Only on the Margins:
Using Linked IRS Administrative and Census Survey Records to Measure the Economic Returns to Migration for Married Men and Women in the United States

Thomas B. Foster[a]
Mark Ellis[b]
Lee Fiorio[b]

[a] U.S. Census Bureau, Center for Administrative Records Research and Applications
[b] University of Washington, Department of Geography and Center for Studies in Demography and Ecology

Abstract

This paper leverages linked IRS tax records and Census Bureau survey microdata to examine the earnings returns for married men and women who migrate across state lines. We are interested in understanding whether and how the traditional gender roles presumably guiding family migration decisions in favor of husbands' economic welfare differ geographically and in different economic circumstances. We offer the first population-level descriptive analysis of migration returns for married men and women, inferring migration from address changes in IRS records and gauging changes in earnings over time using IRS W2s. We disaggregate this descriptive analysis by origin/destination geography, as well as by the time periods before, during, and after the Great Recession. We then utilize links between individual IRS and ACS records to fit a linear regression model predicting earnings as a function of gender, migration status, household composition, earnings potential, and other factors known to influence migration and earnings.

Introduction

Family migration theory postulates that married couples move in the interest of net family welfare (Becker 1975; Mincer 1978; Sjaastad 1962). While it is possible (and arguably preferable) for a net increase in family welfare to be achieved by increasing all family members' welfare, numerous studies have shown that this outcome is atypical. Rather, net family welfare maximization is usually achieved by maximizing one individual's welfare so as to offset any declines in welfare accrued to other family members. Consistent with gender role theory (Pedraza 1991; Shihadeh 1991), a large literature has demonstrated that the maximization of family welfare (e.g. employment outcomes, earnings/wages, and other economic outcomes) usually accrues greater returns for men than women; in fact, women often experience negative economic returns to migration which may or may not actually be offset by their partners' gains. Summarizing the evidence, Cooke (2001: 421) writes that "economic rationality in family migration decision-making occurs only on the margins: families will consider the wife's career development in making migration decisions only if she has a very high-status job relative to her husband or if the husband is unemployed and the family has no other economic resources."

This paper seeks to further our understanding of those "margins" in which the traditional gender role expectations presumably driving family migration decisions break down. We contribute to the established literature on the gendered economic returns to migration by considering the historical and geographic contexts in which contemporary migration takes place. We are interested in how these contexts influence and complicate family migration decisions. First, we consider whether and how the Great Recession changed the ways couples negotiated migration and the expected returns for married men and women. Second, we consider whether and how the returns to migration for men and women may be dependent upon geographic variations in wages, opportunities, and/or cultural expectations surrounding gender and the family.

The ability to consider these geographic and temporal contexts is afforded by a novel longitudinal dataset linking tax records from the Internal Revenue Service to Census Bureau survey microdata covering the 2000 to 2016 period. Prior research has relied on small-sample longitudinal data (such as the Panel Study of Income Dynamics or the National Longitudinal Surveys) to gauge (gaps in) the migration returns to married men and women. While these surveys provide a representative look at the U.S. population over time, samples are not large enough to examine geographic patterns in migration returns for population subgroups with sufficient precision. Our linked IRS-Census dataset provides longitudinal data at near population scale, allowing us to examine the gender gap in migration returns in novel ways.

This research is important not only for our evolving theoretical understandings of migration and migration decision-making processes in families, but also because it may offer insights into declining migration rates and the perpetuation of the more general gender gap in earnings. In particular, we seek to address the ways in which geographic variation and temporal changes in the returns to migration for married men and women might contribute to secular declines in migration in the United States.

Background

Empirical tests of family migration theory show that family migration has a negative effect on labor force participation, employment, weeks worked, hours worked, income, and attitudes toward work among married women, most likely because women are considered "tied movers" in the decision making process regardless of their occupational status or income (Cooke 2001). But there are numerous caveats to these robust results. For example, studies examining the long-term effects of migration suggest that women's negative returns are usually ameliorated after a few years (Lichter 1983). Research suggests that the employment of wives is considered when making migration decisions, even if a husband's economic well-being is given primacy: families with two earners are less likely to migrate than single-earner families (Lichter 1980), and the rise in dual-earner families is hypothesized to contribute to secular declines in American mobility (Molloy, Smith, and Wozniak 2017). And, though it tends to occur only when a wife's income and/or occupational status is dramatically greater than that of her husband, family migration is sometimes undertaken explicitly to improve the economic status of, and does sometimes disproportionately accrue greater benefits to, women.

Less understood are the ways in which geographic variations in wages, opportunities, and cultural gender role expectations may influence migration decisions and the returns accrued to married men and women migrants. In neoclassical economic theory, labor market wage disequilibria are the central impetus for migration between labor markets. Indeed, labor market convergence, as measured by both industrial composition and intra-industry wages, are thought to contribute to secular declines in migration (Molloy, Smith, and Wozniak 2017). Nevertheless, recent research suggests that migration streams between labor markets may be increasingly polarized with respect to educational attainment, favoring highly educated migrants searching for high paying jobs moving between a few quickly growing labor markets (Moretti 2012). It is also increasingly clear that the opportunities available to individuals in their local area have profound and long-lasting effects on employment and earnings across the life course (Chetty et al. 2014). Taken together, these facts suggest that families consider their local contexts and the contexts of potential destinations when weighing the costs and benefits of migration for individuals constituting larger families. We test this hypothesis by examining married men's and women's migration returns by origin and destination state, for married couples in all 50 states.

The relative weight given married partners' economic well-being when making migration decisions may also depend upon the broader economic realities faced by the family. For example, in addition to weighting a wife's economic welfare more heavily when she earns much more than her husband, it is likely that the importance of or emphasis on traditional gender roles presumed to guide family migration decisions shifts in times of heightened economic vulnerability and uncertainty (Karamessini and Rubery 2013; Sahin, Song, and Hobijn 2010). We test this hypothesis in the years leading up to, including, and after the Great Recession in the United States.

Data

We use four administrative records sources – three sources of IRS Federal Tax Information (FTI) and one source from the Social Security Administration (SSA) – to address these topics. The first source of FTI, IRS Form 1040s for the tax years 2000 through 2016, form the backbone of our data. Though

scrubbed of Personally Identifiable Information (PII) like names and Social Security Numbers (SSNs), the 1040 records retain much of the data filers report when filing income taxes each year. This includes addresses, adjusted gross income and incomes from various sources, exemptions claimed, information on dependents and spouses, and the sorts of tax credits claimed by the filer (e.g. the Earned Income Tax Credit).

The second source of FTI, IRS Form 1099 "information returns" for tax years 2003 to 2016, supplement the universe of filers, spouses, and dependents found in IRS 1040s. The 1099s flag sources of income for individual earners. Like the 1040s, the 1099s are scrubbed of PII but do retain address information, making them valuable for this study of migration. In addition, they facilitate insight into a population typically overlooked in studies of migration relying solely on 1040s – namely, those who earn incomes but who, for any number of reasons, choose not to file a tax return. Our prior work shows that supplementing 1040s with 1099s addresses much of the selectivity bias present in studies relying solely on 1040s (Foster, Ellis, and Fiorio 2018a).

The final source of FTI is the universe of IRS Form W2s for tax years 2005 to 2016. IRS W2s contain detailed earnings information for *individual earners*. While this source of FTI does not contain address information, thereby limiting its use for measuring migration, it does allow insight into individual contributions to gross household earnings. For this study, this means that we can investigate whether and how migration influences the earnings of spouses differently, rather than relying on gross reports of household income.

We also rely on one other administrative record source from the SSA, which provides sex, date of birth, date of death, and place of birth information for the population found in FTI records. Drawn from the SSA's list of all names, Social Security Numbers (SSNs), and Individual Tax Identification Numbers (ITINs) issued in the United States, this file is provided for Census Bureau use and scrubbed of SSNs, names, and other PII. This file is particularly useful in this study because it provides important demographic information on the population found in IRS 1040s and 1099s who cannot be linked with Census Bureau survey records.

To these administrative records sources, we link restricted-use Census Bureau microdata from 1-Year American Community Survey (ACS) responses from 2005 through 2016. Individual-level record linkage is facilitated by unique, anonymous person identifiers assigned to individuals in administrative and survey records by the Census Bureau (Wagner and Layne 2014). When available, these unique identifiers are assigned using SSN or ITIN references. When an SSN or ITIN is not available, unique identifiers are probabilistically assigned using other information. After the assignment of unique, anonymous person identifiers, PII like names, SSNs, and ITINs are scrubbed from records.

These linked data provide reliable source of migration data for the U.S. population (Foster, Ellis, and Fiorio 2018a; 2018b). We gauge migration in IRS administrative records by first linking records over time, then by comparing state locations gleaned from address information on IRS records from two successive years' tax records. Because our interest in this paper is in understanding the migration of married men and women, we limit our analysis to those whose IRS tax filing status is "Married, filing jointly" or "Married, filing separately".

Analyses and Expected Results

Descriptive Analysis

Using the universe of IRS 1040s, 1099s, and W2s for tax years 2000 through 2016, we will produce the first national-level summary of the earnings returns to interstate migration for working age men and women, disaggregated by age and marital status. While similar descriptive summaries have been produced using small-sample, nationally representative survey responses, the IRS administrative records covering nearly all Americans allow the first description of migration returns among virtually all those earning a wage in the United States. We will compare these aggregate returns to the wages of non-mover men and women, as well as to estimates of aggregate returns drawn from other longitudinal surveys. Generally speaking, we expect these aggregate results to approximate those from other longitudinal surveys.

We will then disaggregate these aggregate returns by origin/destination geography (Census Bureau region, state), as well as by year, to understand whether and how earnings returns for men and women differ across the United States and over time. Though precise results are difficult to hypothesize and predict, we anticipate finding significant geographic differences in the aggregate returns migrant men and women accrue. Regarding changes over time, expectations are less clear. On the one hand, sudden unemployment during the Great Recession may have pushed many families to jettison traditional gender expectations when weighing the potential returns to migration for men and women in favor of maximizing family well-being at all costs. If this is the case, we would expect to see an increase in the returns accrued to women (particularly relative to their non-migrant counterparts). On the other hand, the threat to masculinity posed by increased unemployment may also have the opposite effect, reinforcing and reifying traditional gender expectations and widening the gender gap in migration returns.

Multivariate Analysis

Following our descriptive analysis, we limit our universe to those married couples who are found in both IRS administrative and ACS survey records. We fit a linear regression model predicting logged earnings among married men and women as a function of interstate migration status, family composition (presence/number of children), human capital (education, work experience), partner's human capital, and state labor market characteristics (unemployment rate, as well as time (gauging periods before, during, and after recession, as well as time since last migration). Because migrants are non-randomly selected with respect to the factors that drive earnings, we will use Heckman correction techniques in multivariate regressions. We will then predict and plot the marginal effects of migration on the expected earnings of married men and women. We are particularly interested in plotting these effects over time, as well as with respect to origin/destination state and the relative earnings potential of married individuals.

References

Becker, G.S. 1975. "Investment in human capital: A theoretical analysis." *Journal of Political Economy* 70: 9-49.

Chetty, R, N. Hendren. P. Kline, and E. Saez. 2014. "Where is the land of opportunity? The geography of intergenerational mobility in the United States." *The Quarterly Journal of Economics* 129:1553-1623.

Cooke, T.J. 2001. "'Trailing wife' or 'trailing mother'? The effect of parental status on the relationship between family migration and the labor-market participation of married women." *Environment and Planning A* 33: 419-430.

Foster, T.B., M. Ellis, and L. Fiorio. 2018a. "The Opportunities and Challenges of Linked IRS Administrative and Census Survey Records in the Study of Migration." *CARRA Working Paper Series, #2018-06*. U.S. Census Bureau. https://census.gov/library/working-papers/2018/adrm/carra-wp-2018-06.html.

Foster, T.B., M. Ellis, and L. Fiorio. 2018b. "Foreign-born and native-born migration in the U.S.: Evidence from IRS Administrative and Census Survey Records." *CARRA Working Paper Series, #2018-07.* U.S. Census Bureau. https://census.gov/library/working-papers/2018/adrm/carra-wp-2018-07.html.

Karamessini, M. and J. Rubery, eds. 2013. *Women and austerity: The economic crisis and the future for gender equality*. Volume 11. Routledge.

Lichter, D.T. 1980. "Family migration and the labor market position of married women." *Social Science Research* 9: 83-97.

Lichter, D.T. 1983. "Socioeconomic returns to migration among married women." *Social Forces* 62: 489-503.

Long, L. 1988. *Migration and Residential Mobility in the United States*. New York: Russell Sage Foundation.

Mincer, J. 1978. "Family migration decisions." *Journal of Political Economy* 86: 749-773.

Molloy, R., C.L. Smith, and A. Wozniak. 2017. "Job changing and the decline in long-distance migration in the United States." *Demography* 54(2): 631-653.

Moretti, E. 2012. *The New Geography of Jobs*. New York: Houghton Mifflin Harcourt.

Pedraza, S. 1991. "Women and migration: The social consequences of gender." *Annual Review of Sociology* 70: 303-325.

Sahin, A., J. Song, and B. Hobijn. 2010. "The unemployment gender gap during the 2007 recession." *Current Issues in Economics and Finance* 16(2). Federal Reserve Bank of New York.

Shihadeh, E.S. 1991. "The prevalence of husband-centered migration: employment consequences for married mothers." *Journal of Marriage and the Family* 53: 432-444.

Sjaastad, L.A. 1962. "The costs and returns of human migration." *Journal of Political Economy* 70: 80-93.

Wagner, D. and M. Layne. 2014. "The Person Identification Validation System (PVS): Applying the Center for Administrative Records Research and Applications' (CARRA) record linkage software." *CARRA Working Paper Series,* #2014-01. U.S. Census Bureau. https://www.census.gov/library/working-papers/2014/adrm/carra-wp-2014-01.html.