Co-Working Couples and the Similar Jobs of Dual-Earner Households

by

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This paper is a revised version of *Co-Working Couples and the Similar Jobs of Dual-Earner Households (CES 15-23) from September, 2015. A copy of the original paper is available upon request.*

CES 15-23R March, 2019

Abstract

Although an increasing number of studies consider married or cohabiting couples as current, former, or potential co-workers, there is surprisingly little evidence on the extent to which couples work at the same workplace. This study provides benchmark estimates on the frequency with which opposite-sex married and cohabiting couples in the United States share the same occupation, industry, work location, and employer using Census 2000 responses linked with administrative records data. This study contains the first representative estimate of the fraction of couples that share an employer, which is in the range of 11% to 13%. These shared employers can account for much of couples' shared industry, occupation, and location of employment. Longitudinal data on the employment and residency indicates that co-working couples much more likely to have chosen the same employer than to have met at work.

JEL Classification: J12, J21, J22

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Any opinions and conclusions expressed herein are those of the author(s) and do not necessarily represent the views of the U.S. Census Bureau. All results have been reviewed to ensure that no confidential data are disclosed.

I. Introduction

The extent to which married or cohabiting couples share an employer is important for many economic and demographic topics. For example, it is well known that members of couples often are similar in educational attainment or socioeconomic status.[i] These shared characteristics may cause, or be caused by, couples working together. Some authors have also studied the phenomenon of couples meeting at work.[ii] A few studies have explored the benefits of couples co-working, including Moen and Sweet (2002, 2004), Janning (2006) and Halbesleben (2010). Workplace anti-nepotism policies would seem to discourage couples from forming among co-workers, or from the members of such couples from continuing to share the same employer. More broadly, there is a literature on couples maintaining similar employment that uses survey data, and such employment homogamy may be driven by couples sharing employers.[iii] Despite its importance, surprisingly little is known about the extent to which couples are also co-workers.

In this study, I provide evidence on the extent to which couples are also co-workers. I use microdata from the Census 2000 linked with administrative records data to provide evidence on the frequency with which dual-earner couples work in similar industries, occupations, and locations, as well as the extent to which they share an employer. I show that similar employment is pervasive among U.S. dual-earner couples, and that 11% to 13% work for the same employer. I also provide evidence on how the dynamics of employment and relationships give rise to co-working couples. I find that the vast majority of co-working couples are due to established couples choosing to work at the same employer. Meeting at work has a only a secondary role: far fewer co-working couples can be accounted for by couples forming among co-workers.

This study uses Census 2000 long form responses linked with administrative records data to provide representative estimates of the set of married and cohabiting couples in which both

members are age 16 to 64. Before considering the extent to which couples are also co-workers, I explore the extent to which couples have similar job characteristics. The frequency with which couples share the same occupation, industry, or location of work can be addressed using survey data alone, as well as the linked data, and I compare estimates from these data sources whenever possible. A sizable fraction of couples share the same occupation: 4% to 13%, depending on the coarseness of the definition. There is somewhat more shared industry of employment, and results largely agree between the Census 2000 and administrative records: 12% to 15% of couples share a narrow industry, while 21% to 26% share a broad industry. Not surprisingly, since couples generally share a residence, there is also substantial similarity in the locations where couples work: 50% to 68% work in the same county, and 66% to 82% work within 25 miles of each other. Survey data often indicates more similarity in work locations than administrative records data, especially at higher levels of aggregation.

This unique linked dataset allows me to provide the first comprehensive estimate of the frequency with which couples share an employer: 10% to 12% of couples work at the same establishment and 11% to 13% work for the same firm. A thorough search of studies on dual-earner couples yielded only a handful of similar estimates, all of which are from studies in which that frequency is not of central interest. Using surveys that take a small number of employers as a sample frame, Batt and Valcour (2003) and Moen and Sweet (2002, 2004) consider samples in which 15% (from several employers), 40% (from five manufacturing or utilities employers) and 17% (from two universities) of dual-earner married couples work for the same employer, respectively. This study's finding that 11% to 13% of dual-earner couples share the same employer is at the low end of this range of estimates.

I document that couples' shared job characteristics is in large part driven by co-working. Of those who work in the same narrow Census industry, about 63% work in the same workplace, as do 70% of those who work in the same Census block (narrowly-defined geography), and 47% of those who report working in the same narrow occupation. I also compare the industry distribution that would prevail if couples were randomly assigned, and find that basically all of the excess industry agreement is accounted for by co-working couples. This finding has important implications for empirical studies that use survey data to assess the extent to which shared employment characteristics reflect labor income risk. While sharing the same industry or occupation certainly exposes households to shocks to demand for similar products or tasks, this finding suggests that shared job characteristics mostly reflect exposure to demand for a particular firm's output, which is usually much more volatile.[iv]

These unique linked survey and administrative records data allows me to explore whether co-working couples exist because the workplace can serve as a mechanism for household formation, an idea which was recently considered by Mansour and McKinnish (2014). By distinguishing between couples that were or were not co-working or co-resident prior in the years 1999 and 2001, I estimate how frequently co-working couples choose the same employer relative to those who meet at work. Of new co-working couples, ten times as many couples existed prior to the shared employment than were previous co-workers who were previously co-resident. This implies that, for the vast majority of couples, they chose the same employer after meeting, rather than meeting on the job, suggesting a strong role for married and unmarried partner couples as a source of job referrals, and so indicates that the family is an important social network that plays a major role in determining employment outcomes.

II. Similar Employment in the Census 2000 Long Form

The tabulations in this paper come from a unique set of linked datasets. The frame of this analysis is the long form of the Census 2000, a one-in-six sample of the population of the United States. These microdata are linked with administrative records on the universe of Unemployment Insurance taxable employment maintained by the U.S. Census Bureau's Longitudinal Employer-Household Dynamics (LEHD) program. These linked data allow me to estimate the extent to which couples share an employer, as well as alternative estimates of the extent to which couples work in similar industries and locations.

Respondents to the long form of the Census 2000 provided information on at most one employer, including the employer's industry and location, as well as the respondent's occupation. Tabulations in this paper are either the Census 2000 long form public-use microdata, or else a 1% random sample of long form responses, and tabulate the responses of the roughly 8.5 million opposite-sex married and unmarried partner households sampled in the long form and who do not live in group quarters.[v] Results are also limited to the 83% of couples where both members are age 16-64, and pool the 90% of couples who are married with the remainder of cohabiting couples (unless noted otherwise). Whenever practical I present estimates that are representative of this so-defined working-age population of couples who live in the 50 states and the District of Columbia.[vi]

Several additional variables not directly available in the source dataset are defined. The distance between places of work compares the latitude and longitude of Census block centroids. Note that this implies that two workplaces in the same block will have distance zero from each other.[vii] A U.S. Census Bureau (2001a) crosswalk aggregates Census 2000 industries to 1997 NAICS Sectors and Supersectors. A similar U.S. Census Bureau (2001b) crosswalk is used to aggregate Census 2000 occupations to 2000 SOC Minor Groups and Major Groups. All employed

respondents have information on their county of work, but in 17% of households at least one member lacks sub-county place of work information due to answers that are incomplete or are otherwise difficult to geocode. Imputation is used to fill missing common location and distance between worksites information conditional on observable characteristics.

Employment rates for the sample of Census 2000 long form respondents where both members are age 16-64 are in Table 1. About 58% of these working-age couples in the U.S. in the year 2000 are dual-earner, while most of the remainder are couples where only the male works. Unmarried partner households, relative to married couples, have higher female employment rates, lower male employment rates and are two to three percentage points more likely to be dual-earner. Among working age couples, having neither partner employed is relatively infrequent, and occurs in less than 10% of married or cohabiting couples.

The Census 2000 long form indicates that dual-earner couples frequently work in similar jobs, as shown in Table 2. They tend to work near each other: 10% of dual-earner couples work in the same Census block and 68% in the same county. In 0.7% of dual-earner couples, both members work from home, so these couples account for less than a tenth of all who work in the same Census block. 38% of dual-earner couples work within five miles of each other, about 76% work within 25 miles of each other. Industry agreement is also quite substantial: among dual-earner couples, 12% work for the same narrowly-defined Census industry, and 22% of couples report responses that crosswalk to the same broad industry (NAICS Supersector). Rather less similarity is found for occupations: only 4% of dual-earner couples work in the same narrow Census occupation, and only 13% of respondent occupations crosswalk to the same broad occupation group (SOC Major Group).

Table 2 also contains information on how frequently couples share combinations of narrow industries, occupations, and blocks (of employment). 1.9% of all couples share the same detailed Census industry, occupation, and block. Nearly all respondents who share the same detailed occupation and block also share the same detailed industry (2.1% vs. 1.9%), and most of those who share the same detailed industry and occupation also work in the same Census block (3.1% vs. 1.9%). In contrast, most of those who share the same detailed industry and block of employment have different narrowly-defined occupations. The outcomes of married and cohabiting dual-earner couples are sufficiently similar that, for ease of exposition, subsequent results pool married and cohabiting couples unless otherwise noted.

The results in Table 2 largely agree with the shared industry and occupation tabulations presented by Shore and Sinai (2010), who consider responses from the Survey of Income and Program Participation 1996-2000 and the 1980, 1990, and 2000 Censuses.[viii] The 12% of Census 2000 responses working in the same industry is between the estimates presented by Shore and Sinai (2010): higher than the 9% they calculate using the Survey of Income and Program Participation but less than the 15% using the three Censuses. The 4% working in the same Census occupation is close to the 3% Shore and Sinai (2010) report for the Survey of Income and Program Participation, but substantially less than the 10% they report using the three Censuses.

Table 3 presents the occupation distribution, by SOC Major Group, for males and females in dual-earner couples along with that of couples who share the same SOC major group. For comparison, it also contains the occupation distribution that would prevail under random matching.[ix] Among dual-earner couples, sharing an occupation is more than twice more common than would be predicted by chance (3.7 million vs. 1.6 million). Conditional on sharing a broad occupation, the distribution is broadly similar to the occupation distribution that follows from that

of the members of dual-earner couples. The greatest exception is for occupations in Office and Administrative Support, which comprise only 15.8% of those who share a SOC major group rather than 27.9% under random assignment. Education, Training and Library occupations also have a relatively large share of dual-earner couples: 9.5% rather than 6.2% under random assignment. Interestingly, this is because for males employed in an occupation in this SOC Major Group and are in a dual-earner couple, 68% have a partner whose occupation is in the same SOC Major Group. In other words, men in education tend especially to marry in education.

Sharing employment in the same industry is even more common than sharing an occupation. Table 4 presents Census 2000 responses by NAICS sector on the industry share among all dual-earner couples, as well as those where the industry agrees, and a randomly matched counterfactual for comparison. Industry agreement is more than twice that would be predicted by chance: 5.5 million vs. 2.0 million. But apart from this overall tendency for couples to share the same industry, the particular industries align with those which would be predicted by random chance. It is very common for couples who share an industry to work in Education Services, Health Care and Social Assistance, as well as Retail Trade, which largely reflects their employment shares. A notable exception is that proportionately few couples share employment in the Manufacturing sector: 21.7% of shared-sector couples relative to 28.7% under random assignment.

Demographic breakdowns of dual-earner couples are shown in Table 5 for all couples, as well as those who share a Census industry, occupation or block (of employment). Couples who share a Census block are disproportionately older (age 55-64), while those who share an industry tend to be younger (16-24 and 25-44). Those who share an occupation or block are more likely to be Asian or Hispanic, while those who share an industry are more likely to be Black or Hispanic.

Those who share an occupation, industry, or Census block are more highly educated than members of dual-earner couples more generally.

Households naturally share the same local labor market, and this naturally accounts for some of a couple's shared employment characteristics. For example, if there is a single dominant employer in the area in which the household lives (e.g., a "factory town"), the respondents will naturally be more likely to report working in the same industry or geography, but not in a way that is different from agreement that they would share with others in the same area. Shared employer characteristics may be driven by this aspect of labor market segmentation. Table 6 provides estimates where the shared workplace characteristics for the couples themselves, and also for simulated couples in which partners are selected at random from the same (residential) Census block, as well as those who live in the same Census block and share the same demographic characteristics.[x] Only about a third of dual-earner couples in the Census 2000 non-missing sub-county workplace information for both members, as well as potential alternative partner with non-missing subcounty workplace information from the same Census block, so a "Truth" column is provided to present the characteristics of this selected subset. The truth column is consistently higher than the randomly selected counterfactual. Of the 10.8% of those who share the same Census block, less than 10% of those (0.8%) share the same Census block as their randomly selected partner. This difference is similar in magnitude (10.8% vs. 1.2%) when selecting households with similar demographic characteristics. This comparison is useful because it suggests that sharing the same neighborhood, established as an important determinant of employment outcomes in such studies as Bayer, Ross, and Topa (2008), Hellerstein, Kutzbach, and Neumark (2013), and Schmutte (2015), is a far weaker predictor of a shared employer than is sharing the same household. As we show in the next section, in most cases, sharing the same Census block of

employment means that the couple shares the same employer. This nine to ten percentage point differential accounts for most of the excess similarities of dual-earner couples in terms of industry and place of work, although for a smaller amount of shared occupations.

III. Shared Employers and Similar Jobs in Linked Employer-Household Data

This section provides evidence on the frequency with which dual-earner couples work at the same or similar employers in the year 2000 using the above described household data from the Census 2000 linked to administrative records data from the Longitudinal Employer-Household Dynamics (LEHD) program, which includes employment in the private sector and by state and local government, and excludes those in military service, the federal government, and the self-employed. These estimates are derived from thirty-eight state-specific administrative datasets containing Unemployment Insurance wage reports and establishment-level workplace characteristics including industry and location.[xi] While in the Census 2000, respondents report only on the job at which they worked the most in the last week, the administrative records sources contain information from multiple employers when present. I consider employment for employees whose employers report wage records for them in the first and the second quarter of the year 2000, which indicates that the individual had an ongoing employment relationship at the start of the quarter, that is, the end of March in the year 2000. This selection is done for more director comparison with the Census 2000, which targets March 30th, 2000 as its response date.

There are several levels at which a person's place of employment is defined. The main level at which employers in the LEHD data are defined is at the Unemployment Insurance account (called the State Employer Identification Number, or SEIN) level. States provide the (federal) Employer Identification Number (EIN) associated with the Unemployment Insurance account.

The Longitudinal Business Database is used to aggregate of EINs to the firm (shared operational control) level, see Jarmin and Miranda (2002) and Haltiwanger et al. (2014), which is the broadest level at which employers are defined.[xii] The narrowest level of shared employment is the workplace (or establishment).

I use three stages of imputation to complete the information on industry, work location and employer for the universe of Census 2000 responses, as follows. First, Unemployment Insurance accounts with multiple establishments, which is about half of all employment, the establishment of employment is assigned by imputation.[xiii] Next, because only a subset of states have available data for the year 2000, county-level information is imputed for missing states. This process imputes an employment outcome for each household for each county: male only works, female only works, both works, and neither works, and, if both work in the county, a stage of imputation assigns whether they share a workplace, and, if not, what characteristics their establishments of work share, if any. Finally, those couples in which one or both members lack a person identifier that allows linkage to administrative records data have imputed employment outcomes. When applicable, the missing geography and missing person identifiers utilize Census 2000 responses to predict shared employment outcomes.

Because the LEHD data for the year 2000 are for a 38-state sample, and also exclude federal workers and the self-employed, the results in Tables 7 and 8 contain estimates from a several different methodologies. "All Couples" refers to all couples in the 1% sample of Census 2000 long form households. Of these, those that in the "38 States" column are those that are in the 38-state set of LEHD states in the year 2000. The column labeled "All Couples" and "38 States" is, therefore, the direct tabulation from tabulating the Census 2000-LEHD matches. The "National" analogue is completed via imputation. The estimates in the columns that are labeled "Excluding

Census 2000 Feds, Self-Employed" exclude couples where either member reported their dominant employment as federal or self-employed in the Census 2000, and so it would not be expected for the LEHD data to contain information on their primary employer. Of those, the "38 States" are calculated on the 38-state subset, and the "National" estimate includes those imputed work information for employment outside those 38 states.

The frequency with which members of opposite-sex couples work in the LEHD data is shown in Table 7 for these alternative definitions. In 39% to 52% of couples, both members work at an employer whose workers are covered by Unemployment Insurance. Estimates of shared employment are naturally higher when excluding households that report federal or self-employment, which do not appear in the LEHD data. But even the high end of this range is lower than the Census 2000 responses of employment in the year 2000, which indicate that 57% to 58% are dual-earner. Of the remainder, about half are couples in which only the male has reported earnings in that year, and the remaining 22% to 33% is roughly split between couples in which only the female has reported earnings, and those in which neither has reported earnings.

The frequency with dual-earner couples work for the same or similar employers is shown in Table 8. Of Census 2000 respondents working in the year 2000, roughly 10% to 12% of two income households work at the same establishment. At broader levels of an employer's definition, this percentage naturally increases, and at its broadest level, that of the firm, 11% to 13% of employers share an employer. Industry sharing is rather more common: 13% to 15% share the same narrow 6-digit NAICS industry, and 25% to 26% share the same broad industry, defined at the NAICS Supersector level. Estimates of shared industry at the broader Sector and Supersector levels are similar to those tabulated on the Census 2000 alone. At the finer levels of geography, results are similar to Census 2000 responses. 11% to 13% of administrative records indicate a

shared Census block of employment, while 10% to 11% do so in the Census 2000 responses. 14% to 17% share the same Census tract of employment in the LEHD, while 16% to 17% do so in the Census 2000. Much less agreement is found for the broader categories: 50% work in the same county, and 66% work within 25 miles of each other, according to the administrative records. Administrative records sources suggest that couples work at greater distances from each other. This is in part due to the difference between the reported place of a business establishment and the location where the person works, and in part due to uncertainty regarding the establishment of employment for workers at multi-establishment employers.

There are few reference points to which to compare the result on shared employers, and readers should note that the following estimates come from estimates that are not representative of the U.S. population. The estimate that 11% to 13% of couples share an employer is close to the estimate in Batt and Valcour (2003) that 15% of the couples in their sample share an employer, but this similarity is most likely coincidental. Batt and Valcour (2003) use the 1998 Cornell Couples and Careers Study which they repeatedly stress is a nonrandom sample of the U.S. population. The authors (page 199) describe that the Study surveyed exempt (or salaried) employees from several employers in upstate New York: two in manufacturing, two in health care employers, two universities, and one utility company. Moen and Sweet (2002, 2004) provide estimates, largely from the same data source. They utilize the survey responses from that the same Cornell Couples and Careers Study along with respondents from additional employers, also in upstate New York, and report that 40% of dual-earner couples co-work at two manufacturing and three utility employers, and 17% co-work at two universities.

To account for the frequency with which observed Census responses are due to shared workplaces, I compute the frequency of Census 2000 reports of shared or similar employment

characteristics of couples who work at the same LEHD workplace, relative to all couples. Results are shown in Table 9, and are limited to the 38 states for which LEHD data is available for the year 2000, and also exclude those Census 2000 observations with missing sub-county geography. 83.8% of Census 2000 respondents who are dual-earner in the LEHD data have the same industry, occupation, and block (of employment) share a workplace in the administrative records data. 70.0% of those who share the same Census block of employment share a workplace. Those who share narrowly-defined Census industry and occupation categories have rather less of their agreement associated with sharing a workplace: 63.1% and 46.6%, respectively. At broader categories, shared workplaces naturally account for less of shared job characteristics.

The frequency with which men and women in dual-earner couples work in particular industries (defined at the NAICS sector level), as well as in the same industry as their partner is explored in Table 10. Industry sharing is tabulated both for all couples, as well as for those who share the same workplace. For comparison, the industry distribution that would occur if spouses were randomly assigned is also presented. Couples work in the same industry more frequently than chance would predict (3.4 million vs. 2.1 million). The observed industry distribution is generally consistent with what chance would predict, although there are much fewer couples in manufacturing than would be predicted, and somewhat more in retail trade. The frequency with which couples work at the same establishment can explain basically all of the difference in shared industry sector and that which chance would predict: 1.6 million couples work at the same establishment, and there are 1.3 million more couples sharing an industry than chance would predict. In Figure 1, I explore this difference by industry.[xiv] Couples sharing the same workplace can account for nearly all of the excess frequency with which couples work in basically every industry.

The demographic characteristics of those couples who share a workplace are not very different from those of the broader population of dual-earner couples, and both are shown in Table 11. Couples who share a workplace are somewhat older, and more frequently have a Bachelor's Degree, and are more frequently Asian and less frequently Black, than members of the average dual-earner couple. Also included are tabulations of the demographic characteristics of those who do not share an establishment, but share the same firm, six-digit NAICS code, or share the same block of employment. Those who do not share the same workplace but work for the same firm have more education and are more frequently Hispanic than the average dual-earner household. Those who work in the same narrowly-defined NAICS industry, but not the same workplace, are far more likely to have a Bachelor's degree than the average member of a dual-earner household. Those who do not share an establishment but share the same block have demographic characteristics that are very similar to those who share a workplace, although they are somewhat younger.

Table 12 shows the frequency with which members of dual-earner couples share similar employment characteristics in the LEHD administrative records-based, along with randomly matched nearby residents. Similar to the Census 2000 results presented in Table 6, a counterfactual exercise that uses shared narrow employment characteristics are about an order of magnitude lower in the randomly matched data compared with the employment characteristics of real (the "Truth" column) couples, without specifically selecting couples with similar demographic characteristics. Couples with similar demographic characteristics have double the likelihood of sharing the same employer, and a higher likelihood of sharing other narrowly defined characteristics. There is a 7% to 9% excess likelihood of sharing the same employer relative to this counterfactual. This

differential for sharing the same workplace accounts for basically all of the excess location and industry agreement.

IV. The Dynamics of Co-Working and Co-Residency

In this section, I use longitudinal residency data to assess the extent to which couples share an employer is due to couples forming among co-workers. Specifically, administrative records on household membership and employment for the year 1999 and 2001 are used to subdivide Census 2000 couples who are co-workers and co-residents in 2000 into those in which are or are not co-workers or co-residents in the preceding and subsequent years. Residency data comes from the Composite Person Record, see Farber and Leggieri (2002). If a couple is not co-resident in 1999, but is in 2000, and if, furthermore, the two were co-workers in both 1999 and 2000, then this evidence suggests that these co-workers are newly co-resident, i.e., those co-workers formed a household together. If couples became co-workers between 1999 and 2000, having previously been co-residents, this indicates that a previously existing couple adopted the same employer. This exercise tests the relative importance of different mechanisms that may lead to co-working couples. If co-working couples usually meet at work, then we would expect to see relatively few previously co-resident couples.

Longitudinal data permits an understanding of the dynamics of spouses as co-workers and co-residents that is necessarily somewhat cruder than the above estimates described above. As before, administrative records on employment are only available for thirty-eight states. Defining employment at the firm-level allows me to avoid difficulties related to establishment imputation. Additionally, less than 95% of Census 2000 long form records can be linked to administrative records sources at all, and only on the order of 70% have reliable residency data.

The results of this exercise are presented in Table 13. 51.8% of couples that are co-worker and co-resident in the year 2000 are also co-working and co-resident in the years 1999 and 2001. Of the remainder, the overwhelming majority is co-resident in either one or both years. Comparing 2000 to 1999 is useful for considering inflows into the co-working, co-residency status in 2000. Only 1.8% of couples who share an employer in the year 2000 do so because of co-workers in 1999 formed couples. About ten times as many couples, 18.1%, worked for the same employer, having been a couple in the preceding year. This evidence means that most for co-working couples are previously existing couples who adopt the same employer. Comparing 2000 to 2001 is useful for considering outflows from co-working and co-residency status. 12.6% of these couples are co-resident in 2001 but not co-working, while 0.7% are co-working but not co-resident, so the outflows from being a co-working couple are even more skewed toward maintaining their status as partners than co-workers. In summary, ten times as many couples, or more, move into and out of co-working status, relative to newly forming couples on the job, or co-working couples splitting up but continuing to share an employer.

Recent surveys have asked couples whether they met at work. It is possible to transform estimates from Table 13 in order to assess whether they are broadly consistent with the evidence Svarer (2007) and Kalmijn and Flap (2001) present for Denmark and the Netherlands, respectively. Svarer (2007) considers a dataset that includes about fifteen thousand couples in Denmark, and reports that 5% of couples form with those at the same workplace, and 7% at the same firm, and provides reasons who these estimates are likely lower bounds. Using data for the Netherlands, Kalmijn and Flap (2001) report that for 8% of partnerships worked for the same employer prior to forming. The rate of inflow into co-working couples is about 2.7% (=1.8%/51.8%) of all co-working couples, or on the order of 0.3% of all dual-earner couples, or 0.15% of all couples. A

number of plausible outflow rates would produce a steady-state of couples who met at work that would be consistent with 5-8% range from the survey estimates discussed above. Overall, the transition rates in Table 13 are broadly consistent with a sizable minority of couples meeting at work.

V. Conclusion

This paper the first systematic analysis of the extent to which couples work for the same employer and its relationship to similar employment among dual-earner couples more generally. Although the results are somewhat sensitive to definitions, source data, and methodology, in the United States in the year 2000, about 13% worked in the same (SOC Major Group) occupation, 21% to 26% in the same (NAICS Supersector) industry, and 50% to 68% in the same county. This paper is also the first to attempt to systematically document the frequency with which dual-earner couples share an employer, which is in the range of 11% to 13%. These shared employers account for most of the narrowly-defined shared industry, occupation, and location responses to the Census 2000. The phenomenon of couples sharing an employer is mostly accounted for by previously formed couples sharing an employer rather than couples forming at work.

These estimates have implications for the well-being of households. Those couples who work at the same workplace may be able to share a commute and spend more time with each other. On the other hand, sharing an employer affects the consumption insurance value of a partnership. Spouses who work at the same workplace may experience similar demand shocks, which can cause them to experience wage depression or layoffs at similar times. Shore (2010, 2015) and Ostrovsky (2012) find that couples incomes often move together. The fact that couples frequently share an employer likely explains a substantial portion of this strong co-movement between couples'

incomes. Furthermore, the extent to which couples share the same high- or low-income employers has implications for household-level income inequality.[xv]

These results also provide evidence that familial social networks are an important determinant of employment outcomes, which complements recent evidence on intergenerational transmission of employers in Corak and Piraino (2011), Wang (2013), Karmarz and Skans (2014), and Stinson and Wignall (2014). This is despite the prevalence of anti-nepotism policies which place restrictions on the ability of family members to be employed at the same firm.[xvi]

Finally, the frequency with which couples share an employer may have implications for the design of household surveys such as the Current Population Survey, the American Community Survey, the Survey of Income and Program Participation, the Panel Study of Income Dynamics, and the National Longitudinal Survey of Youth. It may be possible to increase the accuracy of surveys by, following questions about particular employers, asking whether anyone else in the household works at that same employer.

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Table 1: Household employment status

Household employment status	All Couples	Married	Unmarried Partner
Both male and female with a job, at work	57.7	57.5	60.1
Male only with a job, at work	25.8	26.4	19.6
Female only with a job, at work	7.6	7.3	10.4
Neither partner with a job, at work	8.9	8.8	9.9
N (weighted, in millions)	49.7	45.3	4.4

Notes: Household-level calculations for a the public-use Census 2000 long form responses of married and unmarried partner households who reside in the 50 states or the District of Columbia in which both members of the couple are age 16-64 and do not live in Group Quarters. Responses are weighted by the person weight of the primary respondent.

Table 2: Similar employment for couples in which both members work (percent)

Employment outcome	All Couples	Married	Unmarried Partner
Same Industry, Occupation and Block*	1.9	1.9	1.9
Same Industry and Occupation	3.1	3.1	3.1
Same Industry and Block*	7.0	6.8	8.3
Same Occupation and Block*	2.1	2.1	2.2
Similar occupation			
Same Census Occupation	4.5	4.4	5.1
Same SOC Minor Occupation	6.7	6.6	7.4
Same SOC Major Occupation	12.8	12.7	14.3
Similar industry			
Same Census Industry	11.8	11.7	13.5
Same NAICS Sector	19.1	18.9	21.3
Same NAICS Supersector	21.4	21.2	23.1
Similar location			
Same Census Block*	10.4	10.2	11.8
Both work from home	0.7	0.8	0.4
by distance between census blocks			
Within 5 miles*	43.1	42.9	44.4
Within 10 miles*	59.2	59.0	60.8
Within 25 miles*	82.2	82.2	82.3
by geography			
Same Census Tract*	16.2	16.2	16.5
Same County*	68.2	68.0	70.1
Same State	94.8	94.7	95.1
N* (1% sample, weighted, in millions)	28.5	25.8	2.6
N (PUMS, weighted, in millions)	28.7	26.0	2.6

Notes: Household-level calculations of Census 2000 long form responses of married and unmarried partner households who reside in the 50 states or the District of Columbia in which both members of the couple are age 16-64 and both members report that they held a job within the last week. Calculations from a 1% sample of the source microdata are marked with *, otherwise, household-level tabulations from the public-use Census long form data. SOC and NAICS aggregations are assigned using crosswalks from responses coded to Census 2000 occupations and industries, respectively. Responses for the public-use data are weighted by the person weight of the primary respondent, and the 1% sample is weighted by this value times 100.

Table 3: Occupations of men, women, and shared occupations for couples in which both members work in the Census 2000

SOC Major Group	All Males	All Females	Same SOC Major Group	Under Random Assignment
Management	13.3	8.1	14.7	18.8
Business and Financial Operations	4.3	5.7	3.8	4.3
Computer and Mathematical	3.3	1.8	2.5	1.0
Architecture and Engineering	3.9	0.6	1.1	0.4
Life, Physical, and Social Science	1.2	0.9	0.9	0.2
Community and Social Services	1.3	1.9	1.1	0.4
Legal	1.2	1.2	1.5	0.3
Education, Training and Library	3.3	10.8	9.5	6.2
Arts, Design, Entertainment, Sports and Media	1.8	2.0	1.7	0.6
Healthcare Practitioners and Technical	2.5	8.7	6.8	3.8
Healthcare Support	0.3	3.2	0.4	0.2
Protective Service	3.4	0.6	1.3	0.4
Food Preparation and Serving Related	1.6	3.9	2.9	1.1
Building and Grounds Cleaning and Maintenance	2.9	2.2	2.4	1.1
Personal Care and Service	0.8	4.4	1.1	1.1
Sales and Related	10.5	10.1	14.3	18.5
Office and Administrative Support	6.2	25.7	15.8	27.9
Farming, Fishing, and Forestry	0.7	0.3	0.6	0.0
Construction and Extraction	9.5	0.3	0.9	0.5
Installation, Maintenance, and Repair	7.8	0.4	0.6	0.5
Production	11.0	5.4	12.7	10.3
Transportation and Material Moving	8.6	1.8	3.2	2.7
Military Specific	0.3	0.0	0.1	0.0
N (weighted, in millions)	28.7	28.7	3.7	1.6

Notes: Household-level calculations for Census 2000 long form responses of married and unmarried partner households in which both members of the couple are age 16-64 and both members report that they held a job within the last week. SOC aggregations are assigned using a crosswalk from responses coded to Census 2000 occupations. Responses are weighted by the person weight of the primary respondent.

Table 4: Industry of men, women, and shared occupations
for couples in which both members work in the Census 2000

NAICS Sector	All Males	All Females	Same NAICS Sector	Under Random Assignment
Agriculture, Forestry, Fishing and Hunting	2.0	0.7	1.8	0.2
Mining, Quarrying, and Oil and Gas Extraction	0.6	0.1	0.2	0.0
Utilities	1.7	0.5	0.4	0.1
Construction	11.2	1.7	4.0	2.8
Manufacturing	19.8	9.8	21.7	28.7
Wholesale Trade	5.1	2.5	2.4	1.9
Retail Trade	9.3	10.8	11.3	14.9
Transportation and Warehousing	6.3	2.4	3.3	2.2
Information	3.1	2.8	2.2	1.3
Finance and Insurance	3.9	7.3	4.2	4.2
Real Estate and Rental and Leasing	1.7	1.9	1.3	0.5
Professional, Scientific, and Technical Services	6.3	6.2	6.5	5.7
Management of Companies and Enterprises	0.1	0.1	0.0	0.0
Administrative and Support and Waste Management and Remediation Services	2.9	2.8	1.9	1.2
Educational Services	5.6	15.1	12.7	12.5
Health Care and Social Assistance	4.5	19.6	10.7	13.0
Arts, Entertainment, and Recreation	1.4	1.4	1.1	0.3
Accommodation and Food Services	2.9	4.6	4.9	2.0
Other Services (excl. Publ. Admin.)	4.4	4.9	3.4	3.2
Public Administration	7.3	4.8	6.1	5.2
N (weighted, in millions)	28.7	28.7	5.5	2.0

Notes: Household-level calculations for Census 2000 long form responses of married and unmarried partner households in which both members of the couple are age 16-64 and both members report that they held a job within the last week. NAICS aggregations are assigned using a crosswalk from responses coded to Census 2000 industries. Responses are weighted by the person weight of the primary respondent.

Table 5: Characteristics of Dual-Earner Couples, by Similar Employment

Characteristics	All Dual-Earner Couples	Shared Census Occupation	Shared Census Industry	Shared Census Block*
Male				
Age				
16 to 24	3.6	3.6	3.4	3.2
25 to 44	54.6	52.6	50.4	53.6
45 to 54	29.3	29.4	31.0	28.7
55 to 64	12.6	14.3	15.3	14.5
Race & Ethnicity				
White	83.6	79.9	82.8	80.2
Black	7.6	5.8	5.8	5.3
Asian	3.2	7.7	5.6	8.9
Hispanic of any race	7.7	9.3	8.3	9.0
Education				
Less than High School	9.9	10.2	9.7	9.9
High School Diploma	26.6	17.7	21.9	17.5
Some College or Assoc. Deg.	31.6	22.9	27.4	22.0
Bachelor's Degree or more	31.8	49.2	41.1	50.7
Female				
Age				
16 to 24	5.8	5.7	5.5	5.2
25 to 44	59.5	58.8	56.6	59.3
45 to 54	27	27.1	28.7	27.6
55 to 64	7.6	8.4	9.2	7.9
Race & Ethnicity				
White	83.6	79.4	82.6	80.0
Black	6.9	5.2	5.2	5.3
Asian	3.8	8.6	6.2	9.4
Hispanic of any race	7.8	9.5	8.5	9.6
Education				
Less than High School	7.4	9.8	8.4	9.8
High School Diploma	26.4	20.1	24.4	20.6
Some College or Assoc. Deg.	34.7	23.8	31.2	22.8
Bachelor's Degree or more	31.5	46.3	36.0	46.9
N (weighted, in millions)	28.7	1.3	3.4	1.3

Notes: Household-level calculations of Census 2000 long form responses of married and unmarried partner households who reside in the 50 states or the District of Columbia in which both members of the couple are age 16-64 and both members report that they held a job within the last week. Calculations from a 1% sample of the source microdata are marked with *, otherwise, household-level tabulations from the public-use Census long form data. Responses for the public-use data are weighted by the person weight of the primary respondent, and the 1% sample is weighted by this value times 100.

Table 6: Random Assignment Comparison within Census Block, Census 2000 Alone

	Any other couple within residential block		Match within residential block, with similar demographic characteristics	
Employment outcome	Truth	Random	Truth	Random
Same Industry, Occupation and Block	2.3	0.1	2.0	0.1
Same Industry and Occupation	3.9	0.4	3.9	0.8
Same Industry and Block	8.5	0.4	8.4	0.8
Same Occupation and Block	2.6	0.1	2.6	0.1
Similar occupation				
Same Census Occupation	5.7	1.0	6.5	1.5
Same SOC Minor Occupation	8.1	2.4	9.1	3.1
Same SOC Major Occupation	14.6	7.3	15.2	8.6
Similar industry				
Same Census Industry	14.4	2.6	14.9	3.7
Same NAICS Sector	21.9	9.3	23.9	11.5
Same NAICS Supersector	24.3	12.0	25.6	14.7
Similar location				
Same Census Block	10.8	0.8	10.8	1.2
by distance between blocks				
Within 5 miles	42.5	30.5	44.9	32.6
Within 10 miles	64.5	54.5	67.1	59.3
Within 25 miles	91.2	85.3	91.6	89.9
by geography				
Same Census Tract	14.8	3.8	14.9	4.9
Same County	69.8	60.1	70.9	64.0
Same State	95.3	90.5	96.3	94.3
N (weighted, in millions)	9.8	9.8	2.1	2.1

Notes: Household-level calculations for a 1% sample of Census 2000 long form responses of married and unmarried partner households in which both members of the couple are age 16-64 and both members report that they held a job within the last week. SOC and NAICS aggregations are assigned using crosswalks from responses coded to Census 2000 occupations and industries, respectively. Responses are weighted by the person weight of the primary respondent times 100.

Table 7: Household Employment Status in 2000, LEHD Data

	All Couples		Excluding Households with Feds, Self-Employed	
Household employment status	38 States	National	38 States	National
Both male and female in LEHD	43.2	39.7	51.4	46.7
Male only in LEHD	24.9	26.7	25.7	27.3
Female only in LEHD	15.0	14.5	11.6	11.7
Neither partner in LEHD	16.8	19.0	11.2	14.3
N (weighted, in millions)	38.5	49.3	29.7	38.0

Notes: Household-level calculations for a 1% sample Census 2000 long form responses of married and unmarried partner households who reside in the 50 states or the District of Columbia in which both members of the couple are age 16-64. LEHD data is only available for 38 states in the year 2000. The "38 States" estimates reflect the households that lives in those 38 LEHD states in the Census 2000, using only direct tabulation of the LEHD data, and both members were assigned a PIK. The "National" include all households, and impute employment responses for all missing states, and impute outcomes for households where one or both PIKs are missing. Observations are weighted by the person weight of the primary respondent times 100.

Table 8: Same and Similar Workplaces among Dual-Earner Couples in 2000, LEHD Data

	All Couples		Excluding Census 2000 Feds, Self-Employed	
Employment outcome	38 States	National	38 States	National
Shared Employer				
Same Workplace	11.7	11.7	10.3	10.3
Same SEIN	12.7	12.5	11.3	11.2
Same (F)EIN	12.9	12.8	11.5	11.5
Same Firm	13.1	13.0	11.7	11.7
Shared Industry				
Same 6-Digit NAICS	14.8	15.0	13.4	13.7
Same Group	15.3	15.6	14.0	14.4
Same Sector	23.1	22.3	22.0	21.4
Same Supersector	25.9	26.0	24.9	25.1
Shared Geography				
Same Block	12.5	13.1	11.1	11.6
Same Tract	15.8	16.6	14.4	15.3
Same County	50.4	50.5	49.6	50.0
Same State	95.1	94.8	95.3	95.0
Within 5 miles	31.0	34.1	29.8	32.8
Within 10 miles	46.7	49.1	45.7	48.2
Within 25 miles	66.8	66.4	66.4	66.1
N (weighted, in millions)	16.6	19.6	15.3	17.8

Notes: Household-level calculations for a 1% sample Census 2000 long form responses of married and unmarried partner households who reside in the 50 states or the District of Columbia in which both members of the couple are age 16-64 and both members report that they held a job within the last week. To be included, both members of the couple must have an person identification key, and must have an employer in the LEHD data. LEHD data is available for 38 states. The "38 States" estimates reflect the households that lives in those 38 LEHD states in the Census 2000, using only direct tabulation of the LEHD data. The "National" include all households, and impute employment responses for all missing states. Observations are weighted by the person weight of the primary respondent times 100.

Table 9: Similar employment for couples in which both members work (percent)

Employment outcome	All Couples	Different Workplace	Shared Workplace	Shared Workplace as Percent of All
Same Industry, Occupation and Block	1.4	0.3	11.5	*83.8*
Same Industry and Occupation	2.7	1.1	17.2	*64.7*
Same Industry and Block	6.1	1.2	48.7	*82.8*
Same Occupation and Block	1.6	0.4	12.6	*80.1*
Similar occupation				
Same Census Occupation	4.2	2.5	18.9	*46.6*
Same SOC Minor Occupation	6.5	4.4	24.6	*38.9*
Same SOC Major Occupation	13.0	10.5	34.9	*27.8*
Similar industry				
Same Census Industry	11.7	4.8	71.1	*63.1*
Same NAICS Sector	19.9	13.2	77.9	*40.5*
Same NAICS Supersector	22.4	15.9	78.9	*36.5*
Similar location				
Same Census Block	8.5	2.8	57.4	*70.0*
by distance between blocks				
Within 5 miles	40.7	36.5	77.1	*19.6*
Within 10 miles	57.6	54.6	84.1	*15.1*
Within 25 miles	80.7	79.5	90.9	*11.7*
by geography				
Same Census Tract	14.0	8.5	61.8	*45.7*
Same County	65.4	62.6	89.3	*14.1*
Same State	93.2	92.9	95.7	*10.6*
N (weighted, in millions)	13.8	12.4	1.4	

Notes: Household-level calculations for a 1% sample Census 2000 long form responses of married and unmarried partner households who reside in the 50 states or the District of Columbia in which both members of the couple are age 16-64 and both members report that they held a job within the last week and neither member has missing sub-county geography, linked with 38 states with LEHD data. SOC and NAICS aggregations are assigned using crosswalks from responses coded to Census 2000 occupations and industries, respectively. Responses are weighted by the person weight of the primary respondent times 100.

Table 10: Maximal earning industry of men, women, and shared occupations for couples in which both members work in the Census 2000

NAICS Sector	All Males	All Females	Same Workplace	Same NAICS Sector	Under Random Assignment
Agriculture, Forestry, Fishing and Hunting	0.7	0.4	1.1	0.9	0.0
Mining, Quarrying, and Oil and Gas Extraction	0.7	0.2	0.4	0.3	0.0
Utilities	1.5	0.4	0.8	0.6	0.1
Construction	8.4	1.4	2.9	2.1	1.6
Manufacturing	22.9	10.7	21.2	24.5	33.4
Wholesale Trade	7.0	3.3	4.4	3.5	3.2
Retail Trade	10.2	10.6	9.3	11.2	14.8
Transportation and Warehousing	5.0	2.0	3.1	2.6	1.4
Information	3.1	2.8	2.6	2.3	1.2
Finance and Insurance	3.5	7.8	2.5	3.9	3.7
Real Estate and Rental and Leasing	1.5	1.3	1.1	0.7	0.3
Professional, Scientific, and Technical Services	5.7	6.0	3.7	5.1	4.7
Management of Companies and Enterprises	1.3	1.3	0.8	0.6	0.2
Administrative and Support and Waste Management and Remediation Services	4.2	4.3	4.0	3.1	2.4
Educational Services	7.1	15.7	18.5	16.3	15.2
Health Care and Social Assistance	4.2	18.5	8.8	9.1	10.6
Arts, Entertainment, and Recreation	1.0	1.1	1.5	0.9	0.2
Accommodation and Food Services	3.0	4.8	5.6	4.7	2.0
Other Services (excl. Publ. Admin.)	2.5	3.0	1.8	1.5	1.0
Public Administration	6.4	4.6	5.9	6.0	4.0
N (weighted, in millions)	15.3	15.3	1.6	3.4	2.1

Notes: Household-level calculations for a 1% sample Census 2000 long form responses of married and unmarried partner households in which both members of the couple are age 16-64 and both members report that they held a job within the last week. Observations are weighted by the person weight of the primary respondent times 100.

Table 11: Characteristics of Dual-Earner Couples, by Shared Primary Employer (38 States)

Characteristics	All Dual-Earner Couples	Shared Workplace	Not Shared Workplace and Shared Firm	Not Shared Workplace and Shared NAICS Industry (6 Digit)	Not Shared Workplace and Shared Block
Male					
Age					
16 to 24	3.8	4.1	4.2	2.9	3.4
25 to 44	57.8	55.4	55.7	57.0	61.0
45 to 54	27.5	27.7	31.3	28.3	25.4
55 to 64	10.9	12.8	8.4	12.1	10.2
Race & Ethnicity					
White	83.2	81.8	77.6	81.3	82.2
Black	8.4	7.4	11.7	8.1	8.5
Asian	3.2	5.1	2.8	5.4	1.7
Hispanic of any race	8.6	9.0	12.2	8.9	11.9
Education					
Less than High School	10.6	10.9	6.5	5.8	7.6
High School Diploma	27.7	22.7	24.8	17.0	23.7
Some College or Assoc. Deg.	31.9	30.6	28.0	21.6	30.5
Bachelor's Degree or more	29.9	35.8	41.1	55.5	38.1
Female					
Age					
16 to 24	6.3	7.6	6.5	6.4	3.4
25 to 44	61.8	60.2	64.0	60.3	65.3
45 to 54	25.3	25.3	25.2	26.4	23.7
55 to 64	6.5	7.1	4.2	6.9	7.6
Race & Ethnicity					
White	83.3	82.7	77.1	80.7	79.7
Black	7.8	6.9	9.8	7.1	8.5
Asian	3.9	5.3	4.7	6.2	4.2
Hispanic of any race	8.7	9.1	10.7	9.8	10.2
Education					
Less than High School	7.8	9.6	5.6	6.2	7.6
High School Diploma	27.1	27.3	22.9	16.2	26.3
Some College or Assoc. Deg.	34.8	30.2	34.1	28.3	26.3
Bachelor's Degree or more	30.3	32.8	36.9	49.1	39.8
N (weighted, in millions)	15.3	1.6	0.2	0.5	0.1

Notes: Household-level calculations for a 1% sample of Census 2000 long form responses of married and unmarried partner households in which both members of the couple are age 16-64 and both members report that they held a job within the last week. Observations are weighted by the person weight of the primary respondent times 100.

Table 12: Random Assignment Comparison within Census Block, LEHD Data

	Any other couple Within residential block		Match within residential block, with similar demographic characteristics	
Employment outcome	Truth	Random	Truth	Random
Shared Employer				
Same Workplace	9.6	0.6	8.7	1.2
Same SEIN	10.5	1.0	9.7	1.8
Same (F)EIN	10.8	1.1	10.0	1.9
Same Firm	11.1	1.1	10.1	2.1
Shared Geography				
Same Block	10.3	1.0	9.6	1.6
Same Tract	13.1	3.1	13.0	4.1
Same County	49.0	39.9	48.6	40.6
Same State	95.7	91.1	95.4	94.8
Within 5 miles	29.6	19.2	29.6	20.3
Within 10 miles	44.0	34.0	44.3	35.9
Within 25 miles	66.2	58.5	66.4	61.3
Shared Industry				
Same NAICS Industry (6-Digit)	12.7	1.8	12.0	2.6
Same Group	13.4	2.2	13.0	3.1
Same Sector	21.0	9.3	19.7	10.6
Same Supersector	23.9	12.6	22.6	13.9
N (weighted, in millions)	7.9	7.9	1.7	1.7

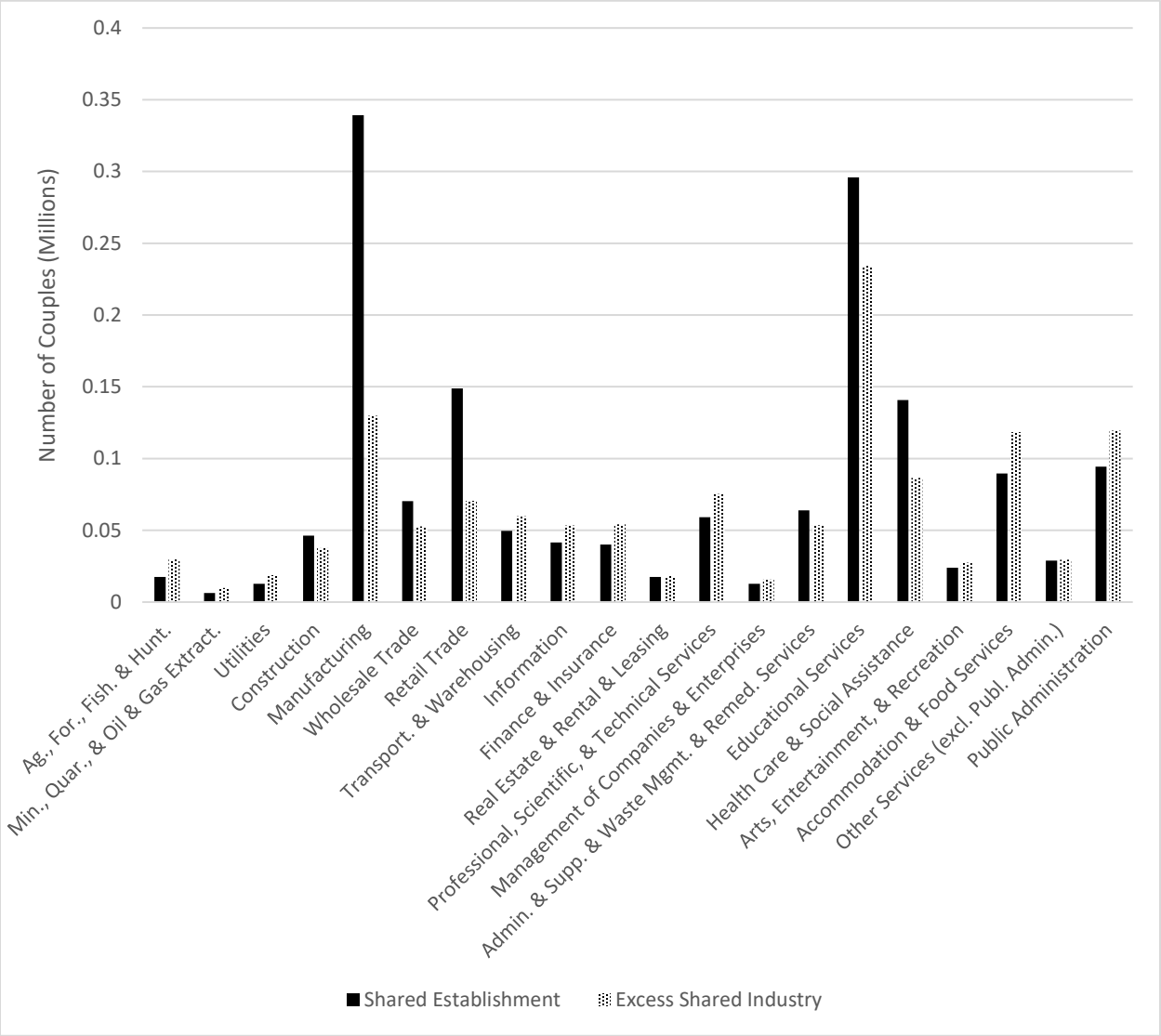
Notes: Household-level calculations for a 1% sample of Census 2000 long form responses of married and unmarried partner households in which both members of the couple are age 16-64 and both members report that they held a job within the last week. SOC and NAICS aggregations are assigned using crosswalks from responses coded to Census 2000 occupations and industries, respectively. Responses are weighted by the person weight of the primary respondent times 100.

Table 13: Workplace & Residency Dynamics of those Co-Worker & Co-Resident in 2000

	2001 Status			
1999 Status	Shared Residence and Employer	Shared Residence Only	Shared Employer Only	Shared Neither Residence nor Employer
Shared Residence and Employer	51.8	12.6	0.7	0.2
Shared Residence Only	17.2	11.2	0.3	0.3
Shared Employer Only	1.8	0.9	0.1	0.0
Shared Neither Residence nor Employer	1.3	1.4	0.1	0.1

Notes: Household-level calculations for a 1% sample of Census 2000 long form responses of married and unmarried partner households in which both members of the couple are age 16-64 and both members report that they held a job within the last week. Responses are weighted by the person weight of the primary respondent. Both members of the couple must appear in the Composite Person Record in both 1999 and 2001, and be employed at the same employer in the LEHD in 2000, to be included in the tabulation. Responses are weighted by the person weight of the primary respondent times 100.

Figure 1: Number of Co-Working Couples and the Excess Amount of Shared Industry



Notes: "Excess Shared Industry" indicates the difference between the observed number of dual-earner couples that work in the same NAICS sector and the number that would be predicted by random assignment given the industry distribution of the members of dual-earner couples. Household-level calculations for a 1% sample Census 2000 long form responses of married and unmarried partner households in which both members of the couple are age 16-64 and both members report that they held a job within the last week. Observations are weighted by the person weight of the primary respondent times 100.

Endnotes

[i] See, among many others, Lam (1988) and Kalmijn (1998) on assortative mating and marital homogamy.

[ii] For example, Bozon and Heran (1989) and Kalmijn and Flap (2001) provide evidence from retrospective surveys that asked couples how they met, including whether they met at work. McKinnish (2007) and Svarer (2007) estimate the relationship between workplace or occupational sex ratios (respectively) and divorce and marriage.

[iii] Characteristics such as industry, occupation, and broad geography are available for tabulation in a variety of public-use microdata sources. For example, Shore and Siani (2010) use such microdata to provide several straightforward tabulations of the frequencies which married couples share a highly specific industry or occupation.

[iv] Research by Hyslop (2001), Shore and Sinai (2010), Shore (2010, 2015), and Ostrovsky (2012) has shown that couples' incomes tend to move up or down together, despite the fact of the second potential earner as a source of insurance as in Lundberg (1985), Hess (2004), and Zhang (2014).

[v] As the Census 2000 long from is itself a 1-in-6 sample, a 1% sample therefrom is a 1-in-600 sample. It nevertheless contains more than 82 thousand observations.

[vi] Note that as the empirical results presented in this paper were prepared, a substantial amount of attention was devoted to the missing data issues that arose in each stage of estimation. For example, the Census 2000 microdata file has a substantial amount of missing sub-county work location information. There are also a variety of issues involved in the use of administrative data, including the reliability of person identification, the completeness of residency information, the exact establishment of employment for those whose Unemployment Insurance accounts cover multiple worksites, and coverage issues involved in construction national estimates from a partial (thirty-eight state) set of datasets, and in certain cases the results from different tabulation strategies are compared, to provide better understanding of the robustness of the overall findings. Results that use the public-use microdata sample are weighted by the person weight of the primary respondent, and in the 1% sample, this weight is multiplied by 100.

[vii] The distance between places of work is measured using block centroids when using self-reported place of work from the Census long form; later in the paper when the LEHD administrative data is used, the distance between geocoded employer addresses rather than block centroids.

[viii] There are some definitional differences of note. Shore and Sinai (2010) report industry and occupation according to the 1950 Census categories (rather than the 2000 Census categories used in this paper) and have several rules for eliminating observations from their samples, including that both members must be age 25 or older.

[ix] Let m_i be the fraction of men in dual-earner couples that work in Supersector i and f_i be the analogous fraction of women. The randomly assigned shares are calculated as $\frac{m_i f_i}{\sum_j m_j f_j}$, and the number of so-defined hypothetical observations is $\sum_j m_j f_j$.

[x] This exercise in Table 6 is only done for a subset of records, and hence the sample size is lower than those done for the universe of couples. First, estimates do not include observations where there is any imputed geography of work, which occurs in about one-fifth of households. Second, there must be at least two dual-earner households with nonmissing place of work information in the same Census block. There were more than 8.2 million Census blocks in the Census 2000, or nearly one for every working age, opposite-sex couple in the long form. Census blocks are more likely to have at least two households that meet this restriction in urban areas than rural areas. The microdata file was sorted by Census block and a random number, and the first record of a Census block served as a "donor" for the second, and the second for the third, etc. In order to avoid double-counting a matched set of couples (blocks with exactly two couples are among the most common), the last couple was not matched to the first, so the number of included records is lower by the number of included Census blocks.

[xi] Specifically, AK, CA, CO, FL, GA, HI, ID, IL, IN, KS, LA, MD, ME, MI, MN, MO, MT, NC, ND, NE, NJ, NM, NV, NY, OH, OR, PA, RI, SC, SD, TN, TX, UT, VA, VT, WA, WI, and WV.

[xii] For additional details about the LEHD data, see Abowd et al. (2009) and McKinney and Vilhuber (2011).

[xiii] The workplace allocations in the standard Unit-to-Worker file used in many studies that employ LEHD microdata are not used in the main analysis because the imputation assignments allocate members of couples to establishments independently of each other, and this naturally results in a lower estimate of the share of couples who work at the same establishment. For the couples who live in "in scope" states, and who are both in the LEHD data, 8.9% work in the same Census block, 8.2% work at the same establishment, and only 36% work in the same county. Note that this

imputation means that the estimates of shared workplace and similar work location will be sensitive to the imputation method. Industry will also be sensitive to the workplace assignment methodology, but most multi-unit employers have a similar industry, especially at the sector or supersector level. Estimates of shared employers at the level of the Unemployment Insurance account (SEIN) or broader (EIN and firm) are by construction unaffected by establishment imputation by construction: an establishment is always associated with one single SEIN.

[xiv] The excess number of couples in each industry is calculated as the total share of observed couples minus $\frac{m_i f_i}{\sum_j m_j f_j}$.

[xv] Assortative mating as relates to household-level income inequality is most often thought of with respect to education. For a recent treatment of this issue, see Greenwood et al. (2014).

[xvi] Wolkenbreit (1997) argues that some employers may fail to adopt anti-nepotism policies out of a concern for profit maximization.