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Sexual Orientation and Household Decision Making. Same-Sex Couples' Balance of Power and Labor Supply Choices

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Summary

I estimate how intra-household bargaining affects gay and lesbian couples' labor supplies, investigating their similarity to heterosexual decision-making, in a collective household framework. Data from the 2000 US Census show that couples of all types exhibit a significant response to bargaining power shifts, as measured by differences between partners in age or non-labor income. In gay, lesbian, and heterosexual cohabiting couples, a relatively young or rich partner has more bargaining power and hence supplies less labor, the opposite holding for his/her mate. Married couples value the older spouse instead, or the richer. No effects are found for same-sex roommates.

Keywords: Household Decision Making, Same-Sex Couples, Labor Supply

JEL Classification: D1, J22

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I. Introduction

This paper examines the labor supply choices of gay and lesbian couples, to explore the role of intra-household bargaining power in same-sex household decision making. A large body of theoretical and empirical literature models and shows that the intra-household distribution of power influences heterosexual households' outcomes (Chiappori, Fortin, Lacroix, 2002, Browning, Bourguignon, Chiappori, Lechene, 1994, Browning, Chiappori, 1998, Lundberg and Pollak, 1996, Grossbard-Shechtman, 1993). In particular, the collective household behavior model predicts that household members make Pareto-efficient decisions according to their respective bargaining power positions, which in turn depend on outside opportunities and social and legal factors, such as members' relative share of non-labor income, their age differences, and abortion and divorce laws (Browning et al., 1994, Chiappori et al., 2002, Oreffice, 2007, Thomas, 1990).

However, all this literature is centered on heterosexual families, while nowadays there is an important legal and cultural movement toward the legalization of same-sex marriages as couples with the same rights and status as heterosexuals, e.g. the California's Supreme Court ruling legalizing same-sex marriages, and the New York governor providing legal status to same-sex marriages performed elsewhere (May 2008). These recent social changes, along with the sizable presence of homosexual partnerships throughout the country, prompt the compelling question of whether the household economics developed around heterosexual families directly applies to gay and lesbian family behavior, and how similarly to heterosexual couples.

I analyze same-sex couples' labor supplies as a household decision, testing their response to intra-household bargaining power, and their consistency with the collective household labor supply behavior predicted for heterosexual couples. In particular, I focus on how gay and lesbian

households' balance of power and labor supplies are responsive to differences in age and non-labor income between partners.

Economic studies of same-sex couples present both similarities and differences with heterosexual households. Black, Sanders, Taylor (2007) assume that families' preferences do not systematically differ by sexual orientation. They instead emphasize the differences in biological constraints, affecting homosexuals' fertility, location, household specialization and human capital choices. The similarities in family preferences is also found by Jepsen and Jepsen (2002), in terms of positive assortative mating for non-labor and labor market traits across all types of couples, even though to a smaller extent for same-sex couples. Becker (1991) highlights the disparities between homosexual unions and heterosexual marriages due to the lack of difference in comparative advantage between partners and to the presence of complementarities, stating that same-sex households are less efficient than heterosexual ones. Jepsen and Jepsen (2006) and Tebaldi and Elmslie (2006) directly link sexual orientation to same-sex partners' labor supply. However, the former study considers labor supply an *exogenous* variable. The latter analyzes the determinants of individual labor supply of same-sex partners, but each partner's labor supply decision is assumed to depend only on his/her own characteristics, completely disregarding the influence of the other partner, and the household dimension of labor supply decisions. Finally, there is evidence in the literature of persistent wage disparities among gay, lesbian and heterosexual workers, with lesbians earning significantly more than heterosexual women, and gay men earning significantly less than heterosexual men (e.g. Allegretto and Arthur, 2001, Black, Makar, Sanders, Taylor, 2003, Blandford, 2003, Jepsen, 2007).

However, none of these studies examines the labor supply choices of same-sex couples as a *household endogenous* decision. I test whether same-sex couples make efficient labor supply

choices influenced by partners' bargaining power, as it is found to be the case for heterosexual households, and investigate possible differences in these effects across lesbian, gay, heterosexual cohabiting and married couples. Pairs of same-sex male and female roommates are used as comparison group. Black et al. (2007) and Jepsen and Jepsen (2002) suggest that family preferences do not depend on sexual orientation, I want to check whether the intra-household decision process and bargaining power as well do not vary with sexual orientation.

I focus on the differences in age and non-labor income ownership between partners, as indicators of intra-household bargaining power. The distribution of these traits within a couple, which captures each partner's outside opportunities, is considered to affect the household members' bargaining position and to have a significant impact on household choices, such as labor supply, clothing expenditure and children's health (Browning et al., 1994, Schultz, 1990, Thomas, 1990, Grossbard-Shechtman, 1993). Psychologists as well report that the partner with greater financial resources has greater power, also in same-sex couples (Caldwell and Peplau, 1984, Patterson, 2000). When a partner has a relatively better trait (relatively richer or younger/older), the distribution of gains from the relationship would shift in his/her favor, generating opposite income effects on the partners. Consequently, the partner with a more favorable bargaining position would decrease his/her labor supply, while his/her mate would increase his/hers (Browning et al. 1994, Chiappori et al., 2002). I also test restrictions on these partners' labor supply responses,, which are predicted by the collective household labor supply model, and compute the sharing rule partners use to divide their household non-labor resources, highlighting the role of the age and non-labor income differences in determining the income transfers within households. This evidence would strengthen the consistency and interpretation of my findings, since it is very unlikely to hold unless the bargaining power explanation and the

collective household approach are correct for same-sex couples as well, rejecting the unitary model prediction that bargaining power forces are irrelevant to intra-household decisions.

I use Census data for the year 2000, the five-percent sample of the Public Use Microdata Set (PUMS), which provides the most recent largest sample of gay and lesbian partners and their detailed demographic, labor and income information, along with standard samples of heterosexual individuals. These data allow to identify only members of same-sex couples but not single gays or lesbians. This limitation represents a lesser concern here, because my analysis applies to couples. My identification strategy consists of estimating the effects of intra-household age and non-labor income differences on both partners' labor supplies, and comparing changes in their labor supplies cross-sectionally among gay, lesbian, heterosexual couples and roommates.

My empirical analysis reveals that a relatively lower age (higher non-labor income) significantly reduces the younger (richer) partner's labor supply, while it significantly increases the labor supply of his/her relatively poorer (older) mate, controlling for both partners' wages, education and other individual and household characteristics. Results are similar for gay, lesbian and heterosexual cohabiting couples alike, while married (heterosexual) couples display more bargaining power for the older spouse, and somewhat smaller labor supply effects. Consistently with the intra-household bargaining interpretation, same-sex pairs of roommates do not show any significant impact. In particular, in same-sex couples I find that being 5 years younger than your lesbian partner reduces your labor supply by around 23 annual hours, while it increases your mate's labor supply by about 35 annual hours, the figures being 23 and 37, respectively, for gay couples. Owning five thousand dollars more non-labor income than your lesbian partner reduces your labor supply by around 19 annual hours, while it increases your mate's labor supply by about 47 annual hours (32 and 41 for gay partners).

These findings represent the first empirical support for gay and lesbian households' labor supplies to be affected by bargaining power forces, according to the household behavior framework predicted for heterosexual households.

Alternative explanations such as the role of age and non-labor income on individual preferences for leisure, age and income differences as proxies for local labor market conditions and attitudes toward gays and lesbians, household labor specialization, and the misreporting of unmarried homosexual partners in the 2000 Census sample are considered. I argue that these phenomena cannot consistently explain my results, given my intra-household bargaining predictions and empirical evidence.

The paper is organized as follows. Section 2 describes the theoretical framework. Section 3 describes the empirical specification and data. Section 4 presents the empirical results. Section 5 considers alternative explanations for the findings. Section 6 concludes the paper.

II. Theoretical Framework

I apply the collective household labor supply model with distribution factors, developed by Chiappori et. al. (2002), to same-sex couples[1]. A household is composed of two decision makers, head and partner, each having a distinct utility function on consumption and leisure. Households are assumed to make Pareto-efficient decisions about each member's leisure and consumption. Preferences are egoistic, in that one mate's utility does not depend on the other's consumption or leisure, although the model can be extended to allow for caring preferences and also public goods. Let h^i and C^i for $i = h, p$ denote member i's labor supply and consumption of a private composite good (whose price is normalized to unity). The utility function of member i

[1] I also consider heterosexual couples in my empirical analysis.

is $U^i(1-h^i, C^i, z)$, where U is strictly quasi-concave, increasing, and continuously differentiable for $i = h, p$, and z represents preference parameters, such as education of the two mates. Let y denote household non-labor income and w_i the wage rate of mate i. Finally, let s_1 and s_2 denote two *distribution factors*, variables that affect the intra-household decision process, but not individual preferences or the joint consumption set. The two bargaining power factors considered in this analysis are the differences between mates in non-labor income and age. For simplicity, I abstract from the non-pecuniary benefits of companionship. I follow convention and assume that the utility from companionship is additive; in particular, it does not influence the trade-off between leisure and consumption.

The optimal allocations of labor supply of each mate are determined by the following program:

$$\max_{h^h, C^h} U^h(1-h^h, C^h, z)$$

subject to

$$C^h \leq \varphi(w_h, w_p, y, s_1, s_2, z) + w_h h^h$$

The partner faces a symmetric problem, $\varphi(w_h, w_p, y, s_1, s_2, z)$ representing the head's share of non-labor income y, and the partner receiving $y - \varphi(w_h, w_p, y, s_1, s_2, z)$. This sharing rule $\varphi(w_h, w_p, y, s_1, s_2, z)$ with which mates divide their non-labor household resources is Pareto-optimally chosen by the couple and depends on the balance of bargaining power. In particular, the stronger the head's bargaining power, the higher his/her share of non-labor income and the lower his/her partner's. The sharing rule $\varphi(w_h, w_p, y, s_1, s_2, z)$ is a function of prices (here normalized to unity), mates' wages, household non-labor income, distribution factors (here the

non-labor income gap and age gap)[2], and other observable characteristics z (preference parameters).

Solving these maximization problems yields the following equilibrium labor supply functions of the two mates:

$$h^h = h^h[w_h, \varphi(w_h, w_p, y, s_1, s_2, z), z]$$

$$h^p = h^p[w_p, y - \varphi(w_h, w_p, y, s_1, s_2, z), z].$$

The derivatives of each labor supply function with respect to the second arguments are unambiguously negative, reflecting a pure income effect. Hence, factors that strengthen the head's bargaining power reduce the labor supplied by the head and increase the labor supplied by the partner, ceteris paribus, in particular controlling for own wage and the couples' total non-labor income *y*. I investigate whether same-sex couples respond to such factors in the direction predicted by the theory, by testing their impact on these couples' labor supplies, and comparing it to the corresponding effects on heterosexual cohabiting and married couples. Pairs of same-sex roommates are also considered, as control group. Roommates share the mere cohabiting aspects of couples, but do not constitute a household or couple, so that their relationship does not involve intra-household bargaining and household decision making. Therefore, their labor supplies should not be affected by the bargaining power shifts illustrated above, and the collective household model predictions should not hold in their case.

[2] The sex ratio, divorce laws, abortion legalization, alimony, and child benefits laws, are other examples of distribution factors that have been studied in the literature on heterosexual households (Chiappori et al, 2002, Lundberg and Pollak, 1996, Oreffice, 2007).

This theoretical framework imposes further restrictions on the partners' labor supplies and on the parameters of the sharing rule, which I test in my empirical analysis. First, the labor supply response to the two distribution factors should be proportional across partners[3], i.e.:

$$\frac{\partial h^h / \partial s_1}{\partial h^h / \partial s_2} = \frac{\partial h^p / \partial s_1}{\partial h^p / \partial s_2}$$

Second, the sharing rule can be recovered up to an additive function k(z) and the partial derivatives of the sharing rule with respect to its arguments are given by[4]:

$$\varphi_y = \frac{\frac{h^p_{s_1}}{h^p_y}}{\frac{h^p_{s_1}}{h^p_y} - \frac{h^h_{s_1}}{h^h_y}}; \quad \varphi_{w_h} = \frac{\frac{h^p_{w_h}}{h^p_y} \cdot \frac{h^h_{s_1}}{h^h_y}}{\frac{h^p_{s_1}}{h^p_y} - \frac{h^h_{s_1}}{h^h_y}}; \quad \varphi_{w_p} = \frac{\frac{h^h_{wp}}{h^h_y} \cdot \frac{h^p_{s_1}}{h^p_y}}{\frac{h^p_{s_1}}{h^p_y} - \frac{h^h_{s_1}}{h^h_y}}; \quad \varphi_{s_i} = \frac{\frac{h^h_{s_j}}{h^h_y} \cdot \frac{h^p_{sj}}{h^p_y}}{\frac{h^p_{s_1}}{h^p_y} - \frac{h^h_{s_1}}{h^h_y}} \forall j = 1,2$$

All these predictions are very unlikely to be fulfilled unless my bargaining power explanation and the collective household approach are correct and applicable to same-sex couples as well. They would show that distribution factors have sizable effects on same-sex households' decisions, and would reject the unitary model prediction that bargaining power forces are irrelevant to intra-household decisions. In particular, a significant impact of the non-labor income difference on partners' labor supplies represents a rejection of the income pooling hypothesis, which has been empirically rejected for heterosexual households (Browning et al., 1994, Schultz, 1990, Thomas, 1990).

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[3] Propositions 1 and 3 in Chiappori et al. (2002).

[4] Proposition 3 in Chiappori et al.(2002). These conditions hold provided that $h^h_y \cdot h^p_y \neq 0$,

where h^i_j is the partial derivative of hours worked of member *i* with respect to the variable *j*.

III. Empirical Specification and Data

III.I Identification Strategy

My main sample consists of gay and lesbian couples with both partners between 18 and 65 years of age. I also consider heterosexual cohabiting and married men and women, and roommates, all in the same age bracket. Moreover, all individuals in my samples are not in school, not in the military, and not in a farm household. A couple consists of the head of the household and his/her unmarried partner, spouse or roommate. I include intact couples only if both the head and the mate are actually present, while I exclude households where there are multiple mates, or more than two adults.

The following equations for labor supply are estimated for heads and partners, and run on each type of couples, gay, lesbian, male roommates, female roommates, heterosexual cohabiting, and married couples:

$$h^h = \alpha_1 \ln w^h + \alpha_2 \ln w^p + \alpha_3 y + \gamma_1 y\_diff + \gamma_2 age\_diff + \delta X + \varepsilon^h$$

$$h^p = \beta_1 \ln w^h + \beta_2 \ln w^p + \beta_3 y + \lambda_1 y\_diff + \lambda_2 age\_diff + \psi X + \varepsilon^p$$

y_diff and age_diff are the two bargaining power factors under consideration. The former is defined as the head's total non-labor income in dollars minus the partner's total non-labor income in dollars, while the latter as the head's age in years minus the partner's age in years (for heterosexual couples, it is the male mate/spouse's trait minus the female mate/spouse's trait[5]).

[5] Heterosexual mates are distinguished according to their gender. As customary in studies of heterosexual households, the emphasis is on the role and behavior of male members versus female members, rather than on the Census definition of head and unmarried partner/spouse, where the head is the individual who owns the housing unit or signs the rental contract, and the partner/spouse is the individual who identifies himself/herself as such.

Both the individual non-labor income and age variables do not have any missing values and their differences can be either positive or negative, or zero[6].

My identification strategy of these bargaining power effects consists of estimating γ_1 and γ_2 for heads, and λ_1 and λ_2 for partners. The impact of the non-labor income (age) difference on the labor supply of heads and partners is captured by γ_1 and λ_1 (γ_2 and λ_2) respectively. According to the theory, if a partner is relatively richer, or being relatively young is a favorable trait, then his/her labor supply should decline and the labor supply of his/her mate should increase. Hence, γ_1 and λ_2 should be negative, while γ_2 and λ_1 should be positive.

The other regressors are the wage rate w^i of each mate $i = h, p$, the couple's total non-labor income y[7], and a vector of covariates X. X includes education of each partner, number of each partner's own children living in the household, and only own age of mate *i*, so that the effect of

[6] The ratio of non-labor incomes and the ratio of ages were used as alternative distribution factors. However, the former is not defined for the several couples with no non-labor income, and they both introduce non-linearities in the labor supply equations. Even though the ratios yield the same pattern of bargaining power effects, the differences of non-labor incomes and ages are preferred in this analysis (as in Browning et al., 1994). The difference (ratio) in educational attainment across partners was also explored, but it did not exhibit any impact on household labor supplies, as in Browning et al. (1994).

[7] All wage and income variables refer to the previous year (1999). I discard individuals who are self-employed, so that wages only reflect income from wages and salaries, and non-labor income is constructed as the individual's total income minus earned income, where earned income coincides with wage income for non-self employed.

age_diff can be identified. A dummy variable for being black rather than white is also included at the household level, since I drop the few interracial unions present in my samples, and my main specifications focus on black or white couples[8]. X also includes state fixed effects, which should capture the different labor market opportunities and social and legal attitudes toward gays and lesbians that exist across states. Alternatively, I include the state unemployment rate, the state total labor force participation and female labor force participation, to control for the level of economic activity in a state and especially for employment opportunities, and dummy variables for the presence in a state of legal provisions for homosexual couples, such as domestic partnerships and civil unions.

The dependent variable in my labor supply regressions is total annual hours worked in the previous year. Households in which either the head or the partner does not work are also included in my samples and I account for a possible selection bias toward working individuals by correcting for sample selection with Heckman MLE[9]. As a source of identification, I use distributional assumptions on the first step residuals alone or exclusion restrictions[10]. Both procedures yield similar robust results. I use predicted wages to measure the non-working mates' wages and to address the possible endogeneity of individuals' observed wages. To predict individuals' wages, I take a standard human capital approach, also implemented in the collective labor supply literature (e.g., Donni, 2007), and consider a wage equation in which wage depends

[8] Including other races such as Asians does not alter my bargaining power estimates.

[9] I only exclude household observations where neither the head nor the partner work, given that this analysis measures bargaining power changes through labor supply.

[10] The latter is young children only affecting the participation decision but not labor supply. Tables report estimation with identification from statistical distribution assumptions.

on the individual's age, race, education, education squared, and cubed, but does not depend on his/her partner's characteristics. This equation is then estimated separately for participating gays, lesbians, heterosexual male cohabitants, heterosexual female cohabitants, husbands, wives, male and female roommates, in my samples, with a correction for selection bias[11]. The generated fitted values then replace the wage observations of the corresponding individuals in my samples[12]. Finally, Wald tests of overall statistical significance performed on the above labor supply regressions do not reject the validity of the framework I use.

The labor supply regressions are run using robust standard errors clustered by state, which allow for correlation of household observations within state. I alternatively clustered by metropolitan area, even though a metropolitan area has not been assigned to almost a third of the observations[13]. My specifications do not use a differences-in-differences estimator: heads' and partners' regressions are estimated separately, across types of couples. As such, they should not suffer from the understated standard errors highlighted by Bertrand, Duflo, and Mullainathan (2004). At any rate, clustering by state (metropolitan area) should rectify such an underestimation, if it is present.

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[11] The participation decision depends on the number of children, dummies for age brackets, education, race and measures of local economy.

[12] Tables report estimation with the predicted partner/spouse's and own wages.

[13] The Census reports that many metropolitan areas have only been partially identified in 2000, and that "users should not assume that the identified portion of a partly-identified metropolitan area is a representative sample of the entire metropolitan area". Thus my main specifications are clustered by state.

III.II Additional Tests

The collective labor supply framework provides additional testable restrictions on the impact of the non-labor income and age differences on mates' labor supplies, and on how the sharing rule varies with the distribution factors, non-labor income, and wages of each mate, as illustrated in Section II. Specifically, I test the following interaction among the coefficients of the partners' labor supply equations:

$$\frac{\gamma_1}{\gamma_2} = \frac{\lambda_1}{\lambda_2},$$

for each type of couples, lesbian, gay, and heterosexual. I also use the following conditions on their labor supply coefficients to obtain the corresponding sharing rule equation:

$$\varphi_y = \frac{\alpha_3 \cdot \lambda_1}{\Delta};\ \varphi_{w_h} = \frac{\beta_1 \cdot \gamma_1}{\Delta};\ \varphi_{w_p} = \frac{\alpha_2 \cdot \lambda_1}{\Delta};\ \varphi_{s_i} = \frac{\gamma_i \cdot \lambda_1}{\Delta}\ \forall i = 1,2$$

where $\Delta = \lambda_1\alpha_3 - \gamma_1\beta_3$ and s_1 and s_2 are the non-labor income difference and age difference, respectively. Solving the above system of differential equations yields the following sharing rule equation:

$$\varphi = \frac{1}{\Delta}(\beta_1\gamma_1 \ln w_h + \alpha_2\lambda_1 \ln w_p + \alpha_3\lambda_1 y + \gamma_1\lambda_1 y\_diff + \gamma_2\lambda_1 age\_diff) + k(z)$$

identifiable up to an additive term *k(z)*, since *z* affects both the sharing rule and the preferences (Chiappori et al, 2002). All these conditions are tested and recovered through my estimation of the coefficients of the partners' labor supply equations.

III.III Data

Estimation is carried out on Census data for the year 2000, specifically the five-percent sample of the Public Use Microdata Set (PUMS), which provides the most recent largest sample

of gay and lesbian partners and their detailed demographic, labor and income information, along with standard samples of heterosexual individuals. Unmarried "heads" and "unmarried partners", "heads" and "roommates", and a random sample (10 percent) of married "heads" and "spouses" were extracted from the Census. Records in these files were then matched on the household identification code "serial" to create a single observation for each couple. All individuals with imputed values for sex, marital status, and relationship to the head of the household were excluded from my samples (subsection V.IV explains the relevance of this procedure). Couples with the head and the partner sharing the same gender were then identified as same-sex couples, gay and lesbian. In the Census, gays and lesbians are identified by their cohabiting relationship, a household being recorded as a same-sex union if the "relationship to head" is specified as "unmarried partner", so that single gays or lesbians can not be recovered. This limitation represents a lesser concern here, because my analysis applies to couples. However, most economic studies on homosexuals use Census data, of 1990 or 2000. Others (e.g. Black et al., 2003, Blandford, 2003) use the General Social Survey (GSS) data, where single gays and lesbians can be identified, but the sample size is much smaller than in the Census data, and sexual orientation is inferred from self-reported sexual activity.

Individual weights are used to make the sample representative of the US population and economy. The state unemployment rate, state total labor force participation and female labor force participation are retrieved from the Bureau of Labor Statistics.

Table 1 presents the descriptive statistics for the heads' and partners' main variables, by type of couple. In the same-sex samples, gays and lesbians on average work similar annual hours, earn a similar hourly wage, and their education and age are also comparable. However, within both gays and lesbian couples, heads work more hours than their partners, earn a higher

wage, and are slightly more educated and older. On average, the age difference is about .83 for lesbians and 1.57 years for gays, and the non-labor income difference is around $ 1,765 for gays and $ 880 for lesbians. Heterosexual couples exhibit a higher annual labor supply and wage for male than female mates, with the stronger disparity within married couples, while their educational attainment is lower than same-sex couples (lowest for heterosexual cohabiting). Husbands (male mates) are on average 2.14 (1.71) years older than their wives (female mates), and their average non-labor income difference amounts to $ 2,898 (35.16). Pairs of roommates exhibit very similar labor supply and wage patterns between mates, who also share the same education level. Their average age and income differences are 1.24 and $ 892 in female pairs, and 1.28 and $ 1043 for male roommates.

IV. Results

IV.I Main Evidence

The main results are shown in **Tables 2** and **3**. The estimated effects of the non-labor income difference and age difference are significant for both heads and partners, and their signs go in the direction predicted by the theory. The point estimates indicate that in lesbian couples (columns 1 and 2 of **Table 2**) being 5 years younger reduces the younger heads' annual labor supply by about 23 hours (P value = .045), while their partners' is increased by 35 hours (P value = .072). As to the other bargaining power variable, owning five thousand dollars more non-labor income implies a decline in heads' labor supply of 19 hours (P value = .043), and an increase in their partners' of 47 hours per year (P value = .002). Gay couples exhibit a similar impact (columns 3 and 4 of **Table 2**). Their estimated coefficients correspond to -23 and 37 heads' and partners' hours worked for a five year younger head (P values .088 and .02), while the impact of

a five thousand dollar income gap amounts to -32 and 41 annual hours worked by heads and partners, respectively (P values .004 and .031). The evidence clearly shows that all same-sex couples exhibit statistically significant responses to bargaining power forces. The younger (richer) partner holds a more favorable bargaining position and lowers his/her labor supply, while his/her mate increases his/her labor supply. Moreover, these labor supply responses are not statistically different between gay and lesbian couples. As reported in columns 5 and 6 of **Table 2,** the heterosexual cohabiting sample exhibits a similar pattern of effects to homosexual households. Married couples differ from all types of cohabiting households in that they attribute more bargaining power to the older spouse, and the magnitude of the effects of the income and age differences is smaller, especially for females (columns 11 and 12 of **Table 2**). Specifically, heterosexual cohabiting couples' labor supply effects of a five year age difference are -18 and 20 hours, while a $ 5,000 income difference generates an estimated hour change of -21 and 27 hours for male and female mates, respectively. For husbands and wives, the corresponding age and income effects amount to 15 and -7 hours, and -17 and 14 hours.

These estimated bargaining power forces and labor supply responses are sizable, corresponding to several days of work a year. The concurrent impact on both partners, and with opposite outcomes, is remarkable given the acknowledged rigidities in the labor supplies, and the frequency of the reported labor supply peaking around 40 hours of work per week. Traditional analyses do not emphasize changes by both spouses, let alone their labor supply responding to bargaining power forces. Moreover, no study finds that same-sex households' labor supply decisions reflect the collective household behavior of heterosexual couples and are influenced by bargaining factors such as non-labor income ownership and age. The intra-household decision process does not appear to vary by sexual orientation. These findings also show that income

pooling does not hold for either heterosexual or same-sex couples. So far, the income pooling hypothesis and the unitary model prediction that bargaining power forces are irrelevant to intra-household decisions had been empirically rejected only for heterosexual households (Browning et al., 1994, Schultz, 1990, Thomas, 1990).

As to the age gap, in both same-sex and opposite-sex cohabiting couples, the younger mate exhibits more bargaining power, while married couples are found to value being relatively old, controlling for wages and education of each partner and individual age. This evidence on married households corresponds to what is found in the literature, where the spouses' age difference is considered a traditional measure of bargaining power, and the older spouse, not the younger, has a favorable position (e.g. Browning et al., 1994, Lyons, Neelakantan, Fava, 2008). These studies focus on household expenditures and financial decisions of married couples, and do not control for wages, hours worked, or actual earnings, so that being older also captures higher earning capacity and labor market opportunities, which are associated to more bargaining power. However, I show that once individual labor market characteristics are disentangled from age and specifically controlled for, married couples still value being relatively old, while relative youth enhances bargaining power in all cohabiting relationships, across sexual orientations.

These results also match the evidence from psychological studies on family relationships. Patterson (2000) reports that the partner with greater financial resources tends to have more power within the couple, in both homosexual and heterosexual unions. Moreover, no difference in break-up rates is found between lesbian and gay couples, with only married couples exhibiting a lower dissolution rate (Caldwell and Peplau, 1984, Kurdek, 1998, Patterson, 2000). The more stable and durable relationship of married couples may make spouses less responsive to outside opportunities and bargaining power. This would explain why in all cohabiting relationship I find

that the younger partner has more bargaining power, since cohabitants have lower barriers to leave and younger individuals have better outside options. The signal conveyed by relative youth about the quality of outside opportunities may be more relevant for cohabiting rather than married couples, and represent a more credible threat, because the former are aware that their household is less stable, lacking the commitment of legal marriage (Kurdek, 1998). In married couples, the life experience, knowledge and maturity of the older spouse play an important role of guidance in the stability of the relationship and are valued by the younger spouse (Fava et al., 2008). Jepsen and Jepsen (2002) as well find that same-sex couples are more similar to cohabiting than to married opposite-sex couples. Finally, wives' smaller bargaining power effects may be also due to stronger rigidities in their labor supply schedules. The more common presence of children within marriage than in cohabiting couples, and especially than in same-sex couples[14], may make spouses, and wives in particular, less likely to respond to bargaining power in terms of labor supply shifts.

As to the other covariates in the labor supply equations, most parameter estimates for all couples are comparable to the literature. In particular, the mates' own wage response is always positive significant, as is the cross-wage effects between mates' labor supplies (**Table 3**). The couple's total non-labor income and own age have a negative effect on labor supply, while education has a positive impact, although the coefficients are not always precisely estimated. Being black is associated with fewer hours of work, as own household children, except for heterosexual male mates for whom children have a positive effect on labor supply. This is mostly in line with the findings in the family labor supply literature. For instance, Chiappori et al.

[14] In my samples, the average number of household children is 1.29 in married couples, .90 in heterosexual cohabiting couples, and .40 and .23 in lesbian and gay couples.

(2002) run similar spouses' labor supply equations and show positive significant cross wage effects, negative own age estimates and positive significant own wage effects for wives.

The bargaining power effect is also estimated on pairs of male and female roommates. The results are detailed in columns 7 to 10 of **Table 2**. Their labor supply regressions show no significant impact of either the income or age differences, as theory predicts. This lack of impact on roommates strengthens my bargaining power interpretation of the labor supply responses of same-sex and opposite-sex couples'. Finally, the disparity between same-sex couples' and roommates' behavior confirms that the sample of same-sex couples is indeed formed by homosexual partners rather than by roommates who wrongly identify themselves as "unmarried partners".

These findings represent the first empirical support for the labor supplies of gay and lesbian households to be affected by bargaining power forces, and emphasize that same-sex household decision making reflect heterosexual households' behavior, more closely to cohabiting than married couples. Bargaining power is found to be positively related to non-labor income ownership in all types of couples, whereas relative youth increases bargaining power in all cohabiting couples but decreases it in married couples.

Further evidence presented below, together with the discussion of various alternative explanations, should help making my results convincing and contribute to the understanding of the economic behavior of gay and lesbian families.

IV.II Additional Findings

I test the restrictions on the proportionality of the partners' labor supply responses to the non-labor income and age differences, and I recover the estimated effects of non-labor income,

mates' wages and the two bargaining power factors on the sharing rule, as illustrated in sections II and III.II.

Results are presented in **Table 4** and **Table 5**. As predicted by the theory (the condition $h_y^h \cdot h_y^p \neq 0$ holds in my samples), the ratios of the coefficients on y_diff and age_diff are not statistically different across mates, and this proportionality holds for all types of couples, as shown in **Table 4**. **Table 5** reports the estimated parameters of the sharing rule. In lesbian couples, a five years age gap (a $ 5,000 non-labor income gap) will induce the older (poorer) partner to transfer an additional $ 1915 ($ 1560) of the couple's non-labor income to the younger (richer) partner. In gay couples, these figures correspond to transfer an additional $ 1515 ($ 2100) of income to the younger (richer) partner. In heterosexual cohabiting couples, a more favorable bargaining position increases the younger (richer) partner's share of income by $ 1360 ($ 1600), while in married couples being 5 years older ($ 5,000 richer) corresponds to an increase in $ 865 (980) of the older (richer) spouse's share. These findings suggest that bargaining power forces do affect the intra-household allocation of resources, of same-sex couples as well. **Table 5** also shows that earning higher wages translates into the transfer of more non-labor income to the higher earner, and that a $ 1.00 increase in the couple's total non-labor income increases the head's share of household non-labor income by 70 cents for lesbians, 34 cents for gay couples, 54 cents for cohabiting and 38 cents for married couples.

Distribution factors have sizable effects on same-sex households' decisions. The unitary model prediction that bargaining power forces are irrelevant to intra-household decisions, and the income pooling hypothesis, are rejected for all households alike, homosexual or heterosexual, cohabiting or married.

V. Alternative Explanations

The predicted opposite labor supply effects on both mates, the lack of any impact on roommates, and the proportionality restrictions are very unlikely to hold unless my bargaining power explanation and the collective household approach are correct and applicable to same-sex couples. Furthermore, I argue that the following phenomena cannot consistently explain my results, given my intra-household bargaining predictions and empirical evidence.

V.I Bargaining power variables as proxies for local labor market conditions and attitudes toward gays and lesbians

It may be possible that the labor supply of the younger or richer homosexual partner falls not as a result of the bargaining power effect, but due to poor local economic opportunities and/or unfriendly attitudes toward gays or lesbians. Similarly, it could be that younger and richer heterosexual women work less, and their male partners work more, because they face worse job opportunities than men. There are at least three reasons to believe that the local economy and attitude hypothesis does not provide a plausible alternative explanation for my findings. First, my labor supply regressions include individuals' wages and education, own age, and state fixed effects (alternatively, state unemployment rate, total and female labor force participation rate, and dummy variables for state legal provisions for homosexual couples) which account for the variation in labor market opportunities and attitudes. My findings are also robust to adding individual controls for occupation categories in my labor supply regressions. Second, the predicted labor supply changes have a distinctive opposite impact on the members of each type of couple. It is difficult to understand why the labor supply of a gay or lesbian individual should be lower while his/her partner is higher, when they share the same gender and sexual orientation,

and thus the same labor market conditions and potential earnings discrimination. Third, gay and lesbian workers exhibit an opposite earnings differential with respect to their heterosexual counterparts, lesbians earning significantly more than heterosexual women, and gay men earning significantly less than heterosexual men (Allegretto and Arthur, 2001, Black et al., 2003, Jepsen, 2007). If it were a gender effect, labor market conditions would not explain my findings of a same pattern of results for gays, lesbians and heterosexuals alike. Finally, pairs of male and female roommates do not exhibit any labor supply effect of age and income differences, while sharing the same gender and labor market characteristics as homosexual couples. As to heterosexual couples, it is hard to reconcile with labor market disparities the opposite effect of relative age on cohabiting and married individuals, when they share the same gender, sexual orientation and similar age, wage and education profiles.

V.II Age, non-labor income and labor supply

Controlling for own age and wage, the age difference between mates should not capture an individual's marginal utility of leisure and affect his/her labor supply through this channel. However, younger cohabitants do not work less than older or married workers, as instead my bargaining power effects show. Matching preferences either do not provide a plausible alternative explanation for my findings. Older individuals may prefer to have a partnership with younger persons, but this youth value does not translate into a lower preference for leisure. Matching with younger individuals does not necessarily affect the marginal utility from leisure making the older partner work more. Actually, the opposite may be more likely, the younger your companion is, the more you value leisure and the less you work. On the other hand, if an

older partner needs to work more hours to earn more income to "buy" a relationship with a younger partner, then this exactly illustrates the bargaining power effect at stake in this study[15].

The same reasoning holds for non-labor income differences. In particular, if non-labor income is endogenous to labor supply choices, then it is likely that high non-labor income suggests high labor supply. If an individual's disutility from work is low, he/she works many hours and as a result owns a high non-labor income. However, this endogeneity bias can not explain my findings since it would predict more hours of work with higher income, whereas my bargaining power effects predict that higher non-labor income differences lead to lower labor supply, and roommates do not exhibit any labor supply impact. Finally, non-labor income has been treated as an exogenous measure of bargaining power by the literature (Browning et al, 1994 and Thomas, 1990).

V.III Household specialization

Bargaining power variables such as income and age difference may somewhat capture differential productivity in household production. However, controlling for own age, and education and wages of both mates, should ensure that comparative advantage and household productivity is disentangled from my bargaining power measures. Besides, there is no specific economic reason why the younger partner should specialize in household production and work less, while the older partner works more in the labor market, married couples exhibiting the opposite pattern. A similar argument holds for non-labor income ownership. Being relatively richer does not imply being more productive at home and working less in the labor market. Also,

[15] The same, reversed, argument holds for married couples, for whom being relatively old is the favorable trait.

this specialization pattern would not necessarily be present in all types of couples, gay, lesbian and heterosexual alike. Finally, the literature emphasizes the specialization effect mainly for married heterosexual couples, while most of my samples consist of unmarried couples, including homosexuals.

V.IV Misreporting of same-sex partners in the Census data

The Census identifies same-sex partners by their cohabiting relationship with an individual of the same gender who records his/her "relationship to the head of the household" as "unmarried partner". Unfortunately, the 2000 Census modified the relationship to head from "spouse" to "unmarried partner" and/or the marital status from married to unmarried, for couples with both mates of the same sex, without signaling the allocated values in the flag variable of relationship to head. As documented in Black et al. (2006), this procedure lead to consider several heterosexual married couples as same-sex couples who wrongly reported their sex or relationship to head. To avoid this misclassification, all individuals with imputed values for marital status, sex, and relationship to head were excluded from my samples, using the corresponding "q" variables which flag allocated values, as suggested by Black et al. (2006) and Jepsen and Jepsen (2002). Overall, more than forty percent of same-sex couples are dropped because of these imputed values, whereas only very few heterosexual couples are affected (four percent of cohabitants and less than one percent of married couples). This process ensures that the same-sex couples at stake are real homosexual partnerships, rather than heterosexuals misreporting their gender or relationship to head, although homosexuals who wrongly identify themselves as married are also dropped (by year 2000, no US state had legalized same-sex

marriages) [16]. The concern that sentimentally un-related individuals voluntarily identify themselves as unmarried partners (rather than roommates) is minimal, given the stigma attached to homosexuality. However, both of these last two instances of mis-reporting would work against my findings of same-sex couples behaving as heterosexual families. Finally, sexual orientation is inferred from self-reported data and under-reporting of homosexual status (identifying as "unmarried partner") may be correlated with demographic characteristics such as education and income. At any rate, there is no reason why mis-reporting is more severe in the Census than in the other smaller homosexuals' data sets, and in principle it may occur in many data sets and variables.

VI. Conclusions

This is the first study of same-sex couples' labor supplies as an endogenous household choice, and the first empirical support for gay and lesbian households' labor supplies to be affected by bargaining power forces, in the direction predicted by the theory for heterosexual households. In particular, I show that gay and lesbian couples do behave as heterosexual couples, their labor supplies being responsive to differences in age and non-labor income between partners. At the same time, no effect is found on same-sex pairs of roommates, consistently with the household bargaining interpretation.

Using 2000 US Census data, I find that each gay and lesbian partner's labor supply is negatively related to their level of bargaining power. Specifically, a relatively lower age (higher non-labor income) significantly reduces the younger (richer) partner's labor supply, while it

[16] Including the observations with Census-allocated marital status yields very similar patterns of bargaining power effects, at higher significance levels.

significantly increases the labor supply of his/her relatively older (poorer) mate, controlling for both partners' wages, education and other individual and household characteristics. Results are similar for gay, lesbian and heterosexual cohabiting couples alike. Married couples attribute a more favorable position to the older spouse, or the richer, with significant but somewhat smaller bargaining power effects. Additionally, I cannot statistically reject the proportionality constraints on the partners' labor supply responses to the two bargaining power factors, as predicted by the collective household labor supply model. Finally, the sharing rule with which partners divide their household non-labor resources is recovered, highlighting that a favorable age difference and/or non-labor income difference increases a mate's allocated income share, in all types of couples.

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Table 1. Summary Statistics

	Lesbian Couples				Gay Couples				Heterosexual Cohabiting Couples			
	Heads		Partners		Heads		Partners		Male Mates		Female Mates	
Variable	mean	std. dev	mean	std. dev	mean	std. dev	mean	std. dev	mean	std. dev	mean	std. dev
Age_diff	0.83	6.72	0.83	6.72	1.57	7.92	1.57	7.92	1.71	6.6	1.71	6.6
Y_diff	880.4	11380	880.4	11380	1765	19971	1765	19971	35.16	12695	35.16	12695
Hours worked*	2069	537.06	1990.1	567.66	2185	615.72	2065.1	615.88	1958.6	837.64	1663	855.75
Log of wage*	3.02	0.35	2.35	0.68	3.09	0.31	2.37	0.64	2.87	0.28	2.01	0.64
Age	38.42	9.03	37.6	8.98	41.17	8.88	38.66	9.19	39.22	9.45	37.51	9.03
Education	14.4	2.33	14.12	2.36	14.63	2.19	14.22	2.27	12.73	2.2	12.93	2.12
Couple's non-labor income Y	3799	12340	3799	12340	6809	21461	6809	21461	4072	13628	4072	13628
Number of children	0.36	0.78	0.056	0.28	0.12	0.51	0.11	0.14	0.351	0.825	0.54	0.959
Dummy for black	0.08	0.27	0.08	0.27	0.05	0.22	0.05	0.22	0.16	0.36	0.16	0.36
Number of observations	2950		2950		2588		2588		68762		68762	

	Female Roommates				Male Roommates				Heterosexual Married Couples			
	Heads		Partners		Heads		Partners		Husbands		Wives	
Variable	mean	std. dev	mean	std. dev	mean	std. dev	mean	std. dev	mean	std. dev	mean	std. dev
Age_diff	1.24	7.24	1.24	7.24	1.28	7.24	1.28	7.24	2.14	4.46	2.14	4.46
Y_diff	891.9	12418	891.88	12418	1044	12249	1044	12249	2898	17062	2898	17062
Hours worked*	1989	636.04	1936	649.81	2081	671.75	2023	675.4	2108	788	1318	951
Log of wage*	2.81	0.26	2.72	0.25	2.85	0.29	2.76	0.24	3.18	0.36	1.96	0.88
Age	35.54	11.79	34.3	11.57	32.96	10.48	31.68	9.65	44.09	10.48	41.95	10.2
Education	14.24	2.33	14.04	2.32	13.68	2.31	13.43	2.3	13.43	2.48	13.35	2.28
Couple's non-labor income Y	4482	15284	4482	15284	3524	13907	3524	13907	5926	19699	5926	19699
Number of children	0.213	0.62	0.025	0.2	0.036	0.245	0.003	0.06	1.29	1.2	1.29	1.2
Dummy for black	0.06	0.24	0.06	0.24	0.06	0.24	0.06	0.24	0.08	0.27	0.08	0.27
Number of observations	8480		8480		9657		9657		96650		96650	

Data from the U.S. Census year 2000, five percent sample of the Public Use Microdata Set (PUMS).
Age_diff (Y_diff) is defined as head's age (total non-labor income) minus partner's age (total non-labor income).
In heterosexual couples, it is the male mate's trait minus the female mate's trait.
*For women and men with positive hours of work.

Table 2. Labor Supply Effects of Age and Non-Labor Income differences on Lesbian, Gay, Heterosexual Cohabiting and Married Couples

	Lesbian Couples		**Gay Couples**		**Heterosexual Cohabiting Couples**	
	Heads (1)	**Partners** (2)	**Heads** (3)	**Partners** (4)	**Male Mates** (5)	**Female Mates** (6)
Age_diff	**4.61** **	**-6.97** ***	**4.67** ***	**-7.48** **	**3.57** ***	**-3.94***
	(2.30)	**(3.88)**	**(2.74)**	**(3.21)**	**(.52)**	**(.454)**
Y_diff	**-.0037** **	**.0095** *	**-.0065** *	**.0081** **	**-.0042** ***	**.0053***
	(.0018)	**(.0031)**	**(.0022)**	**(.0038)**	**(.0006)**	**(.0007)**
Number of observations	2950	2950	2588	2588	68762	68762
	Female Roommates		**Male Roommates**		**Heterosexual Married Couples**	
	Heads (7)	**Partners** (8)	**Heads** (9)	**Partners** (10)	**Husbands** (11)	**Wives** (12)
Age_diff	3.44	-0.875	3.01	2.15	**-3.003** ***	**1.43****
	(3.56)	(1.87)	(2.68)	(2.01)	**(.608)**	**(.688)**
Y_diff	.0007	.0002	-.0011	-.001	**-.0034** ***	**.0028***
	(.0006)	(.0006)	(.009)	(.0009)	**(.0004)**	**(.0008)**
Number of observations	8480	8480	9657	9657	96650	96650

Data from the U.S. Census year 2000, five percent sample of the Public Use Microdata Set (PUMS).

* ; ** ; *** significant at 10 %, 5% and 1 %. Estimated coefficients, standard errors (in parenthesis) clustered by state.

Regressions run with the covariates described in Section III. Regressions are corrected for sample selection with Heckman MLE.

Age_diff (Y_diff) is defined as head's age (total non-labor income) minus partner's age (total non-labor income).

For heterosexual couples, it is the male mate's trait minus the female mate's trait.

Table 3. Estimation of the Labor Supply Regressions of Lesbian, Gay, Heterosexual Cohabiting and Married Couples

	Lesbian Couples		Gay Couples		Heterosexual Cohabiting Couples		Heterosexual Married Couples	
	Heads	**Partners**	**Heads**	**Partners**	**Male**	**Female**	**Husbands**	**Wives**
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Age_diff	**4.61 ****	**-6.97 *****	**4.67 *****	**-7.48 ****	**3.57 *****	**-3.94 *****	**-3.003 *****	**1.43 ****
	(2.30)	**(3.88)**	**(2.74)**	**(3.21)**	**(.521)**	**(.454)**	**(.608)**	**(.688)**
Y_diff	**-.0037 ****	**.0095 ***	**-.0065 ***	**.0081 ****	**-.0042 *****	**.0053 ****	**-.0034 *****	**.0028 *****
	(.0018)	**(.0031)**	**(.0022)**	**(.0038)**	**(.0006)**	**(.0007)**	**(.0004)**	**(.0008)**
Couple's non-labor income Y	-.0086 ***	-.0085 **	-.0052 ***	-.0128 ***	-.007 ***	-.0076 ***	-.0066 ***	-.0087 ***
	(.0015)	(.0035)	(.0018)	(.0032)	(.0004)	(.0005)	(.0004)	(.0008)
Log of wage of head	175.20 ***	558.17 **	270.83 ***	217.27	172.94 ***	194.39 ***	161.62 ***	179.49 ***
	(57.05)	(285.06)	(61.08)	(235.95)	(40.29)	(36.23)	(30.99)	(43.89)
Log of wage of partner	171.98	151.71 ***	310.98	104.62 ***	92.37 ***	590.57 **	192.06 ***	137.83 ***
	(73.09) **	(22.92)	(423.69)	(26.04)	(17.26)	(283.88)	(38.08)	(32.23)
Own Age	-1.81	-4.92	-6.09 **	-4.75	-6.20 ***	0.35	-7.49 ***	-3.07
	(2.31)	(4.05)	(2.49)	(3.66)	(.678)	(.485)	(.71)	(.598)
Education of head	68.02 **	176.70 *	-91.83 **	-15.25	17.47 ***	4.22	10.5 ***	-42.78 ***
	(21.99)	(105.56)	(39.74)	(31.71)	(3.79)	(6.16)	(3.44)	(7.29)
Education of partner	125.53	-6.27	10.67 *	14.02	-82.81 ***	38.28	-90.60 ***	46.87 **
	(90.64)	(12.10)	(25.86)	(14.63)	(16.43)	(26.94)	(11.61)	(20.64)
Number of children of head	-45.40 ***	-50.58 ***	-17.53	-33.68	22.17 ***	-83.86 ***	18.46 ***	-110.00 ***
	(15.43)	(13.43)	(41.07)	(31.51)	(4.83)	(4.27)	(2.09)	(4.77)
Number of children of partner	71.42 *	-16.54	32.46 ***	-116.08	-22.73 ***	-32.98 ***	dropped because same as	
	(43.73)	(48.47)	(91.61)	(139.93)	(3.29)	(4.54)	number of head's children	
Dummy for Black	-117.43 ***	-108.35 **	-173.89 ***	-214.40 **	-144.73 ***	5.39	-246.65 ***	152.77 *
	(47.43)	(54.10)	(66.84)	(108.73)	(8.91)	(11.54)	(11.66)	(24.79)
Number of observations	2950	2950	2588	2588	68762	68762	96650	96650

Data from the U.S. Census year 2000, five percent sample of the Public Use Microdata Set (PUMS).
* ; ** ; *** significant at 10 %, 5% and 1 %. Estimated coefficients, standard errors (in parenthesis) clustered by state.
Regressions run with the covariates described in Section III. Regressions are corrected for sample selection with Heckman MLE.
Age_diff (Y_diff) is defined as head's age (total non-labor income) minus partner's age (total non-labor income).
For heterosexual couples, it is the male mate's trait minus the female mate's trait.

Table 4. Proportionality Tests on the Effects of Age and Non-Labor Income Differences on Lesbian, Gay and Heterosexual Couples

Estimated Ratio of Coefficients

	Lesbian Couples		**Gay Couples**		**Heterosexual Cohabiting Couples**		**Heterosexual Married Couples**	
	Heads	**Partners**	**Heads**	**Partners**	**Male**	**Female**	**Husbands**	**Wives**
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
coefficient of Y_diff	**-.0008 ****	**-.0013 ***	**-.0014 ***	**-.0011 ***	**-.0011 *****	**-.0013 *****	**'.0011 *****	**.0019***
coefficient of Age_diff	**(.0037)**	**(.0008)**	**(.0011)**	**(.0006)**	**(.0002)**	**(.0002)**	**(.0002)**	**(.001)**
Test of equality of this ratio between heads and partners	P = .34		P = .35		P = .489		P = .367	
Number of observations	2950	2950	2588	2588	68762	68762	96650	96650

Data from the U.S. Census year 2000, five percent sample of the Public Use Microdata Set (PUMS).
* ; ** ; *** significant at 10 %, 5% and 1 %. Estimated ratio of coefficients, standard errors in parenthesis.
Age_diff (Y_diff) is defined as head's age (total non-labor income) minus partner's age (total non-labor income).
For heterosexual couples, it is the male mate's trait minus the female mate's trait. Heads and partners become male and female mates.

Table 5. Sharing Rule for Lesbian, Gay, Heterosexual Cohabiting and Married Couples

Estimated Coefficients of the Head's share of a couple's non-labor income

	Lesbian Couples	Gay Couples	Heterosexual Cohabiting Couples	Heterosexual Married Couples
Age_diff	**-383**	**-303**	**-272**	**173**
Y_diff	**.312**	**.420**	**.32**	**.196**
Y	**.71**	**.34**	**.54**	**.38**
log of wage of head	**18358**	**11205**	**11760**	**12844**
log of wage of partner	**-14301**	**-20174**	**-7041**	**-11096**
Number of observations	2950	2588	68762	96650

Data from the U.S. Census year 2000, five percent sample of the Public Use Microdata Set (PUMS).
The above coefficients represent the change in the head's share of the couple's non-labor income Y.
Age_diff (Y_diff) is defined as head's age (total non-labor income) minus partner's age (total non-labor income).
For heterosexual couples, it is the male mate's trait minus the female mate's trait.

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