Our approach is in the spirit of Andresen and Nix (2022) and Siminski and Yetsenga (2020) in that partners/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, specialization within households, parenthood, and gender norms/preferences in our model, while characterizing preferences for the public good and gender-conforming norms into a single channel. 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". Using the variable "sex",[6] 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

[5] 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.
[6] The ACS survey does not distinguish between sex and gender.

common in the literature (Badgett, Carpenter, and Sansone 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 sex or relation to the household head from our sample to further reduce such measurement errors, following common practice in this literature (Black, Sanders, and Taylor 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 Tables B1-B2 report 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 present and working in the week preceding the interview. The commuting time of those working from home is set to zero.

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

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

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. To test Predictions 1-2, 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/spouse's characteristics, the couple's marital status and the number of own (total and younger than 5) children living in the household. Standard errors clustered at the household level are used throughout, as well as individual weights. In our sensitivity analysis, we add a set of dummy variables for occupation or industry, 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.

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. 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 Figure 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 minutes 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 Figure 1 panel A), in line with Predictions 1-2. Given that 4 minutes 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 Figure 1 panel B).[7]

Women in same-sex couples are also more likely to have 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 Figure 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 the difference 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 Figure 1 Panel E).[8] When looking instead at the total commuting time of the two members of the couple, the gender gap in commuting time indicates 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 Figure 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 hours/week versus 38 hours/week on average), while it is lower for men in same-sex couples than men in different-sex couples (42 versus 44 hours/week), consistent with Predictions 3-4.[9]

[7] 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).

[8] 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.

[9] 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

### 4.2 Regression Analysis of Commuting: Main 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/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).

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 minutes more one way on average, whereas men in gay couples have a shorter commute to work than men in different-sex couples, 1.4 minutes less on average (Column 1), as predicted by our model (Predictions 1-2). The mean commuting time to work is 23.2 minutes for women and 27.7 minutes 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 with respect to men in different-sex couples. Even more striking are the comparisons of these differences by sexual orientation to the 10% gender commuting gap estimated in the literature: among working women, the 11% disparity is as sizable as the whole gender commuting gap, while among working men the 5% gap is half as large. These estimated coefficients indicate a relevant commuting behavior by sexual orientation for men and especially for women, and are all significant at the 1% level.

According to (U.S. Census 2021), the average one-way commute time is at all-time high in 2019, and from 2006 to 2019 it increased by about 2.6 minutes. The transportation literature has long been interested in measuring the sizable and persistent gender gap in commuting (Madden 1981): according to Crane (2007), the gender gap in commute time was 2.4 minutes in 2005 in the US. These policy-relevant figures are similar in magnitude to our main commuting disparity by sexual orientation among women. We also note that the measure of commuting time recorded in the ACS

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 B3). This is in line with what previous literature on sexual orientation has documented in the US (Badgett, Carpenter, and Sansone 2021; Oreffice 2011).

data is one-way commuting time: thus, the average daily difference in total commute to and from work among women would be 5 minutes, which in turn is 25 minutes per week, on average.

These patterns are consistent with the idea that same-sex couples may be more egalitarian (Badgett, Carpenter, and Sansone 2021) and particularly with commuting decisions being shaped by gender-conforming social norms and their prescribed household roles: 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.

All these disparities by sexual orientation that we have uncovered are significant at the 1% level, and robust to controlling for demographic characteristics, partner's characteristics, fertility, and marital status, although their magnitude decreases from columns 1 to 5. In this last column, working women in same-sex couples exhibit a one-way commute to work 1.8 minutes longer than working women in different-sex couples, while for working men in same-sex couples the commute is 1 minute shorter than working men in different-sex couples.

Table 3 illustrates these same 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 minutes longer than those in different-sex couples, while for married fathers the difference is -1.7 minutes (Column 1). This disparity by couple type is always of opposite sign by sex, regardless of marital or 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, Mulalic, and Ommeren 2021; Farré, Jofre-Monseny, and Torrecillas 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, Moberg, and Vleuten 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 explanation among household types, and they 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, 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.

### 4.3 Regression Analysis of Commuting: Heterogeneity and Robustness Checks

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

The last two columns report commuting differences by couple type among couples living in city centers (column 5) or those who don't (column 6). Among city dwellers, if anything, men in same-sex couples commute even less than men in different-sex couples. This additional evidence suggest that these distinctive commuting patterns cannot be explained away 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 minute. 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 6) is larger than in the full sample, and much larger than for city dwellers. On the contrary, there is no difference between men in same-sex couples and men in different-sex couples living outside of the city center: 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.

In Table 5, we include additional controls for student status and being in the military (column 1), occupation or industry fixed effects (columns 2-3), family income (column 4), urbanicity (column 5), homeownership (column 6), LGBTQ+ policies (column 7), and mode of transportation to work (column 8). The first, fourth, fifth, sixth, and seventh columns show that the estimated differences for same-sex couples are essentially the same as those of column 5 of Table 2. However, when we control for occupation or industry fixed effects (columns 2 and 3), we observe that the significant commuting differences by sexual orientation are estimated to be smaller than in our main specification in Table 2, and for men in particular the estimated gap for by couple type shrinks to less than half a minute (in absolute value). Nevertheless, we note that job flexibility differences across occupations/industries or workplace locations do not 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 way in which women in different-sex couples implement gender-conforming norms: the estimated coefficient associated to same-sex couples in column 2 is still 1.4 minutes and significant at the 1% level for women. This is also consistent with what Andresen and Nix (2022) find for the child penalty in Norway. 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. The last column includes a set of indicator variables measuring the main mode of transportation to work in the week preceding the ACS interview.[10] 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 driving factor in the commuting time differences between same-sex and different-sex couples.

The Online Appendix includes additional robustness checks. Table B4 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

[10] This is motivated by two recent studies: Bunten et al. (2022) 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.

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, Kolesnikova, and Taylor 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. 2022), Table B5 presents the same regression analysis as in Table 2 separately for Whites, Blacks, Asian, and Hispanics. While Hispanics exhibit the same type of disparities by sexual orientation as Whites do, the commuting gap is smaller among Hispanic women, and larger among Hispanic men, than among Whites, although on average they commute 1-2 minutes longer than Whites. The commuting gaps of Black or Asian women are not significant and are smaller, also considering that their commutes are much longer on average. The fact that the Hispanic commuting differences by couple type is the only significant one, and for men it is even larger, is consistent with the fact that traditionally Hispanics have stronger gender norms in place among different-sex couples.

Table B6 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, or not using weights. Tables B7 and B8 replicate our main regressions of Tables 2 and 3 but 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 B9 presents an additional robustness check: we exclude women and men

who work from home from our sample, running the same set of regressions as in Table 2, finding the same significant pattern of differences by sexual orientation in commuting time.[11]

### 4.4 Regression Analysis of Within-Couple Commuting Time Gap

In Table 6 the dependent variable is the difference in minutes between the commute to work of the two partners/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 6 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.[12]

Related to our findings so far, it is worth mentioning that in the transportation literature Smart, Brown, and Taylor (2017) find in the American Time Use surveys (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

In Table 7 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

[11] Table B10 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 (Table B11), these differences for men become negligible except for men in low-educated couples.

[12] Table B12 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.

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 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.

Table 8 illustrates these labor supply differences separately by 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 hours longer per week than in different-sex couples, while for men the difference is 2.3 hours less per week (Column 1).[13] 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 3). All these work patterns support our model interpretation that the prevalent gender commuting gap reflects gender-conforming social norms among different-sex couples. Indeed, same-sex couples may be more egalitarian and less subject to strong division of labor and work-family balance

[13] Similar estimates are obtained when excluding commuting time from the set of regressors (Table B13).

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.[14-15]

## 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, partner's characteristics, location, fertility, and marital status, as well as for occupation or industry, family income, urbanicity, 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.

[14] 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. Burn and Martell (2022) find evidence that gender typicality does affect labour market outcomes of men and women on average, but does not influence the differential effect for gays and lesbians.

[15] Table B14 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, consistently with our model and with the trade-off between wages and commute time recently emphasized in the literature (Barbanchon, Rathelot, and Roulet 2021). However, commuting time does not seem to explain much of the variation in wages whereas the same-sex indicator is sizable, statistically significant, and largely unaffected by the inclusion of commuting time as additional control.

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, Landais, and Søgaard 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 all together.

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.

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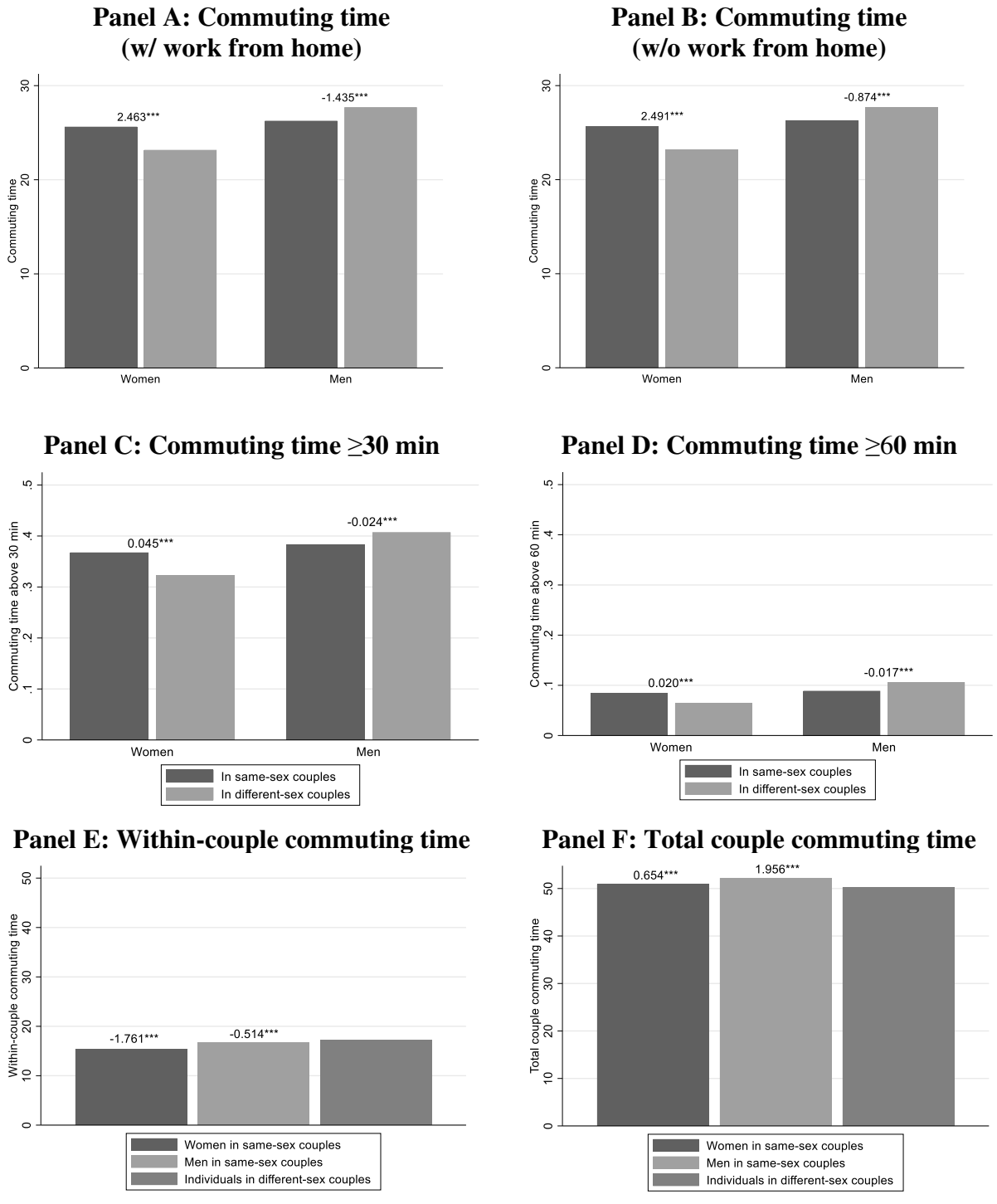
**Figure 1: Commuting time by sex and couple type.**




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 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. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$.

**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≥15 | 0.720 | 0.675 | 0.045*** | 0.723 | 0.738 | -0.015*** |
| 4 | Commute time≥30 | 0.368 | 0.323 | 0.045*** | 0.384 | 0.407 | -0.024*** |
| 5 | Commute time≥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 Figure 1. Source: ACS 2008-2019. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

**Table 2: Commuting time. By sex and couple type.**

| | (1) | (2) | (3) | (4) | (5) |
|---|---|---|---|---|---|
| *Panel A: Women in SSC and DSC* | | | | | |
| In a same-sex couple | 2.463*** | 2.108*** | 2.046*** | 2.145*** | 1.761*** |
| | (0.113) | (0.111) | (0.111) | (0.111) | (0.114) |
| 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 |
| $R^2$ | 0.000 | 0.020 | 0.025 | 0.026 | 0.027 |
| *Panel B: Men in SSC and DSC* | | | | | |
| In a same-sex couple | -1.435*** | -2.131*** | -1.974*** | -2.059*** | -1.021*** |
| | (0.122) | (0.120) | (0.120) | (0.120) | (0.123) |
| 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 |
| $R^2$ | 0.000 | 0.019 | 0.019 | 0.019 | 0.020 |
| *Controls for:* | | | | | |
| State and year FE | | ✓ | ✓ | ✓ | ✓ |
| Demographic controls | | | ✓ | ✓ | ✓ |
| Partner/spouse controls | | | | ✓ | ✓ |
| Fertility and marital status | | | | | ✓ |

"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. All variables are described in detail in Section A of the Online Appendix. Source: ACS 2008-2019. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$.

**Table 3: Commuting time. By marital status and fertility.**

| | Married w/ children | Married w/o children | Unmarried w/ children | Unmarried w/o children |
|---|---|---|---|---|
| | (1) | (2) | (3) | (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. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$.

**Table 4: Commuting time. By position in the household and location.**

| | Household head | Spouse or partner | Main earner | Second earner | City center | Not city center |
|---|---|---|---|---|---|---|
| | (1) | (2) | (3) | (4) | (5) | (6) |
| *Panel A: Women in SSC and DSC* | | | | | | |
| In a same-sex couple | 1.818*** | 1.669*** | 1.050*** | 2.235*** | 0.986*** | 2.376*** |
| | (0.146) | (0.146) | (0.126) | (0.218) | (0.251) | (0.202) |
| Observations | 1,846,540 | 2,564,869 | 1,753,489 | 2,657,920 | 452,789 | 1,991,694 |
| Mean of dependent variable | 23.318 | 23.115 | 25.084 | 21.913 | 25.702 | 24.086 |
| $R^2$ | 0.028 | 0.026 | 0.028 | 0.026 | 0.094 | 0.030 |
| *Panel B: Men in SSC and DSC* | | | | | | |
| In a same-sex couple | -0.910*** | -1.130*** | -0.964*** | -0.448* | -1.208*** | -0.323 |
| | (0.155) | (0.164) | (0.137) | (0.230) | (0.220) | (0.242) |
| Observations | 3,173,588 | 2,037,248 | 4,004,896 | 1,205,940 | 547,612 | 2,336,237 |
| Mean of dependent variable | 27.422 | 28.053 | 28.044 | 26.427 | 28.066 | 29.228 |
| $R^2$ | 0.022 | 0.018 | 0.021 | 0.021 | 0.066 | 0.023 |
| *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. Column 6 includes respondents whose metropolitan status is coded as "Not in central/principal city" or "Not in a metropolitan area". Both Columns 5 and 6 exclude respondents with undeterminable metropolitan status. Source: ACS 2008-2019. $^{*}$ $p < 0.10$, $^{**}$ $p < 0.05$, $^{***}$ $p < 0.01$.

**Table 5: Commuting time. Additional controls.**

| | (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) |
|---|---|---|---|---|---|---|---|---|
| *Panel A: Women in SSC and DSC* | | | | | | | | |
| In a same-sex couple | 1.754*** | 1.365*** | 1.477*** | 1.843*** | 1.742*** | 1.707*** | 1.762*** | 1.539*** |
| | (0.114) | (0.113) | (0.113) | (0.114) | (0.119) | (0.113) | (0.114) | (0.104) |
| Observations | 4,411,409 | 4,411,409 | 4,411,409 | 4,411,409 | 3,852,237 | 4,411,409 | 4,411,409 | 4,411,409 |
| Mean of dependent variable | 23.201 | 23.201 | 23.201 | 23.201 | 23.444 | 23.201 | 23.201 | 23.201 |
| $R^2$ | 0.027 | 0.050 | 0.050 | 0.028 | 0.029 | 0.028 | 0.027 | 0.168 |
| *Panel B: Men in SSC and DSC* | | | | | | | | |
| In a same-sex couple | -1.012*** | -0.345*** | -0.384*** | -1.108*** | -1.091*** | -1.194*** | -1.021*** | -1.214*** |
| | (0.123) | (0.122) | (0.122) | (0.123) | (0.125) | (0.123) | (0.123) | (0.113) |
| Observations | 5,210,836 | 5,210,836 | 5,210,836 | 5,210,836 | 4,571,778 | 5,210,836 | 5,210,836 | 5,210,836 |
| Mean of dependent variable | 27.675 | 27.675 | 27.675 | 27.675 | 27.796 | 27.675 | 27.675 | 27.675 |
| $R^2$ | 0.020 | 0.045 | 0.043 | 0.021 | 0.022 | 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 | ✓ | ✓ | ✓ | | | | | |
| Occupation FE | | ✓ | | | | | | |
| Industry FE | | | ✓ | | | | | |
| Family income | | | | ✓ | | | | |
| Urbanicity | | | | | ✓ | | | |
| 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 6: Within-couple commuting time 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 | | | | | ✓ |

Only household heads have been included. Note: 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. See also notes in Table 2. Source: ACS 2008-2019. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$.

**Table 7: 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*** | 2.448*** |
| | (0.053) | (0.053) | (0.053) | (0.054) | (0.054) | (0.051) |
| Commuting time | | | 0.039*** | | 0.038*** | 0.035*** |
| | | | (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 | 0.130 |
| *Panel B: Men in SSC and DSC* | | | | | | |
| In a same-sex couple | -1.831*** | -2.082*** | -2.050*** | -0.955*** | -0.936*** | -1.332*** |
| | (0.056) | (0.055) | (0.055) | (0.057) | (0.057) | (0.053) |
| Commuting time | | | 0.017*** | | 0.016*** | 0.018*** |
| | | | (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 | 0.112 |
| *Controls for:* | | | | | | |
| Hourly wages | | ✓ | ✓ | ✓ | ✓ | ✓ |
| State and year FE | | ✓ | ✓ | ✓ | ✓ | ✓ |
| Demographic controls | | ✓ | ✓ | ✓ | ✓ | ✓ |
| Partner/spouse controls | | ✓ | ✓ | ✓ | ✓ | ✓ |
| Fertility and marital status | | | | ✓ | ✓ | |
| Student and army status | | | | | | ✓ |
| Occupation FE | | | | | | ✓ |

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). Individuals working part-time are included in the sample. Commuting time includes individuals working from home (commuting time imputed as zero). Only respondents with non-missing commuting time have been included in the analysis. See also notes in Table 2. Source: ACS 2008-2019. $^{*}$ $p < 0.10$, $^{**}$ $p < 0.05$, $^{***}$ $p < 0.01$.

**Table 8: Hours worked. By marital status and fertility.**

| | Married w/ children | Married w/o children | Unmarried w/ children | Unmarried w/o children |
|---|---|---|---|---|
| | (1) | (2) | (3) | (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) |
| 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 7. Source: ACS 2012-2019. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$.

**Online Appendix for "Commuting to work and gender-conforming social norms: evidence from same-sex couples"**

## Appendix A. Variable description

### A.1 ACS Variables

#### A.1.1 Dependent variables

*Commuting time* reports the total amount of time, in minutes, that it usually took the respondent to get from home to work in the week preceding the ACS interview. This variable is set to missing for individuals who did not work in such week. Unless otherwise specified, commuting time includes individuals working from home (commuting time imputed as zero).

*Within-couple commuting time gap* reports the (absolute value of the) difference in commuting times between the household head and their spouse or unmarried partner. Commuting time includes individuals working from home (commuting time imputed as zero). Couples in which at least one member was not working at the time of the ACS interview have been coded as missing.

*Total couple commuting time* reports total commuting time of the household head and their spouse or unmarried partner. Commuting time includes individuals working from home (commuting time imputed as zero). Couples in which at least one member was not working at the time of the ACS interview have been coded as missing.

*Number of hours worked weekly.* The ACS reports the number of hours per week that the respondent usually worked, if the person worked during the 12 months preceding the interview. This variable is top coded at 99. Respondents who did not work in the 12 months preceding the interview are assigned value zero.

*Wage and salary income* reports individual hourly pre-tax wage and salary income. Individuals were asked the usual number of hours worked in a week in the 12 months preceding the interview, the number of weeks worked in the 12 months preceding the interview (including paid vacation, paid sick leave, and military service), and the total pre-tax wage and salary income - that is, money received as an employee - for the 12 months preceding the interview. Given this definition of income, self-employed individuals have been excluded from this analysis. These three variables have been used to compute hourly earnings for each respondent. Since the number of weeks

worked in the previous years is recorded as a categorical variable, it has been assumed that the actual number of weeks worked is the median of the selected interval. For instance, if the individual reported working 27-39 weeks, it has been assumed that they worked 33 weeks. Whenever indicated, we have adjusted income for inflation using the average annual FRED Consumer Price Index for All Urban Consumers (All Items).[16]

### A.1.2 Key independent variable: In a same-sex couple

The ACS does not directly ask individuals about their sexual orientation. However, the ACS identifies a primary reference person, defined as "the person living or staying here in whose name this house or apartment is owned, being bought, or rented". The ACS also collects information on the relationship to the primary reference person for all members of the household, and the range of possible relationships includes husband, wife, and unmarried partner (as a different category than roommate or other nonrelative). By combining such information, it has been possible to create an indicator variable equal to one if an individual was in a same-sex couple; zero if an individual was in a different-sex couple. Both individuals married to a same-sex spouse and individuals living with a same-sex unmarried partner have been coded as individuals in same-sex couples.

It is worth nothing that, in order to reduce measurement error, in 2019 the ACS survey question explicitly distinguished between "opposite-sex husband/wife/spouse", "opposite-sex unmarried partner", "same-sex husband/wife/spouse", and "same-sex unmarried partner". In addition, the options for unmarried partners were moved higher in the list of potential relation categories, thus increasing its salience.

### A.1.3 Additional individual variables

*Sex* reports whether the person was male or female. Note that sex in the ACS is reported as a binary variable.

*Age* reports a person's age in years at the time of the interview. A similar variable has been constructed to report the age of a person's spouse or unmarried partner.

*Race* includes a series of indicator variables constructed to record a person's race: White, Black, Asian, or other races. The indicator *Asian* includes Chinese, Japanese, Other Asian or Pacific

[16] Source: https://fred.stlouisfed.org/series/CPIAUCSL

Islander. The indicator *other races* includes American Indian, Alaska Native, other race not listed, or individuals who selected two or three major races. A similar set of variables has been constructed to report the race of a person's spouse or unmarried partner.

*Hispanic* is an indicator equal to one if a person self-identified as Mexican, Puerto Rican, Cuban, or Other Hispanic; zero otherwise. A similar variable has been constructed to report the ethnicity of a person's spouse or unmarried partner.

*Higher Education* is an indicator equal to one if a person's highest degree completed was a Bachelor's degree or higher (Master's degree, Professional degree beyond a Bachelor's degree, Doctoral degree); zero otherwise. A similar variable has been constructed to report the education level of a person's spouse or unmarried partner.

*Number of children* reports the number of own children (of any age or marital status) residing with each individual. This variable includes step-children and adopted children as well as biological children. This variable is coded as zero for people with no children present in the household.

*Number of children under age 5* reports the number of own children age 4 or under residing with each individual. This variable includes step-children and adopted children as well as biological children. This variable is coded as zero for people with no children under 5 present in the household.

*Married* is an indicator equal to one if a person is a member of a (same-sex or different-sex) married couple; zero otherwise. Married same-sex couples can be identified from 2012. Before 2012, married same-sex couples were re-coded as unmarried same-sex couples by the ACS.

*Student status* is an indicator equal to one if a person attended school or college in the 3 months preceding the interview; zero otherwise.

*In the army* is an indicator equal to one if a person reported being employed in the Armed forces (including "Armed forces: at work" and "Armed forces: with job but not at work"); zero otherwise.

*Employed* is an indicator equal to one if a person was working in the week preceding the interview; zero otherwise.

*In the labor force* is an indicator equal to one if a person was a part of the labor force, either working or seeking work, in the week preceding the interview; zero if a person was out of the labor

force, or did not have a job, was looking for a job, but had not yet found one at the time of the interview.

*Total family income* reports the total pre-tax money income earned by one's family from all sources for the 12 months preceding the interview. Amounts are expressed in contemporary dollars, and not adjusted for inflation.

*Occupation* records a person's primary occupation using the IPUMS harmonized occupation coding based on the Census Bureau's 2010 ACS occupation classification scheme. Unemployed persons were to give their most recent occupation, if they had worked in the 5 years preceding the interview, otherwise they were classified as "Unemployed, with No Work Experience in the Last 5 Years or Earlier or Never Worked".

*Industry* reports the type of industry in which the person performed an occupation using the IPUMS harmonized industry coding based on the 1990 Census Bureau industrial classification scheme. Unemployed persons were to give their most recent industry, if they had worked in the 5 years preceding the interview, otherwise they were classified as "N/A (not applicable)" or "Last worked 1984 or earlier".

*Urbanicity* reports whether a person resided in a metropolitan area (including both inside and outside the central/principal city). Persons with indeterminable metropolitan status were recorded as missing. Indeed, confidentiality requirements have limited the details regarding metropolitan status for some individuals.

*Mode of transportation to work*. Individuals were asked to report how they usually got to work in the week preceding the interview. If they used more than one method of transportation, they were ask to select the one used for most of the distance. The options were the following:

- Car, truck, or van
- Bus or trolley bus
- Streetcar or trolley car
- Subway or elevated
- Railroad
- Ferryboat
- Taxicab

- Motorcycle
- Bicycle
- Walked
- Worked at home
- Other method

From the answers to this question, a series of indicator variables has been constructed to record a person's main mean of transportation to work. This question on means of transportation to work was asked to all individuals age 16 or more who worked in the week preceding the interview. The aforementioned indicators have been coded as missing for individuals not working in the week preceding the interview.

**A.1.4 LGBTQ+ policy variables.**

*SSM legal* is an indicator variable equal to one in all states and time periods when same-sex marriage was legal; zero otherwise. The effective date has been used to code this variable. These data have been primarily obtained from the National Center for Lesbian Rights.[17]

*SSM ban* is a series of indicator variables equal to one in all states and time periods in which same-sex marriage was banned in the state constitution or state statute; zero otherwise. These indicators remain equal to one even in later years after the legalization of same-sex marriage in a given state. When more than one statutory ban was passed in a state, the oldest one has been used to code the state statute ban variable. These data have been primarily obtained from the Freedom to Marry campaign.[18]

*Domestic partnership* is an indicator variable equal to one in all states and time periods in which same-sex domestic partnerships were legal; zero otherwise. This indicator remains equal to one even in later years when\if a state had converted same-sex domestic partnerships into marriages. These data have been primarily obtained from the National Center for Lesbian Rights.[19]

*Civil union* is an indicator variable equal to one in all states and time periods in which same-sex civil unions were legal; zero otherwise. This indicator remains equal to one even in later years

[17]Source: http://www.nclrights.org/wp-content/uploads/2015/07/Relationship-Recognition.pdf. Accessed Oct/1/2019.
[18]Source: http://www.freedomtomarry.org/pages/winning-in-the-states. Accessed Oct/1/2019.
[19]Source: http://www.nclrights.org/wp-content/uploads/2015/07/Relationship-Recognition.pdf. Accessed Oct/1/2019.

when\if a state had converted same-sex civil unions in marriages. These data have been primarily obtained from the National Center for Lesbian Rights.[20]

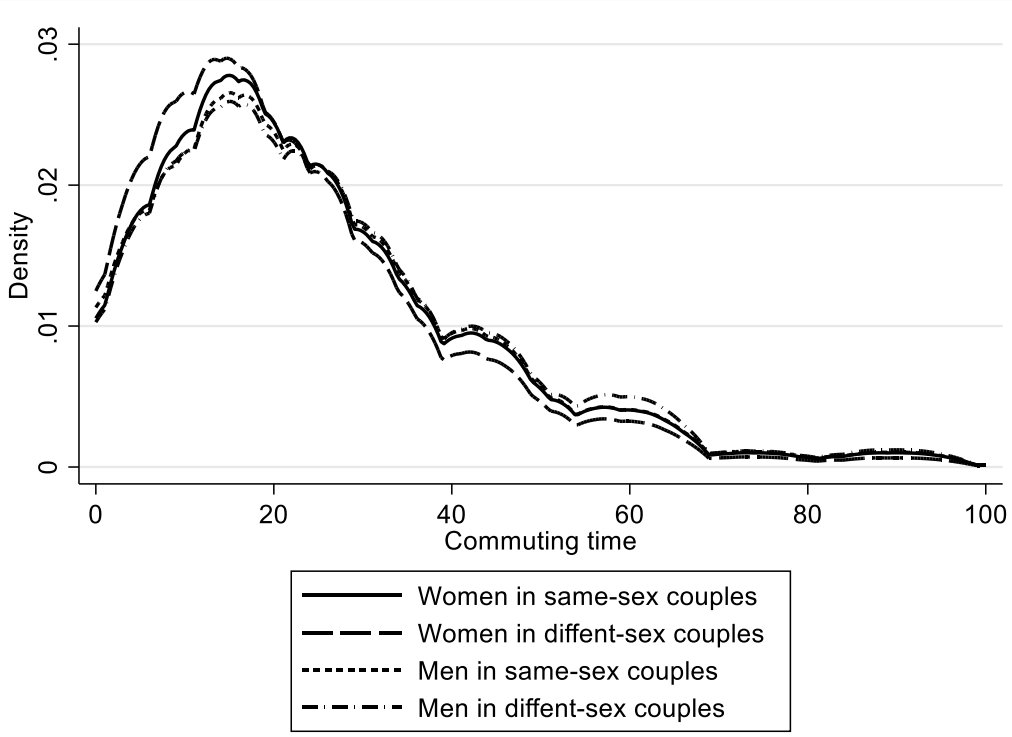
*Anti-discrimination law* is an indicator equal to one in all states and time periods in which employer discrimination based on sexual orientation was not allowed; zero otherwise. This variable has been set equal to one even if the law covered only sexual orientation, not gender identity, or if a law protecting trans individuals was passed at a later date. Laws protecting only public employees have not been considered. These data have been primarily obtained from the Freedom for All Americans campaign.[21]

*Hate crime* is a series of indicator variables equal to one in all states and time periods in which there was a law specifically addressing hate or bias crimes based on sexual orientation only, or on sexual orientation and gender identity; zero otherwise. Since some states passed these laws after 2009, these variables have not been set equal to one for all states after President Obama signed the Matthew Shepard and James Byrd, Jr. Hate Crimes Prevention Act into law on October 28, 2009. These data have been primarily obtained from the Human Rights Campaign.[22]

[20]Source: http://www.nclrights.org/wp-content/uploads/2015/07/Relationship-Recognition.pdf. Accessed Oct/1/2019.
[21]Source: https://www.freedomforallamericans.org/states/.Accessed: Oct/21/2019. We have subsequently checked that no other law was passed in 2019.
[22]Source: https://www.hrc.org/state-maps/hate-crimes. Accessed: Oct/25/2019. We have subsequently checked that no other law was passed in 2019

## Appendix B. ACS additional tables and figures

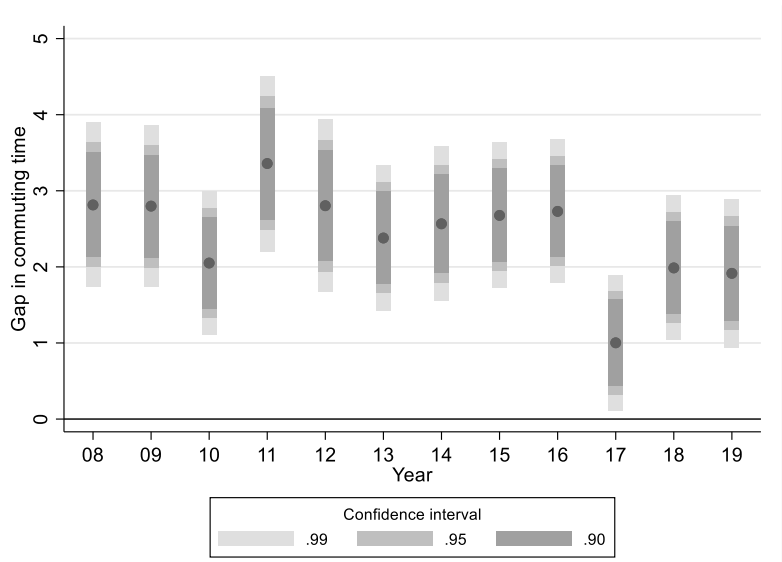
### Figure B1: Commuting time distribution.



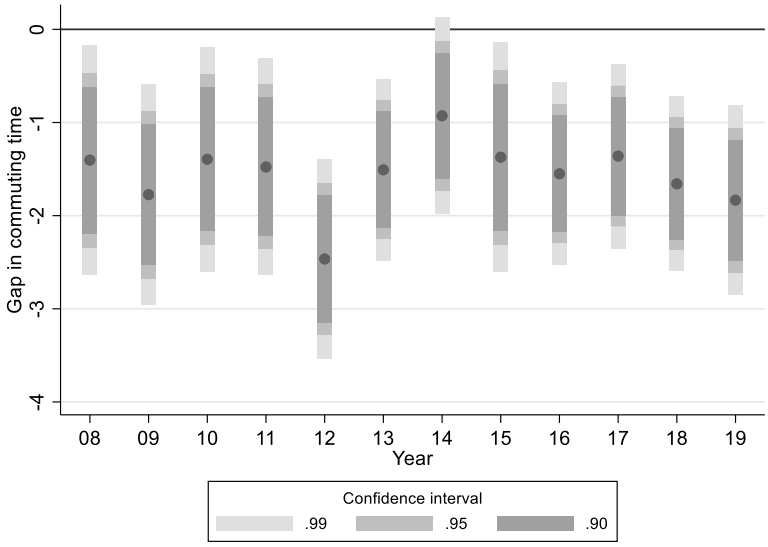

Kernel density estimates. Respondents younger than 18 or older than 64 have been excluded. Commuting time censored at 100 minutes. Commuting time includes individuals working from home (commuting time imputed as zero). Bin width equal to 8 minutes. Unweighted statistics. Source: ACS 2008-2019.

**Figure B2: Raw gaps in commuting time (including working from home) for individuals in same-sex vs. individuals in different-sex couples.**

**Panel A: Women.**

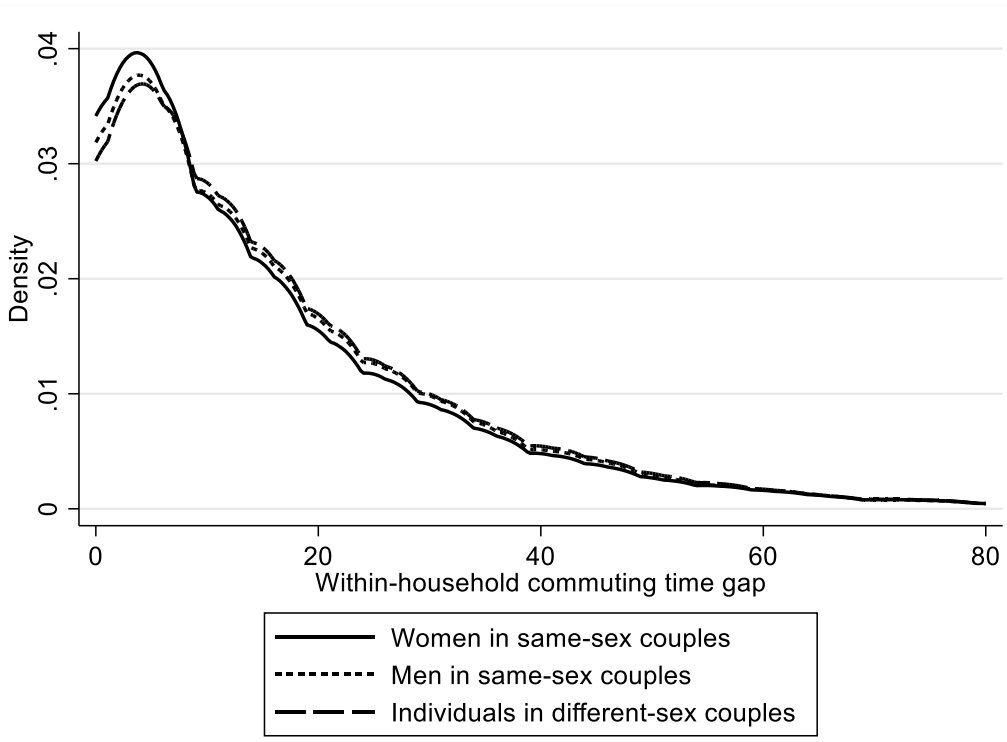



**Panel B: Men.**




These figures report the estimated gap between women (men in Panel B) in same-sex couples and women (men) in different-sex couples from 12 different regressions, one for each year. The dependent variable is commuting time (including individuals working from home). See also notes in Table 2. As in Table 2 Column 1, these regressions do not include demographic controls, partner/spouse controls, marital status, fertility, or state fixed effects. Source: ACS 2008-2019.

**Figure B3: Within-couple commuting time gap distribution.**




Kernel density estimates. Respondents younger than 18 or older than 64 have been excluded. Commuting time gap censored at 80 minutes. Bin width equal to 8 minutes. Unweighted statistics. Source: ACS 2008-2019.

**Table B1: ACS sample sizes. Individuals 18-64 in same-sex and different-sex couples.**

| | Same-sex | | Different-sex | |
|---|---|---|---|---|
| | Female | Male | Married | Unmarried |
| 2008 | 5,453 | 5,079 | 997,747 | 96,396 |
| 2009 | 5,703 | 5,285 | 994,337 | 99,090 |
| 2010 | 5,733 | 5,340 | 977,773 | 106,248 |
| 2011 | 5,834 | 5,384 | 945,122 | 104,172 |
| 2012 | 6,080 | 5,603 | 942,970 | 106,056 |
| 2013 | 6,982 | 6,791 | 944,980 | 111,931 |
| 2014 | 7,380 | 7,110 | 929,088 | 113,035 |
| 2015 | 8,061 | 7,723 | 927,944 | 116,554 |
| 2016 | 8,036 | 8,021 | 922,524 | 116,246 |
| 2017 | 8,871 | 8,314 | 926,510 | 121,186 |
| 2018 | 9,137 | 8,975 | 922,169 | 122,709 |
| 2019 | 9,167 | 8,737 | 922,234 | 126,020 |
| Total | 86,437 | 82,362 | 11,353,398 | 1,339,643 |

Notes: Sample includes all respondents (both primary reference person and unmarried partner or married spouse) in a same-sex or different-sex married/unmarried couple. Respondents younger than 18 or older than 64 have been excluded. Source: ACS 2008-2019.

**Table B2: ACS sample sizes. Individuals 18-64 in married/unmarried couples.**

| | Female same-sex | | Male same-sex | | Different-sex | |
|---|---|---|---|---|---|---|
| | Married | Unmarried | Married | Unmarried | Married | Unmarried |
| 2012 | 1,682 | 4,398 | 1,412 | 4,191 | 942,970 | 106,056 |
| 2013 | 2,383 | 4,599 | 2,095 | 4,696 | 944,980 | 111,931 |
| 2014 | 2,909 | 4,471 | 2,891 | 4,219 | 929,088 | 113,035 |
| 2015 | 4,047 | 4,014 | 3,588 | 4,135 | 927,944 | 116,554 |
| 2016 | 4,374 | 3,662 | 4,182 | 3,839 | 922,524 | 116,246 |
| 2017 | 5,296 | 3,575 | 4,681 | 3,633 | 926,510 | 121,186 |
| 2018 | 5,429 | 3,708 | 5,140 | 3,835 | 922,169 | 122,709 |
| 2019 | 5,453 | 3,714 | 4,958 | 3,779 | 922,234 | 126,020 |

Notes: Sample includes all respondents (both primary reference person and unmarried partner or married spouse) in a same-sex or different-sex married/unmarried couple. Respondents younger than 18 or older than 64 have been excluded. Marital status recorded in the ACS for same-sex couples only from 2012. Source: ACS 2012-2019.

## Table B3: Descriptive statistics – additional variable.

| | Women | | Men | |
|---|---|---|---|---|
| | Same-sex couples | Different-sex couples | Same-sex couples | Different-sex couples |
| Variable | (1) | (2) | (3) | (4) |
| Age | 42.303 | 44.069 | 43.542 | 45.096 |
| White | 0.806 | 0.794 | 0.818 | 0.791 |
| Black | 0.095 | 0.074 | 0.064 | 0.085 |
| Asian | 0.027 | 0.066 | 0.045 | 0.055 |
| Other race | 0.072 | 0.067 | 0.073 | 0.069 |
| Hispanic | 0.126 | 0.146 | 0.148 | 0.152 |
| Bachelor's degree | 0.447 | 0.361 | 0.488 | 0.340 |
| Has child | 0.326 | 0.599 | 0.137 | 0.621 |
| Has child age 0-4 | 0.088 | 0.188 | 0.043 | 0.201 |
| Married | 0.483 | 0.876 | 0.460 | 0.870 |
| Student | 0.095 | 0.061 | 0.076 | 0.041 |
| In the army | 0.004 | 0.001 | 0.003 | 0.009 |
| Employed | 0.810 | 0.680 | 0.821 | 0.858 |
| In the labor force | 0.849 | 0.715 | 0.860 | 0.895 |
| Total family income | 74,282 | 101,340 | 101,851 | 101,117 |
| Weekly hours worked | 40.758 | 37.644 | 42.335 | 44.188 |
| N | 86,437 | 6,554,055 | 82,362 | 6,138,986 |

Weighted means. Sample size (N) refers to the total number of respondents in the relevant sub-group (i.e., individuals in same-sex or different-sex couples). Weekly hours worked reported only for those working in the week preceding the ACS interview. Respondents younger than 18 or older than 64 have been excluded. Source: ACS 2008-2019 (2012-2019 for marital status). All differences are statistically significant at the 1-percent level.

**Table B4: Commuting time. By age group.**

| | 18-40 | 41-64 | 25-64 |
|---|---|---|---|
| | (1) | (2) | (3) |
| *Panel A: Women in SSC and DSC* | | | |
| In a same-sex couple | 0.791*** | 2.183*** | 1.726*** |
| | (0.163) | (0.154) | (0.118) |
| Observations | 1,646,346 | 2,765,063 | 4,258,026 |
| Mean of dependent variable | 23.512 | 22.985 | 23.305 |
| $R^2$ | 0.032 | 0.026 | 0.027 |
| *Panel B: Men in SSC and DSC* | | | |
| In a same-sex couple | -1.407*** | -1.313*** | -1.155*** |
| | (0.192) | (0.158) | (0.126) |
| Observations | 1,852,711 | 3,358,125 | 5,090,197 |
| Mean of dependent variable | 27.237 | 27.956 | 27.793 |
| $R^2$ | 0.022 | 0.020 | 0.020 |
| *Controls for:* | | | |
| State and year FE | ✓ | ✓ | ✓ |
| Demographic controls | ✓ | ✓ | ✓ |
| Partner/spouse controls | ✓ | ✓ | ✓ |
| Fertility and marital status | ✓ | ✓ | ✓ |

See also notes in Table 2. Source: ACS 2008-2019. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$.

**Table B5: Commuting time. By race and ethnicity.**

| | White | Black | Asian | Hispanic |
|---|---|---|---|---|
| | (1) | (2) | (3) | (4) |
| *Panel A: Women in SSC and DSC* | | | | |
| In a same-sex couple | 1.940*** | 0.756 | 0.029 | 1.319*** |
| | (0.120) | (0.474) | (0.630) | (0.310) |
| Observations | 3,650,782 | 268,726 | 261,460 | 469,924 |
| Mean of dependent variable | 22.425 | 26.983 | 27.131 | 24.119 |
| $R^2$ | 0.018 | 0.057 | 0.042 | 0.036 |
| *Panel B: Men in SSC and DSC* | | | | |
| In a same-sex couple | -0.991*** | -1.044** | 0.092 | -1.805*** |
| | (0.132) | (0.530) | (0.550) | (0.357) |
| Observations | 4,313,957 | 310,190 | 281,674 | 649,412 |
| Mean of dependent variable | 27.231 | 29.067 | 30.236 | 28.954 |
| $R^2$ | 0.017 | 0.039 | 0.049 | 0.019 |
| *Controls for:* | | | | |
| State and year FE | ✓ | ✓ | ✓ | ✓ |
| Demographic controls | ✓ | ✓ | ✓ | ✓ |
| Partner/spouse controls | ✓ | ✓ | ✓ | ✓ |
| Fertility and marital status | ✓ | ✓ | ✓ | ✓ |

See also notes in Table 2. Demographic controls in these specifications include only age and education, not race or ethnicity. Source: ACS 2008-2019. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$.

**Table B6: Commuting time (including working from home). Additional restrictions.**

| | No students | No army | 2012-2019 | Robust SE | No weights |
|---|---|---|---|---|---|
| | (1) | (2) | (3) | (4) | (5) |
| *Panel A: Women in SSC and DSC* | | | | | |
| In a same-sex couple | 1.770*** | 1.762*** | 1.641*** | 1.761*** | 1.829*** |
| | (0.119) | (0.114) | (0.134) | (0.103) | (0.099) |
| Observations | 4,139,712 | 4,404,566 | 2,940,098 | 4,411,409 | 4,411,409 |
| Mean of dependent variable | 23.166 | 23.197 | 23.552 | 23.201 | 23.201 |
| $R^2$ | 0.027 | 0.027 | 0.027 | 0.027 | 0.023 |
| *Panel B: Men in SSC and DSC* | | | | | |
| In a same-sex couple | -1.017*** | -1.010*** | -1.263*** | -1.021*** | -1.156*** |
| | (0.128) | (0.123) | (0.143) | (0.113) | (0.105) |
| Observations | 5,007,438 | 5,154,713 | 3,467,410 | 5,210,836 | 5,210,836 |
| Mean of dependent variable | 27.721 | 27.703 | 27.976 | 27.675 | 27.675 |
| $R^2$ | 0.020 | 0.020 | 0.021 | 0.020 | 0.018 |
| *Controls for:* | | | | | |
| State and year FE | ✓ | ✓ | ✓ | ✓ | ✓ |
| Demographic controls | ✓ | ✓ | ✓ | ✓ | ✓ |
| Partner/spouse controls | ✓ | ✓ | ✓ | ✓ | ✓ |
| Fertility and marital status | ✓ | ✓ | ✓ | ✓ | ✓ |

See also notes in Table 2. Source: ACS 2008-2019 (2012-2019 in Column 3). * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$.

**Table B7: Commuting time (including working from home). By sex and couple type. Only working individuals with working partner/spouse.**

| | (1) | (2) | (3) | (4) | (5) |
|---|---|---|---|---|---|
| *Panel A: Women in SSC and DSC* | | | | | |
| In a same-sex couple | 2.419*** | 2.054*** | 1.983*** | 2.045*** | 1.600*** |
| | (0.124) | (0.122) | (0.122) | (0.122) | (0.125) |
| Observations | 3,702,772 | 3,702,772 | 3,702,772 | 3,702,772 | 3,702,772 |
| Mean of dependent variable | 23.051 | 23.051 | 23.051 | 23.051 | 23.051 |
| $R^2$ | 0.000 | 0.020 | 0.026 | 0.027 | 0.028 |
| *Panel B: Men in SSC and DSC* | | | | | |
| In a same-sex couple | -1.102*** | -1.858*** | -1.734*** | -1.819*** | -0.886*** |
| | (0.134) | (0.132) | (0.132) | (0.132) | (0.136) |
| Observations | 3,613,617 | 3,613,617 | 3,613,617 | 3,613,617 | 3,613,617 |
| Mean of dependent variable | 27.218 | 27.218 | 27.218 | 27.218 | 27.218 |
| $R^2$ | 0.000 | 0.020 | 0.020 | 0.020 | 0.021 |
| *Controls for:* | | | | | |
| State and year FE | | ✓ | ✓ | ✓ | ✓ |
| Demographic controls | | | ✓ | ✓ | ✓ |
| Partner/spouse controls | | | | ✓ | ✓ |
| Fertility and marital status | | | | | ✓ |

See also notes in Table 2. Source: ACS 2008-2019. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$.

**Table B8: Commuting time (including working from home). Sub-sample analysis. Only working individuals with working partner/spouse.**

| | Married w/ children | Married w/o children | Unmarried w/ children | Unmarried w/o children |
|---|---|---|---|---|
| | (1) | (2) | (3) | (4) |
| *Panel A: Women in SSC and DSC* | | | | |
| In a same-sex couple | 2.398*** | 1.729*** | 0.882** | 0.339 |
| | (0.352) | (0.273) | (0.409) | (0.232) |
| Observations | 1,344,196 | 825,535 | 118,422 | 192,777 |
| Mean of dependent variable | 23.220 | 23.447 | 23.781 | 23.308 |
| $R^2$ | 0.029 | 0.028 | 0.026 | 0.035 |
| *Panel B: Men in SSC and DSC* | | | | |
| In a same-sex couple | -1.627*** | -1.077*** | -1.902** | -0.899*** |
| | (0.544) | (0.277) | (0.847) | (0.216) |
| Observations | 1,324,583 | 783,957 | 113,986 | 195,681 |
| Mean of dependent variable | 28.221 | 26.829 | 27.197 | 25.815 |
| $R^2$ | 0.023 | 0.020 | 0.016 | 0.021 |
| *Controls for:* | | | | |
| State and year FE | ✓ | ✓ | ✓ | ✓ |
| Demographic controls | ✓ | ✓ | ✓ | ✓ |
| Partner/spouse controls | ✓ | ✓ | ✓ | ✓ |

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

**Table B9: Commuting time (excluding working from home). By sex and couple type.**

| | (1) | (2) | (3) | (4) | (5) |
|---|---|---|---|---|---|
| *Panel A: Women in SSC and DSC* | | | | | |
| In a same-sex couple | 2.491*** | 2.048*** | 1.968*** | 2.025*** | 1.873*** |
| | (0.116) | (0.113) | (0.113) | (0.113) | (0.115) |
| Observations | 4,151,189 | 4,151,189 | 4,151,189 | 4,151,189 | 4,151,189 |
| Mean of dependent variable | 24.619 | 24.619 | 24.619 | 24.619 | 24.619 |
| $R^2$ | 0.000 | 0.023 | 0.030 | 0.030 | 0.031 |
| *Panel B: Men in SSC and DSC* | | | | | |
| In a same-sex couple | -0.874*** | -1.665*** | -1.632*** | -1.740*** | -0.633*** |
| | (0.125) | (0.123) | (0.123) | (0.123) | (0.126) |
| Observations | 4,967,002 | 4,967,002 | 4,967,002 | 4,967,002 | 4,967,002 |
| Mean of dependent variable | 29.032 | 29.032 | 29.032 | 29.032 | 29.032 |
| $R^2$ | 0.000 | 0.021 | 0.022 | 0.022 | 0.023 |
| *Controls for:* | | | | | |
| State and year FE | | ✓ | ✓ | ✓ | ✓ |
| Demographic controls | | | ✓ | ✓ | ✓ |
| Partner/spouse controls | | | | ✓ | ✓ |
| Fertility and marital status | | | | | ✓ |

See also notes in Table 2. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$.

**Table B10: Commuting time. By education level.**

| | High-educ w/ high-educ partner | High-educ w/ low-educ partner | Low-educ w/ high-educ partner | Low-educ w/ low-educ partner |
|---|---|---|---|---|
| | (1) | (2) | (3) | (4) |
| *Panel A: Women in SSC and DSC* | | | | |
| In a same-sex couple | 2.220*** | 0.598** | 2.128*** | 1.405*** |
| | (0.193) | (0.278) | (0.292) | (0.183) |
| Observations | 1,155,948 | 670,662 | 425,499 | 2,159,300 |
| Mean of dependent variable | 24.088 | 25.091 | 21.984 | 22.403 |
| $R^2$ | 0.042 | 0.025 | 0.026 | 0.018 |
| *Panel B: Men in SSC and DSC* | | | | |
| In a same-sex couple | -0.572*** | -0.538** | -1.313*** | -1.752*** |
| | (0.212) | (0.267) | (0.290) | (0.220) |
| Observations | 1,385,856 | 571,011 | 671,106 | 2,582,863 |
| Mean of dependent variable | 27.684 | 27.771 | 27.670 | 27.652 |
| $R^2$ | 0.043 | 0.028 | 0.020 | 0.014 |
| *Controls for:* | | | | |
| State and year FE | ✓ | ✓ | ✓ | ✓ |
| Demographic controls | ✓ | ✓ | ✓ | ✓ |
| Partner/spouse controls | ✓ | ✓ | ✓ | ✓ |
| Fertility and marital status | ✓ | ✓ | ✓ | ✓ |

See also notes in Table 2. Unlike Table 2, the indicators for education level are not included in "Demographic controls" and "Partner/spouse controls" since they are used to select the sub-samples across specifications. Source: ACS 2008-2019. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$.

**Table B11: Commuting time (including working from home). By education level, with controls for occupation.**

| | High-educ w/ high-educ partner | High-educ w/ low-educ partner | Low-educ w/ high-educ partner | Low-educ w/ low-educ partner |
|---|---|---|---|---|
| | (1) | (2) | (3) | (4) |
| *Panel A: Women in SSC and DSC* | | | | |
| In a same-sex couple | 1.894*** | 0.204 | 1.672*** | 0.974*** |
| | (0.193) | (0.276) | (0.293) | (0.183) |
| Observations | 1,155,948 | 670,662 | 425,499 | 2,159,300 |
| Mean of dependent variable | 24.088 | 25.091 | 21.984 | 22.403 |
| $R^2$ | 0.066 | 0.049 | 0.058 | 0.041 |
| *Panel B: Men in SSC and DSC* | | | | |
| In a same-sex couple | -0.298 | -0.299 | -0.326 | -0.489** |
| | (0.212) | (0.267) | (0.291) | (0.219) |
| Observations | 1,385,856 | 571,011 | 671,106 | 2,582,863 |
| Mean of dependent variable | 27.684 | 27.771 | 27.670 | 27.652 |
| $R^2$ | 0.064 | 0.053 | 0.044 | 0.042 |
| *Controls for:* | | | | |
| State and year FE | ✓ | ✓ | ✓ | ✓ |
| Demographic controls | ✓ | ✓ | ✓ | ✓ |
| Partner/spouse controls | ✓ | ✓ | ✓ | ✓ |
| Fertility and marital status | ✓ | ✓ | ✓ | ✓ |
| Occupation FE | ✓ | ✓ | ✓ | ✓ |

See also notes in Table B10. Source: ACS 2008-2019. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$.

**Table B12: Within-couple commuting time gap. Sub-sample analysis.**

| | Married w/ children | Married w/o children | Unmarried w/ children | Unmarried w/o children |
|---|---|---|---|---|
| | (1) | (2) | (3) | (4) |
| *Panel A: Women in SSC and DSC* | | | | |
| In a same-sex couple | -1.221*** | -0.860*** | -3.163*** | -2.349*** |
| | (0.407) | (0.331) | (0.462) | (0.257) |
| Observations | 1,330,012 | 789,268 | 115,552 | 183,147 |
| Mean of dependent variable | 17.965 | 16.938 | 17.051 | 16.132 |
| $R^2$ | 0.013 | 0.012 | 0.010 | 0.014 |
| *Panel B: Men in SSC and DSC* | | | | |
| In a same-sex couple | -0.121 | -0.815*** | -1.534 | -0.670*** |
| | (0.662) | (0.287) | (0.967) | (0.256) |
| Observations | 1,328,182 | 790,295 | 113,574 | 185,504 |
| Mean of dependent variable | 17.967 | 16.941 | 17.100 | 16.215 |
| $R^2$ | 0.013 | 0.012 | 0.010 | 0.013 |
| *Controls for:* | | | | |
| 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 B13: Hours worked. By marital status and fertility. No control for commuting time.**

| | Married w/ children | Married w/o children | Unmarried w/ children | Unmarried w/o children |
|---|---|---|---|---|
| | (1) | (2) | (3) | (4) |
| *Panel A: Women in SSC and DSC* | | | | |
| In a same-sex couple | 3.627*** | 1.862*** | 1.795*** | 1.002*** |
| | (0.150) | (0.110) | (0.175) | (0.105) |
| Observations | 1,518,968 | 1,049,278 | 144,190 | 227,662 |
| Mean of dependent variable | 37.263 | 38.693 | 37.643 | 39.168 |
| $R^2$ | 0.042 | 0.041 | 0.047 | 0.050 |
| *Panel B: Men in SSC and DSC* | | | | |
| In a same-sex couple | -2.281*** | -1.516*** | -1.390*** | -1.058*** |
| | (0.204) | (0.115) | (0.326) | (0.094) |
| Observations | 1,972,381 | 1,092,622 | 166,510 | 235,897 |
| Mean of dependent variable | 44.678 | 43.949 | 42.682 | 42.748 |
| $R^2$ | 0.023 | 0.012 | 0.021 | 0.017 |
| *Controls for:* | | | | |
| Hourly wages | ✓ | ✓ | ✓ | ✓ |
| State and year FE | ✓ | ✓ | ✓ | ✓ |
| Demographic controls | ✓ | ✓ | ✓ | ✓ |
| Partner/spouse controls | ✓ | ✓ | ✓ | ✓ |

See also notes in Table 7. Source: ACS 2012-2019. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$.

**Table B14: 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*** | 0.023*** | 0.030*** | 0.028*** |
| | (0.004) | (0.003) | (0.003) | (0.003) | (0.003) | (0.003) | (0.003) | (0.003) |
| Commuting time | | | 0.002*** | | 0.002*** | 0.002*** | | 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 | 0.413 | 0.390 | 0.394 |
| *Panel B: Men in SSC and DSC* | | | | | | | | |
| In a same-sex couple | 0.049*** | -0.060*** | -0.057*** | 0.047*** | 0.049*** | -0.047*** | -0.050*** | -0.048*** |
| | (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 | 0.388 | 0.378 | 0.380 |
| *Controls for:* | | | | | | | | |
| State and year FE | | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| Demographic controls | | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| Partner/spouse controls | | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| Fertility and marital status | | | | ✓ | ✓ | | | |
| Student and army status | | | | | | ✓ | ✓ | ✓ |
| Occupation FE | | | | | | ✓ | ✓ | ✓ |
| Include part-time workers | | | | | | | ✓ | ✓ |

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 wage was above the 99$^{th}$ percentile of the hourly wage distribution for the relevant sample have been excluded. Only respondents with a positive hourly wage and working at least 40h/week have been included in the analysis. Both married and unmarried couples included in this sample. Commuting time includes individuals working from home (commuting time imputed as zero). Only respondents with non-missing commuting time have been included in the analysis See also notes in Table 2. Source: ACS 2008-2019. $^{*}$ $p < 0.10$, $^{**}$ $p < 0.05$, $^{***}$ $p < 0.01$.

## Appendix C. Model extensions

### C1. Differences in home productivity by gender

We can extend our household model of section 2 to allow for different productivities of men and women: men and women may not be perfect substitutes in the household sector. Let us represent an individual g's productivity in generating the household public good with the parameter $k_g > 0$, so that a household $H$ can produce $Q^H = \left[\left(k_i t_i^H + k_j t_j^H\right) - \left(k_i c_i^H + k_j c_j^H\right)\right]$. Following the same steps as in section 2, our main predictions may be written as:

$$\frac{1+c_F^D}{1+c_F^S} = \frac{\beta_F^S}{\beta_F^D}\frac{k_F}{k_F} \Rightarrow c_F^S - c_F^D > 0 \quad (1')$$

$$\frac{1+c_{\mathrm{M}}^{\mathrm{D}}}{1+c_{\mathrm{M}}^{\mathrm{S}}} = \frac{\beta_M^S}{\beta_M^D}\frac{k_{\mathrm{M}}}{k_{\mathrm{M}}} \Rightarrow c_{\mathrm{M}}^{\mathrm{S}} - c_{\mathrm{M}}^{\mathrm{D}} < 0 \quad (2')$$

$$\frac{1-t_F^D}{1-t_F^S} = \frac{\beta_F^S}{\beta_F^D}\frac{k_F}{k_F} \Rightarrow t_F^S - t_F^D < 0 \quad (3')$$

$$\frac{1-t_{\mathrm{M}}^{\mathrm{D}}}{1-t_{\mathrm{M}}^{\mathrm{S}}} = \frac{\beta_M^S}{\beta_M^D}\frac{k_{\mathrm{M}}}{k_{\mathrm{M}}} \Rightarrow t_{\mathrm{M}}^{\mathrm{S}} - t_{\mathrm{M}}^{\mathrm{D}} > 0 \quad (4')$$

Given that i = j when we compare women across types of couples in (1') and (3'), and men across types of couples in (2') and (4'), the above are exactly the same predictions as (1)-(4) of section 2.

As to prediction (5), for different-sex households we focus on the case where $k_M < k_F$ which reflects the traditional gender difference in the production of the public good, but other differences by gender may also be considered. This yields:

$$\frac{1+c_{\mathrm{F}}^{\mathrm{D}}}{1+c_M^{\mathrm{D}}} = \frac{\beta_M^{\mathrm{D}}}{\beta_{\mathrm{F}}^{\mathrm{D}}}\frac{k_{\mathrm{M}}}{k_{\mathrm{F}}} \Rightarrow c_{\mathrm{M}}^{\mathrm{D}} - c_{\mathrm{F}}^{\mathrm{D}} > 0$$

And in same-sex households where $\beta_i^S \approx \beta_j^S$ and $k_i = k_j$:

$$\frac{1+c_{\mathrm{i}}^{\mathrm{S}}}{1+c_j^S} = \frac{\beta_j^{\mathrm{S}}}{\beta_{\mathrm{i}}^{\mathrm{S}}}\frac{k_j}{k_i} \approx 1 \Rightarrow c_{\mathrm{i}}^S \approx c_j^{\mathrm{S}}$$

Therefore, our prediction still holds:

$$\left(c_{\mathrm{M}}^{\mathrm{D}} - c_{\mathrm{F}}^{\mathrm{D}}\right) > \left(c_{\mathrm{i}}^{\mathrm{S}} - c_j^S\right) \qquad (5')$$

Finally, Conjecture 1 still holds in the same way as in section 2. The gap reported in Prediction 5 may actually be larger in the presence of children if parenthood additionally widens the difference $(\mathrm{k_F} - \mathrm{k}_M)$: that is, if parenthood increases the home productivity of women with respect to men's.

**C2. Differences in coordination costs of commuting by gender**

We can extend our household model of section 2 to allow for the commuting disruptions to the production of the public good to vary by gender. For instance, women's proximity and their being "on call" for family emergencies may be more relevant in the household sector than men's. Let us incorporate these differences in coordination costs using the parameter $\theta_g > 0$, so that a household $H$ can produce $Q^H = \left[\left(t_i^H + t_j^H\right) - \left(\theta_i c_i^H + \theta_j c_j^H\right)\right]$. Following the same steps as in section 2, our main predictions may be written as:

$$\frac{1+c_F^D}{1+c_F^S} = \frac{\beta_F^S}{\beta_F^D}\frac{\theta_F}{\theta_F} \Rightarrow c_F^S - c_F^D > 0 \qquad (1'')$$

$$\frac{1+c_{\mathrm{M}}^{\mathrm{D}}}{1+c_{\mathrm{M}}^{\mathrm{S}}} = \frac{\beta_M^S}{\beta_M^D}\frac{\theta_M}{\theta_M} \Rightarrow c_{\mathrm{M}}^{\mathrm{S}} - c_{\mathrm{M}}^{\mathrm{D}} < 0 \qquad (2'')$$

Note that the first order conditions for hours worked are not affected by these coordination costs, so that predictions (3)-(4) hold as such here as well.

Given that i = j when we compare women across types of couples in (1''), and men across types of couples in (2''), the above are exactly the same predictions as (1)-(2) of section 2.

As to prediction (5), for different-sex households we focus on the case where $\theta_M < \theta_F$ which reflects the traditional gender difference in the production of the public good, but other differences by gender may also be considered. This yields:

$$\frac{1 + c_{\mathrm{F}}^{\mathrm{D}}}{1 + c_M^{\mathrm{D}}} = \frac{\beta_M^{\mathrm{D}}}{\beta_{\mathrm{F}}^{\mathrm{D}}}\frac{\theta_M}{\theta_F} \Rightarrow c_{\mathrm{M}}^{\mathrm{D}} - c_{\mathrm{F}}^{\mathrm{D}} > 0$$

And in same-sex households where $\beta_i^S \approx \beta_j^S$ and $\theta_i = \theta_j$:

$$\frac{1 + c_{\mathrm{i}}^{\mathrm{S}}}{1 + c_j^S} = \frac{\beta_j^{\mathrm{S}}}{\beta_{\mathrm{i}}^{\mathrm{S}}} \frac{\theta_j}{\theta_i} \approx 1 \Rightarrow c_{\mathrm{i}}^S \approx c_j^{\mathrm{S}}$$

Therefore, our prediction still holds:

$$\left(c_{\mathrm{M}}^{\mathrm{D}} - c_{\mathrm{F}}^{\mathrm{D}}\right) > \left(c_{\mathrm{i}}^{\mathrm{S}} - c_j^S\right) \qquad (5')$$

Finally, Conjecture 1 still holds in the same way as in section 2. The gap reported in Prediction 5 may actually be larger in the presence of children if parenthood additionally widens the difference $(\theta_{\mathrm{F}} - \theta_M)$: that is, if parenthood increases the coordination cost contribution of women relative to men.

**C3. Miscellaneous**

If part of childcare or household good production is outsourced, as long as one part is still produced by the couple, the betas will have the same effects, so our predictions across households would hold.

The betas may vary by education and skill level of men and women, although there is evidence that also among high-skilled couples, gender-conforming social norms bite (Bertrand et al. 2015, 2021; Goldin 2021). In any case, conditional on a given level of education/skill, that is, when comparing individuals with the same level of education and skills by couple types, the role of the betas in affecting commuting time and labor supply would remain unchanged: our model predictions and intuition would still hold.

**References for Appendix C**

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