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Migrations Among Educationally Homogamous Couples in The US: 1997-2013

by

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Abstract

As female labor participation rates, educational attainment, and occupational prestige improve the colocational dilemma of migration increasingly a problem. This paper seeks to determinine the difference in determinents and outcomes of interstate migration across educationally homogamous couples in the United States. The paper uses data from the Panel Survey of Income Dynamics for couples, married and cohabitating, age 24-55 in the period 1997-2013. This paper looks at three couple types, low educated couples being those where both members have no college degree, high power couples where both members have a college degree and unequal couples where one of the couple members has a college degree. The paper finds that with respect to high power couples there is little evidence that gender equitable household bargaining is taking place and that migration decision are predominately determined by the husbands. In addition wives in these couples do not gain from migration by any reasonable difference from their low power or unequal power counterparts. It was the assumption of this paper that the new dynamics of gender equity in the workforce would lead to new patterns of family migration. However, it is apparent that family migration still follows gender specialization patterns that are evident in research from earlier periods. While dual power couples are defined as couples with two college graduates, further research should narrow this definition in order to better examine the issue of family migration in the changing landscape of female employment.

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1 Introduction

One of the most difficult decisions a family can undergo is the decision to migrate. Whether this migration is to different labor markets within a country or international migration, these long distance moves are costly not only due to the pecuniary and psychological cost born by the family but due to the disruption that migration can mark on an individual's career. As women improve their place in the labor market, both in terms of occupational status and labor force participation, their income contribution to the family plays a greater role in family decision making. These improvements in women's positions in the labor market has complicated the family migration decision. Families perform a balancing act when looking at potential labor markets and the future careers of both husband's and wives are at stake. A question arises as to how migration decisions are made in dual income families and in particular if these migration decisions differ across educational groups.

Dual income couples can be marked into two distinctions. The first is the dual earner family where both couples bring income into the family. While within the dual earner family one couple can be employed in a higher prestige career it is assumed in the dual earner family that one or both couples do not have a traditional career. Dual career couples on the other hand are those couples where both the husband and wife are employed in higher prestige careers. Both members in these couples are expected to be highly educated and to make decisions based on their future utility and earnings growth.

It is expected that migration will only occur if the costs are outweighed by the benefits (Sjaastad, 1962). However, due to a colocational problem, for dual career couples a migration may not be beneficial for both spouses. This may be especially true when

moves are precipitated by a job offer on the part of one spouse. In these cases a good labor market match for the other spouse is not assured. (Costa & Kahn, 2000) This could lead to poor labor matches on the part of the trailing spouse or what's referred to as the tied mover in the literature (Greenwood, 1997). It is assumed in the traditional migration literature that these poor labor market matches and decreases in earnings will be made up for by the increased contributions to the families income by the leading mover (Mincer, 1978; Greenwood, 1997; Sandell, 1977). However in the context of careers, the trailing mover is at a disadvantage for their future human capital growth. This concern over bad labor matches and the colocational problem is why some have theorized why larger cities, where there are more potential labor matches, have greater concentrations of dual-career couples. (Costa & Kahn, 2000; Green, 1997; Cooke, 2014)While these studies that look at large cities and other ways that dual career couples may solve the colocational problem (such as commuting couples) are instructive in describing possible solutions they do not examine the income dynamics that affect and result from migration.

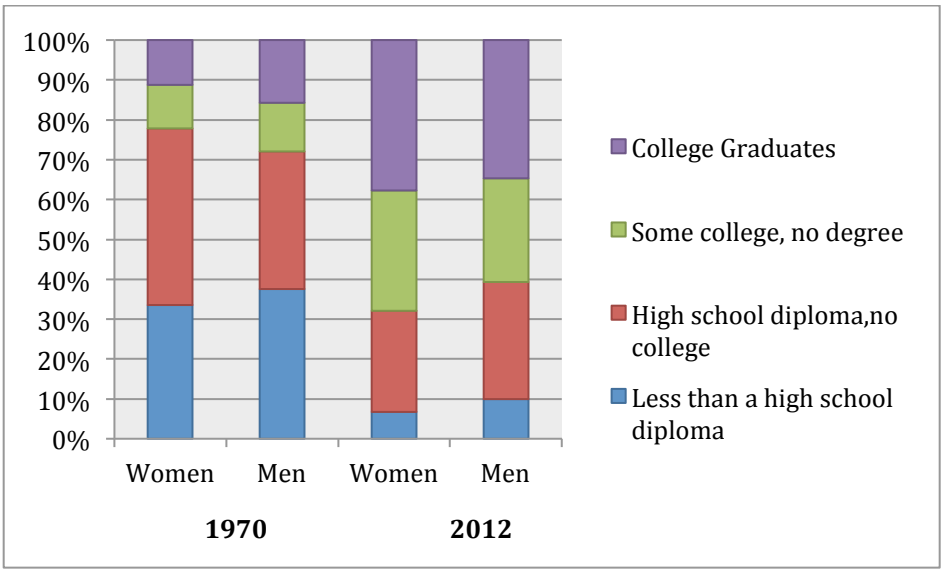
Improvements in female labor positions also leads to a greater contribution to the family income on the part of wives. The traditional model for family decision making treats the family as a single decision making unit. (Becker, 1981; Samuelson, 1956) However in the context of dual earner families, a bargaining model may be more apt. Instead of a single utility function within households, family members bring in their own specific utility functions and the dynamics between couples and their external threat points dictate couple's decisions. (Manser & Brown, 1980; McElroy & Horney, 1981; Lundberg & Pollak, 1996) While the bargaining model has been applied to such issues as domestic abuse, purchases within the home, and divorce it is more rare in the migration literature. (Tauchen et al., 1991; Lundberg & Pollak, 1996; Stevenson & Wolfers, 2007) It is anticipated that changes in income dynamics within couples should change the decision making process. This should be no different in the migration decision. With the increases in educational and occupational homogamy an increase in income equality within the couple is to be expected. Income equality within couples may significantly affect the ways these couples make migration decisions. In addition husbands and wives in dual career couples may similarly seek to make decisions based their future utility from human capital investment. These interfamily income dynamics can be expected to play a significant role both in determining family migration and the benefits from the migration decision.

This paper seeks to address the interfamily income dynamics that lead to and result from internal migration among educationally homogenous couples in the United States from 1997-2013.

1.1 Motivation

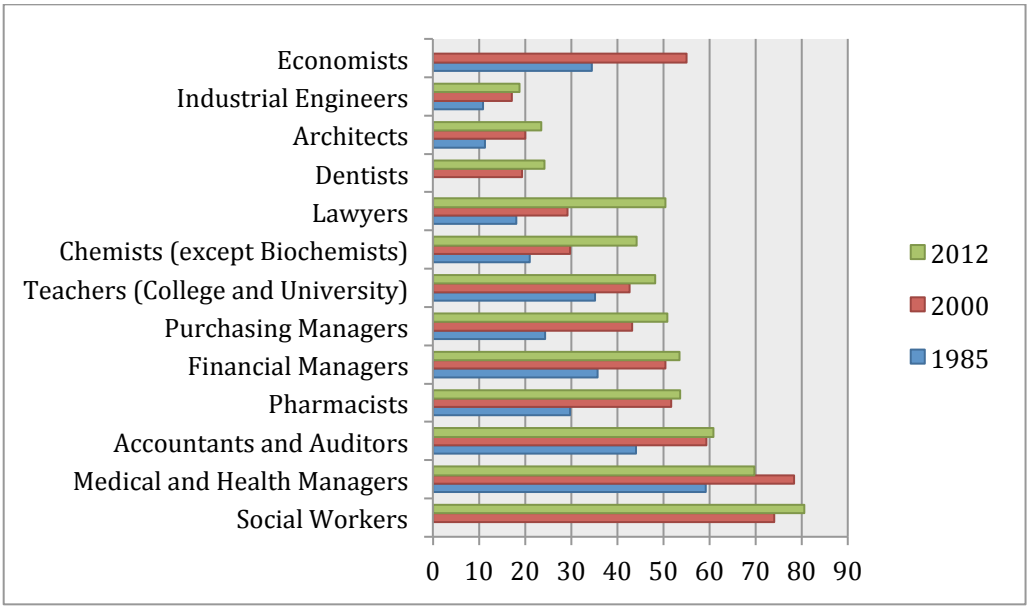
In 2012 the number of women with bachelor degrees or higher outpaced that of men. (US Department of Labor, 2016) In addition the number of women in careers with high occupational prestige is increasing. In 2012 according to the Current Population Survey women comprise around half of the total employed in occupations such as lawyers, Financial Managers, College and University teachers and Pharmacists. (Bureau of Labor Statistics, 2016) In addition women make up around half of the labor force in the US. In 2012 women made up around 47% of the labor force. (US Department of Labor, 2016)

Figure 1: Educational Attainment by Sex 1970 2012



Source: Bureau of Labor Statistics (BLS), Current Population Survey (CPS) (US Department of Labor, 2016)

Figure 2: Women as Percentage of Total Employed in Specific Occupations 1985-2012



Source: Current Population Survey, U.S. Bureau of Labor Statistics (US Department of Labor, 2016)

These improvements in women's places in the workforce have also led to increases in educational homogamy. There has been extensive literature on the extent racial, educational, or occupational homogamy plays in partner selection. (Kalmijn, 1991; Smits et al., 1998; Blossfeld, 2009; Hout, 1982; Kalmijn, 1998)

The economics of partner selection was outlined in the seminal work of Gary Becker. (Becker, 1974) Becker argues that a traditional work division within the household dictates partner selection preferences. Under Becker's traditional model men have a comparative advantage in the labor market and women take care of household labor. With the transition from bread-winner models to dual earner families this labor division has become less solvent. The socio-economic positions of women have become a greater factor in partner preferences. This transition has led to the family's economic status being determined by the contribution of both the husband and wife. Men and women are increasingly basing their partner preferences on those who have attractive socio-economic positions in society. (Kalmijn, 1994) Buss et al. 2001 finds that the financial prospects of women are increasingly taking a dominant role in the partner selection process. (Buss et al., 2001)Therefore the mate selection is becoming more symmetric. More often women in high-income groups are in a relationship with men of higher occupational status than previous generations. (Sweeney & Cancian, 2004). As income is tied to education, increasingly individuals are marrying partners of similar educational

status. Smits (2003) finds that individuals with a higher educational status are 8.5 times more likely to marry a partner with high education compared to an individual with lower education. (Smits, 2003)

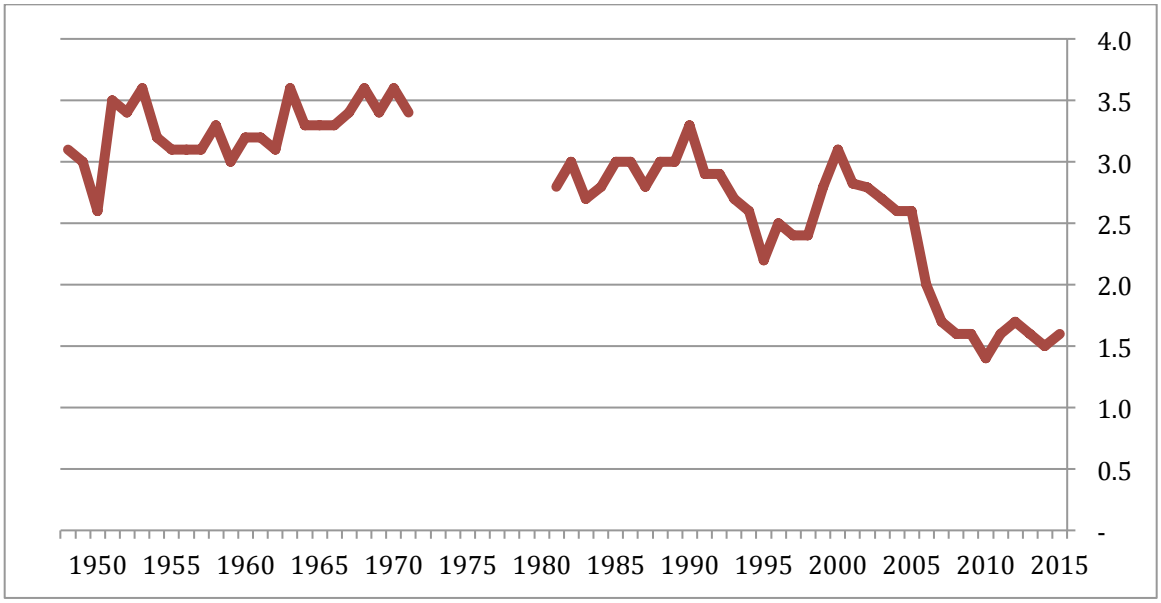
In addition to the economic position of educated potential mates, cultural preference also factor into educational and occupational homogamy. Individuals marry those with similar attitudes and values. (Osbeck & Moghaddam, 1997; Kalmijn, 1998) Educational attainment can serve as a sorting mechanism or can even change opinions and attitudes on various attitudes and values including gender roles, voting behavior, and traditional values (Alwin & Krosnick, 1991; Waal et al., 2007). Therefore similarly educated individuals may find their attitude or values to be more in line with one another and higher educated couples may have more equitable views on who makes decisions within the household.

These factors of educational homogamy should increase the level of income homogamy within families. Moreover because couples are increasingly occupational homogamous highly educated couples may have members who are less willing to sacrifice their human capital investments. This makes family migration decisions increasingly difficult as migration is often associated with one member of the household sacrificing their labor income or wages on behalf of the move leader.

This paper looks at internal migration in the United States (US). The US is marked as having a largely mobile population. While comparisons across countries is difficult due to difference in definitions of migrants, most international comparisons find that the US is indeed highly mobile. (Bell & Muhidin, 2009)

Around 1.5 percent of the population moves between two of the four Census regions each year and about 1.3 percent moves to different states within the same region annually. Around 3 percent change their county of residence each year. These migrations account for around 5 to 6 percent of the population moving each year. Approximately 32% of US natives will change states in their lifetime. Although these inter-state migration rates have more recently declined, which some attribute to the colocation problem or housing contraction, rates are still higher than most developed countries. (Molloy et al., 2011)

Figure 3: Per Cent of US Population Making Interstate Migrations per Year



Source: U.S. Census Bureau, Current Population Survey (United States Census Bureau, 2015)

Several arguments such as a long run immigrant dynamic and geographic characteristics try to explain why the US has such high internal migration numbers. (Long & Boertlein, 1976.; Long, 1991) Specific country characteristic that effect internal migration rates may impact this paper's external validity when approaching the colocational problem in other countries. However, it remains applicable to nations with similar migration behavior such as Canada and Australia. In addition the dynamic of household decision making in equitable powered couples remains important no matter the migration landscape within a country. The US provides a good testing group for migration decisions within dual career couples due to greater mobility and therefore a high number of observations of movers.

2 Theory

2.1 Migration Theory

The disequilibrium theory of migration states that an agent maximizes their utility through a function with two arguments, income and leisure which are subject to a full income constraint.[1] The implication in this model is that an individual will supply labor such that the marginal rate of substitution of consumption for leisure equals the wage rate. (Greenwood, 1997) This simple model expects that a individual is expected to offer their labor services to whichever market offers the highest wage which in turn may require migration. The human capital approach added to the disequilibrium perspective. Sjaasted (1962) focused on migration as a form of human capital investment. According to human capital investment a potential migrant will choose to move to or remain in the locality where their future net benefit is greatest. According to this human capital investment for an individual their migration decision is determined according to the difference in cost and earnings between the two potential migration locations (moving of staying.) (Greenwood, 1997; Sjaastad, 1962; Mincer, 1978)

$$\sum_{t=1}^{n} (E_{jt} - E_{it})/(1+r)^t$$

[1] The equilibrium theory of migration states that locations reach wage and capital cost equilibrium and therefore migration is instead driven by amenities such as shipping access for firms and cultural or natural amenities for individuals. Because quantifying these amenities is difficult the equilibrium theory of migration is outside the scope of this paper. (Greenwood 1997)

The above represents the earnings stream difference between location j less than in location i where r is the rate of future horizon depreciation. Similarly the costs follow a similar structure

$$\sum_{t=1}^{n}(C_{jt} - C_{it})/(1+r)^t$$

In order to determine whether a move should take place when future discounting the summation of earnings must take place over the remainder of the migrants life such that

$$PV_{ij} = \sum_{t=1}^{n}\left[\frac{1}{(1+r)^t}\right]\left[(E_{jt} - C_{jt}) - (E_{it} - C_{it)}\right]$$

Where PV is the present value of migration. Of course determining future investment returns to human capital is incredible difficult but the costs of migration, which includes both pecuniary and psychological costs, must be lower than the expected wage gains to migration.

$$C < w_j - w_i$$

According to the human capital framework the present value of migrating to location j must be higher than the present value of remaining in location i. In this human capital model economic opportunity differentials between locations represent gains to household utility that can be arbitraged from migration. This model has defined much of the migration literature until the 1970s and while the perspective has shifted somewhat to the equilibrium model, the idea of human capital investment is indeed important when discussing household with two careers. This model has been followed in much of the subsequent literature and it has been assumed that economic advantages, chiefly the differences in wages are the primary drivers in migration. (Greenwood, 1997)

The above is a brief description of the economic theories surrounding migration literature on an assumed individual migrating actor, however the concern of this paper is on the migration behavior of families and couples. The influence of family ties was analyzed by Mincer in 1978 who makes the distinction of tied persons. (Mincer, 1978) Such a person is one whose gains from migration are dominated by gains of the spouse. This model follows the assumption that for migration to occur the benefits must outweigh the costs. However rather than the more basic model wherein it is determined on an individual level this dual model of migration behavior is subject to a joint utility function such that the joint net benefit of migration should exceed the joint cost of migration. If the wife's income in location j, where the family chooses to move. is lower than they are in location i, the origin location, then the wife is a tied mover. If on the other hand the husband wages fail to offset the wives losses then the husband is a tied stayer. This dynamic leads to the reduction of employment and earnings of wives who do move and the increase in employment and earnings of husbands who move. However with the increase in female labor force participation this dynamic of tied movers may be less tenable and the results may lead to less migration and more marital instability. (Cooke, 2008; Mincer, 1978)

2.2 Family Decision Making

This dynamic of migration decisions in the household is tied to the household decision making literature. The economic convergence of men and women within families have led to changing dynamics in how decisions are reached within households. Rather than a single utility function determined by the primary actor either altruistic or otherwise newer models seek to examine the intersectionality between the individual utility function of both primary members within a family. These models, primarily influenced by game theory, state that family decision points are additionally affected by threat points such spousal misbehavior and the external threat of divorce. (Stevenson & Wolfers, 2007; Lundberg & Pollak, 1996; McElroy & Horney, 1981)This is particularly important in the migration literature, as not only has the convergence of wages increased the latitude within families' decision making, but this aspect of threat, inclusive of divorce, influences the population of migrants. If a family is facing a potential migration rather than option being move or not move and within this being a tied mover or a tied stayer,

the third option of divorce is optioned. This can make the examination of migration within marriages incredibly difficult. (Costa & Kahn, 2000)

For much of early economic theory the dominant tenant of belief was that families act as though they are maximizing a single utility function. The idea is that a family's common preference may result from consensus among family members or may be dominated by a single family member. (Becker, 1981; Samuelson, 1956)Common preference models assume that income in "pooled" and then allocated to maximize a single objective function. This means that a family's demand behavior depends on total family income and does not depend on the individual incomes of family members. However certain aspects such as the link between female education and fertility threw this theory into contention and new methods for modeling family behavior have been developed. Game-theoretical models of marriage and family have been developed building on the contributions of Manser and Brown (1980) and McElroy and Horney (1981). Most bargaining models of family behavior treat the decisions as the result of interactions between two decision makers - - the husband and the wife. (McElroy & Horney, 1981; Manser & Brown, 1980)

The common preference model derives primarily from Samuelson's (1956) consensus model and Becker's (1974, 1981) altruistic model. The consensus model theorizes that within a two member household each member has their own individual utility function that depends on their own private consumption of goods. However, by consensus, these members agree to maximize a consensus social welfare function within their individual utility which is subject to the joint budget constrait that pools income earned by both members. While this model is appealing in its simplicity Samuelson did not explain how family members reach consensus or how this consensus is maintained. Becker's altruistic model the family consists of one altruistic parent and a group of selfish but rational kids. Within this model Becker argues that the presence of the altruistic parent who makes transfers induces the selfish "kids" to act unselfishly. By adjusting transfers the altruistic parent induces the rotten kids to maximize the family income.

While these models are alluring in their simplicity they are dissatisfying on theoretical grounds when it comes to studies on marriage and divorce. Common preference cannot be suitably used in the modeling of divorce as these models require agents to compare their utility within a marriage and outside of a marriage. Along with the difficulty in modeling the causes of divorce is the difficulty in modeling decisions that are made under threat of divorce.

Rather than a cooperative preference model the bargaining model relaxes the pooling assumption and recognizes that families may involve two or more agents with distinct preference which in turn dictate family consumption. A typical bargaining model of marriage has a family that consists of a husband and wife. Each has a utility function that depends on his or her personal consumption of private goods. U_h for the husband and U_w for the wife. The bargaining model is marked by a "threat point" which is the point at which payoff through cooperation is outweighed by the returns to the carrying out of the threat. This can be marked by divorce or by some form of noncooperative equilibrium. The utility received by the husband or wife is dependent upon the threat point. The higher one's utility at the threat point the higher ones utility in the Nash bargaining solution. Thereby the family demands depend not only on prices and family income but also on the determinants of the threat point. (McElroy & Horney, 1981)

For a divorce threat model the threat point is the maximal level of income received separately within a marriage. Therefore demands met by bargaining within a household will not depend on family income but on the income received by the husband and the income received by the wife. However they are also marked by other environmental factors such as the remarriage market and income available to divorced men and women. Within the study of migration the divorce threat point may come into focus as a marriage may choose to dissolve rather than have one member face poor labor markets. Or a family may be more prone to tied stayers as individual utility function won't allow for migration to occur. (Stevenson & Wolfers, 2007; Abraham et al., 2010)

Tied to this modeling method is the separate spheres bargaining model of Lundberg and Pollak (1996) whereby the threat point is internal within the marriage and does not necessarily incur divorce. The husband and wife settle their differences through Nash bargain but the alternative to compromise is an inefficient noncooperative equilibrium wherein each spouse provides household public good such that they are individually maximizing their utility. In this model, while divorce is still the ultimate threat, noncooperative equilibrium may be more beneficial as spouses would receive benefits of joint consumption of public goods. (Lundeberg & Pollak, 1996) This internal threat point is important because within the separate spheres bargaining model socially assigned gender roles can assign primary responsibility with the household. An assigned gender role could imply that a woman would provide more household goods such as childcare or even sacrificing her career for her husbands. This relates to the "tied mover" idea in migration literature. In game theory literature many games seem to have a self-evident way to play. This in turn could suggest that the move toward equilibrium within a

marriage is dictated by social conventions regarding the correct responsibilities of husbands and wives, including husbands investments in human capital through migration. (England & Kilbourne, 1990; Sen, 1989)

2.3 Migration and Family Decision Making

A specific focus has been placed on how gender roles influence migration decisions. Empirical findings point to a powerful gender dimension to post-migration status that is not consistent with the human capital model. (Shihadeh, 1991; Shauman & Noonan, 2007; Boyle et al., 2003) Even when a wife has a more significant earnings history, occupational status or education than the husband, migration tends to depress the earnings of wives rather than husbands. (Smits et al., 2004; Boyle et al., 1999) There has however been evidence that points to the contrary. (Branden, 2013)

Building on the migration literature discussed above the field of research surrounding dual earner couples migration decisions is varied. Empirical research suggests the importance of husband's career opportunities in migration decisions. Duncan and Perrucci (1976) found that the higher occupational prestige and migration opportunities of the husband the more likely couples will choose to move. However similar occupational prestige and migration opportunities on behalf of the wife's career had no similar effect on the families migration propensity. (Duncan & Perrucci, 1976) Bielby and Bielby (1992), using data from 1970 linked migration with gender roll beliefs and find that couples who align with tradition gender roll beliefs will be reluctant to make a move that hurts the husbands career opportunity but will be willing to incur a similar loss in the wives income. (Bielby & Bielby, 1992) More recent research has found similar findings (Blackburn, 2010; Mckinnish, 2008; Cooke et al., 2009; Nivalainen, 2004) England and Kilbourne and Sen (1990) suggest that women are socialized to be less willing to drive hard bargains with their spouses and therefore get less than they would based on their otherwise would given their contributions to the budget constraint. (England & Kilbourne, 1990; Sen, 1989)This may suggest that they are more willing to take a weaker future position to further their partners career in effect becoming a tied mover.

Cooke 2008 frames the gender perspective on move intentions with the egalitarian ideals of couples. While he finds that couples who are more egalitarian in their views on gender tend to be more mobile, these egalitarian couples are also less likely to move if either the wife or the husbands are employed. In addition Cooke provides evidence for tied mover husbands in these egalitarian couples. (Cooke, 2008). Shauman 2010, looking at family migration of dual earner couples between 1980 and 2000 finds support for a gender dynamic of migration that is highly motivated by the employment dynamics of the male partner irrespective of wive's occupational status. She points to a interspousal comparative advantage as possible reasons for the asymmetry. (Shauman, 2010)

Green 1997 used a case study approach and found that migration decisions are tied to the spouse with higher earnings, a more location constrained career or the more insecure career. These characteristics were usually relegated to the husbands. (Green, 1997) In fact as Frank 1978 argues career choice may be endogenous to beliefs about migration and marriage. Women are less likely to invest in their human capital when their opportunity set is limited by their husband's location choices according to Frank. (Frank, 1978) Perales and Vidal 2012 point to the relative transferability of female dominated professions. Occupations such as teaching, nursing and secretarial work are easily transferable and have long been relegated as female dominated professions. (Perales & Vidal, 2013)) They find that individuals working in female-dominated occupations have lower propensities to move and to lead moves regardless of sex. Wives working in these occupations are more likely to be tied movers when matched with husbands in gender-integrated occupations. However, the authors point to lower opportunities for wage growth in female dominated careers as the primary motivation for male led moves. As education has increased among women and as women have achieved near parity with men in many occupations the emergence of dual career couples may shift the way families decide on their place of residence.

However, Tenn 2009 looking at migration patterns from 1960-2000 found that even with increases in female labor force participation and occupational prestige, women in most household find it optimal to focus on the husband's career and the migration patterns stayed relatively similar across the period. (Tenn, 2010) Quinn and Rubb 2010 point to suboptimal job matches attributed to migration. This leads to overeducation on the part of wives, which result from family migration (tied mover) or the inability to migrate (tied stayer). (Quinn & Rubb, 2011) The bad matches problem has been the focus of several articles on dual career couples propensity to live in large metropolitan areas. (Costa & Kahn, 2000; Compton & Pollak, 2007)

There has been some examination into the relationship between family migration and the gender pay gap. (Cooke et al., 2009) Decomposition techniques find that women's full time wages were about 91% percent that of men's when controlling for education, experience, industry, occupation, race and union membership. (Blau & Kahn, 2006)). When comparing married men and women's the wage gap is exagerated. Waldfogel (1998) finds that as much as 40%-50% of the gender gap in the United States can be attributed to marital status and parental status. Much of the literature on the gender pay gap has focused on this effect of marriage and child birth. (Anderson et al., 2003; Budig & England, 2001; Winslow-Bowe, 2009)Considerable less focus has been placed on the association between the wage gap and migration. Empirical evidence points to tied migrants being harmed in their labor force participation and employment (Cooke & Speirs, 2005) Cooke et al. (2009) look at the wage penalties suffered by women in family migrations. They finds that family migration has a clear effect on married women's earnings and while recovery takes place in the US, it takes several years. Loses in women's earnings were found to be compensated by increases in family earnings. However because husband's earnings increase while wives' earnings decrease the net effect is that family migration causes an increase in inequality within the family. Their findings shows the net effect of migration to be about half of that of childbirth. Though because migration is expected to improve husbands wages, the contribution to the intrafamily wage gap is around the same as childbirth.

While there has been considerable focus on the migration behaviors of dual earning couples there has been less focus on differences in migration dynamics across different educational groups. Costa & Kahn (2000) among others (Green, 1997; Rouwendala & Van Der Straatena, 2004; Mariotti et al., 2015) point to the dual career couple's concentration in large cities as an outcome of the family migration problem. Another focus of dual career couples in the literature is on commuting couples. This couples type was catalogued by Gross and Gerstel (1984) and has since been pointed to as how dual career couples solve their colocation dilemma. McFall and Murray-Close point to living apart as being a viable solution to location problems for educated couples following graduation from university. (McFall & Murray-Close, 2016) Several studies focus on the colocational problem of Phd graduates and tenure track professors (often called the two-body problem) and speculate that location problems hinder career advancement especially for women. (Schiebinger et al., 2008; Wolfinger et al., 2008) While these studies look at the colocational problem of dual career couples, because they focus on Phd graduates their populations are often more limited in their labor market options than other dual career couples outside of academia. (McFall & Murray-Close, 2016; Compton & Pollak, 2007)

Outside of the focus on commuting couples there has been less attention in the literature to dual career couples migration behaviors. Most studies focus on their geographic preferences. Costa and Kahn marked how the order of couples in which both members are college educated has increased in large metropolitan areas, from 32 percent in the 1940s to 50 percent by 1990. (Costa & Kahn, 2000) In addition to the returns to education which may be larger in large cities and the urban amenities such as access to cultural activities Costa and Kahn theorized that a primary cause of the increase in the dual-career population in large cities has to do with the colocational problem. Dual career couples are constrained by possible poor future labor matches. In order to counter this problem these couples choose to live in large metropolitan areas. In these large cities the potential for a bad labor market match is lower. Even if the first match is bad, because of the robust labor market there is a higher probability for better matches in the future. The authors state that large cities preserve the marriages of dual career households because living in large metropolitan areas with diversified labor market reduces the individual compromises to their own utility. Other authors have looked at the geographic preference of dual career couples in the US along with other countries including Australia (Rouwendala & Van Der Straatena, 2004; Mariotti et al., 2015)

There are two primary reasons why dually college educated couples are expected to have different migration patterns than non college educated couples. The first is under the assumption that within these couples both husbands and wives who are in careers or of higher occupational prestige. Dual career couples can be distinguished from dual earner couples in that within dual earner couples at least one member considers his of her occupation as a job. Jobs are distinguished from careers by merit of careers require expetnsive training or commitment. For dual-earner couples, one spouse's work is considered to be secondary. Dual-career couples pursue careers and at the same time. (Boye, 2014)

These career dynamics within the household affect household decisions not only through their current income contributions but through decisions for future investments in human capital. The second primary reason is the assumption that egalitarian views concerning gender role traditionalism are promoted through college. ((Bryant, 2003; Chatard & Selimbegovic, 2007; Funk & Willits, 1987) Under the assumption brought forth by Cooke (2008) dually college educated couples should have different dynamics in migration decisions and outcomes because of their more egalitarian views towards gender roles.

This paper is interested in examining the different internal migration characteristics of couple types. That is determining whether there is a behavioral difference in migration between low power couples, couples in which neither individual is college educated, and dual power couples, couples in which both members are college educated.

3 Hypotheses

There are two primary ways in which migration and intrafamily income dynamics can be examined. The first is how premigration conditions influence a family's decision of whether or not to move. The second is on the returns to migration for both the family and the individuals. This paper bases its investigation on the following hypotheses:

3.1 Premigration Conditions Hypotheses

H1: Among dual power couples the incomes and occupational prestige of both husbands and wives should influence whether or not migration occurs.

Among low power couples and unequal couples it is expected that only the husband's income or occupational prestige will be an influencing factor on migration propensities.

H2: Income equality among dual power couples should have a strong negative effect on migration.

Couples with more equal incomes will be less likely to have an individual who readily accepts being a tied mover. The bargaining model of family decisions suggests that more equitable incomes within a family will decrease the possibility to have a leading mover. Among low power and unequal power couples the effect of income equity within the couple is expected to have less of an effect as the cost to migration (such as diminished human capital investment) is expected to be lower for couples with low occupational prestige.

H3: Dual power couples will be more influenced by dissimilarities in occupational prestige than low power or unequal couples.

It is expected that among dual power couples occupational prestige will be higher. Therefore those with small differences in occupational prestige should likely have higher human capital investments both in terms of past investments and in terms of investment opportunities. Among low power and unequal power couples these differences in occupational prestige should have less impact as it is expected that lower occupational prestige has less opportunity for future human capital investment through migration.

3.2 Post migration Hypotheses

H4: Family Income should rise as a result of migration across all groups.

This is a general precondition for migration. However, due to push factors such as losing a job, family incomes may decrease as a result of migration. These income reductions are less expected among dual power couples who should have more potential labor market matches. Therefore while family income could decline for low power couples it should rise for dual power couples. Among unequal couples the relationship between push and pull factors is more unclear.

H5: Incomes should rise for both husbands and wives as a result of migration in the dual power couple population.

Based on the bargaining model of family decisions a decision such as migration is only reached if it is beneficial to both members and if these benefits outweigh the alternative (divorce). Therefore for dual couples to move incomes should rise for both husbands and wives. This decision is also influence by gender role beliefs that may be shaped by college education. Low power and unequal power couples should experience income

gains for at least one couple member, likely the husband. If migrations occur due to pull factors incomes of the husband should rise. There is the possibility that income of the husband may fall if migrations are due to push factors.

H6: Migrations among dual power couples should lead to more equity between spousal income.

Because migration is a two part bargaining model whereby decisions are shaped not only by the initial bargaining power of each couple but also by the resulting bargaining power of each couple member, it should be expected that among dual power couples migration is agreed upon only if it improves equity within the household. This should be especially true if it is to be assumed that dual power couples consist of individuals who seek future human capital investments. Among low power and unequal power couples the resulting economic equality should be less of a factor. This is influenced both by the potential for less egalitarian attitudes toward gender roles and by the lessened premium these couples may place on future human capital investments.

4 Data and Methods

4.1 Data

Data is taken from the Panel Study of Income Dynamics (PSID) The PSID was created in 1968 and has been collected for more than 4 decades. More than 70,000 peoples have participated in the PSID. The PSID was originally design to study the dynamics of income and poverty. AS such the original 1968 sample was drawn from two populations: an over sample of low income families and a nationally representative sample. In 1997 the sample was reduce from approximately 8,500 families to 6,300 families and the survey transitioned to biennial sampling. As such we have used data from the 1997 sample to the 2013 sample. To account for the over sample of low income individuals sample weights are provided. (Institute for Social Research, 2015)

The sample was restricted to married or cohabitating couple between the ages of 24 and 55. In addition because of the time element of migration, couples are only included if they were observed in two consecutive periods for the premigration conditions. From the initial population sample of 23,608 married couple years with the age range, 3,492 observations were lost due to attrition. Another 734 were lost due to change in marital status leaving a sample of 20,116 married couple years. Because the focus is primarily on dual income families, the sample was restricted to only include couples where both members being employed at time t resulting in 14,590 observations.

Observations for which labor income for either husbands and wives was missing was removed and trimmed labor income outliers to the 95th percentile. Also removed were couples with missing or incomplete education data. The population was reduced to 13,204 observations.

For estimations on postmigration outcomes three time periods are required. This is due to the fact that incomes in the year of the move may be disrupted by the migration behavior.

By restricting the postmigration models to couples observed in three periods the postmigration sample is restricted to 10,343 observations.

There are three methods for determining internal migration in the data. One particularity about family mobility is delineating residential mobility from actual migration. Residential mobility is defined as moving within a labor market usually due to changes in residential preferences such as moving to the suburbs for life-cycle changes (Michielin & Mulder, 2008). In the data there are three ways to be certain that moves are being made in order to change labor markets. The first is through a change in the state of residence. This method allows for observing more movers however, as some labor markets cross state lines there is the concern that while a change in state is observed the actual reason for the move is not due to migrating behavior but instead due to mobility behavior. A second method for determining migration behavior is to look at individuals who changed regions. The US census designates six census areas: North East, North Central, South, Mountain, West and Alaska and Hawaii. While there is the slight possibility for labor markets to exist across region boundaries these are rare and it is expected that individual who change regions are truly migrating and not carrying out residential mobility. A third way of looking at migrating behavior is to look at the reasons for moves. The PSID asks all movers for the reasons for their move. There are nine categories, which in turn are classified as consumption based or production based. Within the production based category the reason, moved for job or career should align with the definition of migration as it would be assumed that in order for a productive move to be necessary a change of labor market is required. This allows the data to capture those who had intrastate moves but changed labor markets.

Of the 13,204 observations 510 had interstate moves, 261 had regional moves, and 260 moved solely for productive reasons. The majority of movers cited ambiguous or mixed reasons for their moves. Because moves are a multifaceted decision it is likely that many movers who choose to move based on productive reasons fall into this category, however, because couples who changed labor markets from the ambiguous category can not be extracted from other reasons it is unreasonable to include them in our migration category.

Table 1: Migrations per Migration Type

	State Migration	Region Migration	Productive Reasons
	Premigration Sample		
No Migration	12,694	12,943	12,944
Migration	510	261	260
Total	13,204	13,204	13,204
	Postmigration Sample		
No Migration	9,907	10,118	10,121
Migration	436	225	222
Total	10,343	10,343	10,343

Because of the larger number of observed moves by states changing the state of residence will be used as the primary method of determining migration.

Migration tends to peak in the mid twenties and decline steadily from there although with a slight uptick in retirement age. (Greenwood, 1997) As such control for age are included. Couples with members over the age of 55 are removed from the sample as the interest is primarily in couples of working age and did not want to include moves that are the result of retirement. Couples with members under the age of 24 were also excluded. Including couples under 24 may include couples with members who are still students. Although students are less likely to be dual earners by including couples under the age of 24 the low earner couples would skew younger than the dual earner couples and low power couples could include observations that are in the process of becoming dual power couples. In addition because the interest is in the effect that future discounting of careers may have on migration a younger population is more viable. Men in the sample are slightly older than women with a mean of 39.3 years for husbands and 37.6 for wives.

Having children should also decrease the propensity to move as the costs of migration increase with more children. Children are grouped categorically as follows: no children, having 1 child, and having 2 or more children. Early testing estimation should no discernable difference between having 2 children are higher orders of children present. For parsimony 2 or more is the maximum category for children. Taken from the children-in-families approach which found that children under 7 had no participatory role in migration decisions a control is placed for the presence of children under the age of 7. (Bushin, 2009) Mincer also supposed that children, younger than school age would not depress migration and older school age children would. (Mincer, 1978) While this

variable may also include families with members of higher ages the control serves as a proxy for younger families. This control is important not only from the children-in-families approach but because younger families may have more mobility as their children are not yet enrolled in schools. In addition having younger children may facilitate life-cycle behavior such as moving to larger housing or moving out of cities to the suburbs. (Michielin & Mulder, 2008) However long distance moves are less likely to be associated with life-cycle behaviors. These are more likely to be met with short distance moves or residential mobility. (McAuley & Nutty, 1982)

A dummy variable for home ownership is included as couples who own homes are less expected to migrated due to higher migration costs. The majority of the sample were home owners with 10,320 observations owning or buying a home in the premigration sample and 8,410 in the postmigration sample.

The PSID defines married partners as longtime cohabitators regardless of civil status. Because the threat of "divorce" or dissolving the coupledom may be more readily available for cohabitating couples it would be expected that cohabitating couples have low probabilities of migration. A dummy control is included for these cohabitating couples. (Boyle et al., 2008)

Occupational prestige was coded using the PSID 3-digit 2000 Census occupational classification. Nam Powers occupational prestige was used. The Nam-Powers-Boyd occupational prestige scales from 0 to 100 with 100 being the highest possible occupational prestige. In the premigration sample occupation prestige for husbands have a mean of 50.8 and 52.5 for wives and means of 52.0 and 50.5 for husbands and wives respectively in the postmigration sample. Observations prior to 2001 were recoded according to 2000 3-digit occupational codes using a crosswalk provided by the US Census. (Nam & Boyd, 2004)

Because labor income for both men and women are rightward skewed an inverse hyperbolic sine transformation (IHS) was applied to the data. The IHS transformation is preferable to other alternatives such as dropping individuals with no income or creating categorical variables. (Burbidge et al., 1988) It also has the advantage of treating incomes of zero as truly zero rather than the log(y+1) transformation that assumes small income for individuals with no earnings. The IHS is as follows:

$$IHS = log(income_i + (income_i^2 + 1)^{1/2})$$

For large values this transformation behaves like a normal log transformation while it reduces values to y as y approaches zero. In addition to the logarithmic transformation incomes were adjusted for inflation with 2010 as the reference year. (World Bank Data)

Transformations lead to normally distributed data on incomes with a slight leftward skew. Husbands have a mean logged income of 11.2 and wives have a mean logged income of 10.5 in the premigration sample and 10.84 and 9.7 respectively in the postmigration sample.

A variable was constructed from the labor income of both husbands and wives to create a ratio of labor income within the family. This ratio is referred to as index. The index was constructed as a ratio of the low earner in the family on the high earner in the family regardless of sex.

$$Index = \frac{Income_{Husband}}{Income_{Wife}} \; if \; Income_{Wife} \geq Income_{Husband}$$

$$Index = \frac{Income_{Wife}}{Income_{Husband}} \; if \; Income_{Husband} > Income_{Wife}$$

This index is a measurement of the income homogamy within a couple. As this index rises we expect the propensity to move to fall. Index has a mean of .52 for the premigration sample and .47 for the post migration sample.

This paper is interested in the income dynamics that determine migration and result from migration across different educationally homogamous couples. As such the sample is divided in to education classes. Three education classes are determined. The first is named low power: this consists of couples wherein both members are without college degrees. This category is the largest and constitutes 6,164 couple year observations for the premigration sample and 4,851 couple years for the postmigration sample. The second category – dual power – consists of couples wherein both members have at least a bachelor's degree. This sample consists of 3,375 couple years in the premigration

sample and 2,628 couple years in the postmigration sample. The final category are those couples with unequal education, the nonhomogamous couples. Due to small sample size no distinction was made between female led and male led couples although some tests were performed that include a dummy variable for wife led couples which had no effect on the estimations. This category consists of 3,666 couple year observations for the premigration sample and 2,864 couple year observations for the postmigration sample.

While the dual power couples do not necessarily equate to dual career couples due to potential gender specialization (Frank, 1978; Shauman, 2010; Shihadeh, 1991) or other factors, due to the small sample size, other methods, such as income (Goldin, 1997) or prestige were not viable as it restricted the number of observations.

These education classes have similar income distributions within the family. A means comparison test of the index variable across these education groups produced a Wilks Lambda of .99 suggesting that incomes are similarly distributed within families across these education classes.

Table 2: State Migrations by Education Class

	Premigration Sample			
	Low Power	Dual Power	Unequal	Total
Changed States T= t+1				
No	5,988	3,172	3,534	12,694
Yes	176	203	131	510
	3%	6%	4%	4%
Total	6,164	3,375	3,665	13,204
	Post Migration Sample			
	Low Power	Dual Power	Unequal	Total
Changed States T= t				
No	4,698	2,453	2,756	9,907
Yes	153	175	108	436
	3%	7%	4%	4%
Total	4,851	2,628	2,864	10,343

As can be seen in Table 2 dual power couples have higher rates of migration than their low power and unequal power counterparts with a Pearson's χ^2 of 59.7 in t-test of sample difference. This could be due to these couples being in careers that require high mobility. In addition, dual power couples have on average higher incomes. Therefore the costs of migration are relatively lower for these couples.

A full table of variables broken down by education class can be seen in Appendix I.

It is important to note the advent of sample selection problems in migration research. Sample selection problems occur when the population of a subgroup is not representative of the entire population. In migration literature a problem exists that migration is self determined. (Greenwood, 1997) Migrants will select into their behavior and therefore it may not be appropriate to compare migrants to non-migrants. The basic control model assumes that $E(\Delta income_n | M = 0) = E(\Delta income_p | M = 0)$ for individual n whose migration, $M = 1$ and individual p with whom $M = 0$. Of course movers choose to migrate and thus may be subject to differential behavioral responses. This classic selectivity problem can take its form in migration literature in several forms. Persons who migrate may be those who have the most favorable opportunities. Economic agents select into the migrating population based on the belief that moving will yield some return to their utility. Therefore migrants are not random. The fact that individual n migrates and individual p remains even though all measurable indicators suggest they are the same may suggest that there are differences in unobservables between individuals. These difference may be how they view future benefits or how they measure psychological costs.

Two other forms of sample selectivity are present in family migration studies: attrition and divorce. Attrition, if it is not random and instead determined by a family's move could affect the results. A second major source of sample selectivity bias is that of divorce. As the estimations are concerned with the determinants and consequences of migration among married couples, a coupledom that divorces will no longer be part of the sample. Due to the fact that divorce is considered to be part of the threat negotiation, which is apparent in family bargaining, divorce and the migration decision are likely inextricably linked. (Greenwood, 1997; Compton & Pollak, 2007) Therefore families that stayed married and either moved or stayed survived whereas those who divorced may have done so due to the pressure placed on individual's utility that is present when faced with migration decisions.

In order to account for these potential sample selection problems the use of a two-step model was employed using methods by Heckman to determine the effect if any of sample selection from divorce and attrition. (Heckman, 1976) Sample selection into migration by movers is addressed using matching estimators and nearest neighbor propensity score matching. However, weaker predicted probabilities of migration within the sample diminish the viability of these estimates. (Heckman et al., 1998)

4.2 Approach

We are initially concerned with the probability of migration for couple types. Our sample is divided into three subsamples for education class: low power for couples where both members are high school graduates or below, dual power for couple where both members are college graduates, and unequal power for couples where one member is a college graduate and one is not. Unequal powered couples could be further reduced into male power and female power couples, however due to our limited observations we kept this group as such.

Our initial model is based on a binary choice probit model where move is our dependent variable.

$$Move_{ik}^{*} = \beta_1(log\ wife\ income_{ik}) + \beta_2(log\ husband\ income_{ik}) + \boldsymbol{X_{ik}'\beta} + \varepsilon_{ik}$$

$$P(Move_{ik} = 1) = P(Move_{ik}^{*} > 0)$$

$$= P(\beta_1(log\ wife\ income_{ik}) + \beta_2(log\ husband\ income_{ik}) + \boldsymbol{X_{ik}'\beta} + \varepsilon_{ik} > 0)$$

$$i = 1,2,..,n$$

$$k = all\ couples, Low\ Power, Dual\ Power, Unequal\ Power$$

where **X** is a matrix of premigration controls: children groups, nonwhite, home ownership, youngest child under 7, cohabitating partners, age of husband, occupational prestige for husbands and wives, and residing in an large city. $\boldsymbol{\beta}$ is a vector of coefficients for premigration controls.

This model is performed with all couples to determine the effect of income of migration. In order to see the income dynamics of different couple classes, separate estimations are performed for each couple class under the assumption that these couple types discount husband and wives' income in different manners. According to Hypothesis 1 it is expected that as wives' incomes rise the propensity to migration will diminish, as they will be less willing to be a tied mover. This should be especially true for dual power couples.

Another specification is estimated with the inclusion of the index variable. Testing Hypothesis 2:

$$Move_{ik}^{*} = \beta_1(log\ wife\ income_{ik}) + \beta_2(log\ husband\ income_{ik}) + \beta_3 index_{ik} + \boldsymbol{X_{ik}'\beta} + \varepsilon_{ik}$$

Similarly to hypothesis 1, income dynamics and interfamily equality should have effects on the propensity to migrate. Greater income equality should decrease the probability that a couple would migration. As incomes within the family become more equal the likelihood of having one individual opt in to being a tied mover is likely to decrease. Therefore higher indices should result in low migration. The index is also expected to react to each couple class differently. It is expected that this effect would be more pronounced among the dual power couples than low power and unequal power couples. However, if according to transferability specialization hypothesis women, who are college educated, selected income careers with low earnings growth but high transferability we may expect little difference between low power and high power couples on the degree of income equality in the household. (Shauman, 2010; Shihadeh, 1991)

A similar estimation is performed on the absolute difference in occupational prestige between husbands and wives. This variable should be a proxy for potential income growth and will test Hypothesis 3.

$$Move_{ik}^{*} = \beta_1(log\ wife\ income_{ik}) + \beta_2(log\ husband\ income_{ik}) + \beta_3 Prestige\ Difference_{ik} + \boldsymbol{X_{ik}'\beta} + \varepsilon_{ik}$$

To test hypotheses 4 and 5 a three period regression if performed to estimate changes to income that result from migration for wives, husbands, and family income. As such three estimation types are performed for each dependent variable. Within these types secondary models for education subpopulations are estimated under the assumption that the migration effect effects dual power couples with different dynamics. According to Hypothesis 5 Dual Power families should see positive growth in both husbands and wives incomes. Included in this model are controls for age, age squared, and experience based on the Mincer earnings function. (Mincer, 1958) In addition a variable for having a

newborn child is included in the model as the motherhood penalty is expected to take place. (Budig & England, 2001)

This income model is estimated with three time periods: the period before a move the period of the move and the period following a move. Incomes resulting from migration are measured in the period following migration so that the labor disruption that migration may incur is likely excluded as this would negatively bias the results. In addition sampling from periods after migration allows for some recovery to occur for the tied mover. The model is as follows:

$$Income_{ik,t+1} = \beta_0 + \beta_1 Migration_{ik,t} + \beta_2 income_{ik,t-1} + \beta_3 newborn_{ik,t+1} + \boldsymbol{X'_{ik,t-1}\beta} + \epsilon_{ik}$$

$$i = 1,2,\dots,n$$

$$k = all\ couples, low\ power, dual\ power, unequal\ couples$$

Where income t + 1 if the income of either the husband, the wife, or household income $migration_{ik,t}$ is a dummy variable for whether or not migration occurred in the middle period $\boldsymbol{X_{ik,t-1}}$ is a matrix of controls from the first cycle and newborn is a dummy for having a new child in the final cycle. This model is performed for all couples and for our subpopulations separately. (Blackburn, 2010)

A similar three period regression is performed with the index measurement in time t+1 as the dependent with a control for income equality in time t-1. According to hypothesis 6 it is expected that dual power incomes will seek migration that result in more income equality or at least do no significantly disrupt the distribution of income within the family.

5 Results

H1: Among dual power couples the incomes and occupational prestige of both husbands and wives should influence whether or not migration occurs

In order to test Hypothesis 1 a probit regression of the propensity to move in time period t+1 on premigration conditions was estimated both for all couple types and each distinct couples type.

As can be seen in Table 3 husband's income and prestige is a larger driver of migration propensities than wife's characteristics. However when comparing low power to dual power couples interesting differences can be observed. The predicted probability that the husband's income is driving the migration decision from all couples seems to be driven mostly by these low power couples. This could be expected if it assumed that low power couples have more defined gender roles. (Bielby & Bielby, 1992; Shauman, 2010; Shihadeh, 1991) In addition occupational prestige on the part of the husband is similarly positive and significant at $p<.10$. Predicted marginal effects of husband's income at the means predict approximately a 1% increase in the probability of migration for each log increase of husband's income. However this marginal effect is quite low as this equates to around half a percent increase per a standard deviation increase of .75 or 130% of the mean. While low power couples had a negative but insignificant relationship between wives' occupational prestige and a positive relationship between husband's occupational prestige and migration among dual power couples this relationship is reversed. Couples with greater wife occupational prestige are positively associated with migration behavior, though these results are economically small and insignificant.

Table 3: Husband's and Wives' Income on the Propensity to Migrate

	(1) All	(2) Low Power	(3) Dual Power	(4) Unequal
Log Labor Income				
Wife	-0.0117	-0.0248	-0.0265	-0.0320
	(0.0234)	(0.0395)	(0.0328)	(0.0486)
Husband	0.110***	0.134**	0.0279	0.0546
	(0.0393)	(0.0680)	(0.0506)	(0.0816)
Occupational Prestige				
Wife	0.000799	-0.000897	0.00192	-0.00154
	(0.000881)	(0.00160)	(0.00146)	(0.00153)
Husband	0.000202	0.00294*	-0.00245*	-0.00241
	(0.000888)	(0.00166)	(0.00130)	(0.00159)
Cohabitating	-0.262***	-0.191	-0.417**	-0.0948
	(0.0978)	(0.146)	(0.195)	(0.177)
Children				
No Children	0.183**	0.235*	0.116	0.131
	(0.0730)	(0.132)	(0.129)	(0.142)
1 Child	(ref.)	(ref.)	(ref.)	(ref.)
2 + Children	-0.0507	0.112	-0.157	-0.0601
	(0.0622)	(0.109)	(0.102)	(0.120)
Under 7	0.163**	0.137	0.151	0.165
	(0.0686)	(0.109)	(0.121)	(0.139)
Age Husband	-0.0178***	-0.0199***	-0.0177***	-0.00887
	(0.00337)	(0.00602)	(0.00585)	(0.00653)
Own Home	-0.543***	-0.493***	-0.711***	-0.416***
	(0.0551)	(0.0871)	(0.0993)	(0.107)
NonWhite	-0.0751	-0.0841	0.0367	-0.121
	(0.0705)	(0.106)	(0.124)	(0.144)
MSA	-0.0735	0.000481	-0.131	-0.178*
	(0.0508)	(0.0857)	(0.0819)	(0.0971)
Constant	-1.897***	-2.282***	-0.309	-1.190
	(0.455)	(0.813)	(0.650)	(0.992)
Observations	13,204	6,164	3,375	3,665

Robust standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

Another point of interest is the negative relationship between husband's occupational prestige and migration. This negative relationship may indicate that husbands among dual power couples are more geographically constrained and that their careers are dependent on specific locations. Higher occupational prestige may "lock" couples into a location. While this may also hold true for wives' of higher occupational prestige, because of less observations of these high prestige wives, significance is not determined.

Also of note is the very strong and significant relationship between cohabiting couples in dual power relationships and migration. Cohabiting couples are expected to have lower migration probabilities due to less friction to stay together both socially and economically. (Boyle et al., 2008) These frictions should be lessened fairly equally across all couple types. The economically larger and significant relationship between cohabiting couple in dual power relationships may indicate that a family bargaining process is taking place whereby the external threat for dual power couples is stronger than that of low power couples. This would be expected as it is assumed that these couples would have better opportunities outside of marriage that low power couples both in the marriage market and in supporting themselves. However, the strength of cohabiting couples may be attributed to divorce and thus the removal from the sample. It is possible that when faced with a migration decision cohabitating dual power couples likely choose one of two options: separate and move or remain in the couple and stay. In the sensitivity analysis section tests bear this out as the variable for cohabiting couples become insignificant when Heckman corrections for divorce and attrition are applied.(Table 11)

Hypothesis 2: *Income equality among dual power couples should have a strong negative effect on migration.*

Hypothesis 2 is based off of two assumptions. The first is the hypothesis proposed by Cooke (2008) that couples with more egalitarian views on gender roles are less agreeable to migration that incurs a tied-mover. The second reason why dual power couples are expected to be more effected by income equality within the household has to do with human capital investment. Under the human capital theory of migration, migration occurs when moves are associated with improvement in human capital investments. Income equality among dual power couples is more likely to be among couples with greater premigration human capital investments than among low power couples. As migration disrupts this investment for the tied mover, if bad labor matches are to be assumed, then high income-equality within the household should strongly and negatively affect the probability to migrate. In order to test the effect that income equality within the

household has on different couple classes the same specification as used above is estimated with the inclusion of the index variable.

Table 4 shows the results from the index estimation. While the index for income equality within the family is indeed negative and significant for dual power couples it is similarly negative and significant for low power couples, though to a lesser degree both in terms of significance and economically. These estimations provide evidence that interhousehold bargaining is taking place and that more equal household are less willing to bargain according to a separate spheres condition. However, contrary to hypothesis 2 income equity seems to have similar effects across both educationally homogamous groups. Interestingly for unequal power couples, while greater income equality has a negative sign, it is less economically powerful and not significant. This may indicate that even where couples are more equal in terms of their income contributions, migration decisions are still led by the individual with the most human capital investment or that unequal couples have more defined gender roles.

H3: Dual power couples will be more influenced by dissimilarities in occupational prestige than low power or unequal couples.

Current occupational prestige can be a good proxy for spouses' human capital investment. As such, the differences in occupational prestige may serve to determine if a couple has decided, implicitly or explicitly, to invest in a single member's human capital. Under the human capital migration model tied movers may agree to migrate because the future returns to their spouses human capital investments will make up for their loss of income. If the occupational prestige gap is small between spouses premigration it may be less likely that a coupledom will be able to determine on whose human capital to invest in. Because dual power couples on average have higher occupational prestige the investment in human capital for both husbands and wives should have higher future returns. Therefore the occupational prestige difference should be more of a determinant of migration for these dual power couples.

Testing this hypothesis the probit migration model is estimated again, this time with a control for the absolute difference in prestige between husbands and wives. The results from these models can be seen in Table 5

Table 4: Effect of Income Equality Index on Migration Propensities

	(1) All	(2) Low Power	(3) Dual Power	(4) Unequal Power
Index	-0.360***	-0.334*	-0.343**	-0.239
	(0.110)	(0.195)	(0.166)	(0.213)
Log Labor Income				
Wife	0.0455	0.0370	0.0218	0.00510
	(0.0292)	(0.0537)	(0.0380)	(0.0615)
Husband	0.0845**	0.103*	0.00682	0.0474
	(0.0355)	(0.0604)	(0.0464)	(0.0756)
Occupational Prestige				
Wife	0.000790	-0.000892	0.00197	-0.00153
	(0.000884)	(0.00160)	(0.00147)	(0.00153)
Husband	0.000122	0.00297*	-0.00241*	-0.00253
	(0.000887)	(0.00166)	(0.00129)	(0.00160)
Cohabitating	-0.255***	-0.196	-0.405**	-0.0839
	(0.0983)	(0.147)	(0.194)	(0.178)
Children				
No Children	0.192***	0.247*	0.115	0.140
	(0.0731)	(0.132)	(0.129)	(0.142)
1 Child	(ref.)	(ref.)	(ref.)	(ref.)
2+ Children	-0.0574	0.105	-0.174*	-0.0577
	(0.0625)	(0.109)	(0.102)	(0.120)
Under 7	0.162**	0.143	0.148	0.160
	(0.0686)	(0.109)	(0.121)	(0.139)
Age Husband	-0.0189***	-0.0208***	-0.0187***	-0.0101
	(0.00342)	(0.00621)	(0.00590)	(0.00653)
Own Home	-0.544***	-0.500***	-0.709***	-0.415***
	(0.0552)	(0.0877)	(0.100)	(0.107)
NonWhite	-0.0648	-0.0739	0.0507	-0.122
	(0.0707)	(0.106)	(0.126)	(0.143)
MSA	-0.0878*	-0.000640	-0.149*	-0.190**
	(0.0506)	(0.0859)	(0.0813)	(0.0951)
Constant	-1.976***	-2.378***	-0.372	-1.326
	(0.431)	(0.770)	(0.629)	(0.979)
Observations	13,204	6,164	3,375	3,665

Robust standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

Table 5: Effect of Absolute Difference in Occupational Status on Migration Propensities

	(1) All	(2) Low Power	(3) Dual Power	(4) Unequal
Difference in Occupational Prestige	0.00285***	0.00221	0.00325**	0.00171
	(0.000935)	(0.00165)	(0.00153)	(0.00174)
Log Labor Income				
Wife	-0.00221	-0.0173	-0.0159	-0.0260
	(0.0240)	(0.0403)	(0.0337)	(0.0500)
Husband	0.113***	0.141**	0.0314	0.0563
	(0.0392)	(0.0683)	(0.0506)	(0.0820)
Occupational Prestige				
Wife	0.000858	-0.000941	0.00241*	-0.00164
	(0.000843)	(0.00154)	(0.00139)	(0.00150)
Husband	0.000655	0.00278*	-0.00139	-0.00224
	(0.000871)	(0.00161)	(0.00138)	(0.00158)
Cohabitating	-0.254***	-0.185	-0.421**	-0.0891
	(0.0978)	(0.146)	(0.196)	(0.177)
Children				
No Children	0.188***	0.239*	0.121	0.132
	(0.0729)	(0.131)	(0.128)	(0.142)
1 Child	(ref.)	(ref.)	(ref.)	(ref.)
2+ Children	-0.0450	0.117	-0.153	-0.0577
	(0.0621)	(0.108)	(0.102)	(0.120)
Under 7	0.172**	0.142	0.159	0.172
	(0.0685)	(0.108)	(0.120)	(0.139)
Age Husband	-0.0178***	-0.0199***	-0.0178***	-0.00880
	(0.00338)	(0.00602)	(0.00586)	(0.00654)
Own Home	-0.551***	-0.501***	-0.715***	-0.421***
	(0.0553)	(0.0874)	(0.0998)	(0.107)
NonWhite	-0.0749	-0.0827	0.0312	-0.119
	(0.0705)	(0.106)	(0.125)	(0.144)
MSA	-0.0835	-0.00699	-0.139*	-0.185*
	(0.0509)	(0.0863)	(0.0814)	(0.0975)
Constant	-2.138***	-2.492***	-0.650	-1.334
	(0.464)	(0.816)	(0.671)	(1.009)
Observations	13,204	6,164	3,375	3,665

Robust standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

As can be seen in Table 5 the absolute difference in occupational prestige is a significant predictor of migration for the all couples model. However the predictive significance is lost for both the low power and unequal power couples. Among dual power couples the absolute difference in occupational prestige is positive and more economically strong than the whole sample population. According to marginal effects calculated at the means, a difference on the order of 10, for instance the difference between a database developer (NPB = 90) and a linguist (NPB = 80), increase the probability of migration by 0.3%. While not strikingly large it does demonstrate some relationship between premigration prestige and migration decisions.

H4: Family Income should rise as a result of migration across all groups.

The above hypothesis is a testing hypothesis. Under migration theory migration will only occur if family income in the destination location j is larger than that of the origin location i. Family income must also increase to a degree to offset the costs of migration:

$$C < Income_j - Income_i$$

While statistically insignificant migration is associated with an increase of family income by around 4% for all couples. (Table 6) Among dual power couples will see similar associations with migration. However, among low power couples, migration is associated with a decrease in incomes, though again statistically insignificant. This may be explained by the push factor of migration. Low power couples may be more affected by sudden changes in the labor market or to poor economies in their origin state. Therefore interstate migrations may occur because of a loss of job and a move to a more agreeable labor market. In addition, while family incomes may decrease, because the cost of living is variable between states and between urban and rural locations a decline in incomes may not necessarily indicate a decline in purchasing power. Unfortunately, because better location data is unavailable, adjusting for purchasing power is not viable.

Table 6: Effect of Migration on Family Income in Time t+1

	(1) All	(2) Low Power	(3) Dual Power	(4) Unequal
Migration T=t	0.0414	-0.0861	0.0391	0.0644
	(0.0509)	(0.0929)	(0.0658)	(0.101)
Newborn T= t+1	-0.0602*	-0.121*	-0.104**	-0.0263
	(0.0351)	(0.0630)	(0.0499)	(0.0646)
Premigration Controls T= t-1				
Log Labor Income				
Husband	0.408***	0.403***	0.404***	0.291***
	(0.0141)	(0.0236)	(0.0216)	(0.0278)
Wife	0.200***	0.202***	0.164***	0.198***
	(0.0101)	(0.0172)	(0.0141)	(0.0205)
Occupational Prestige				
Husband	0.00305***	0.00294***	0.00177***	0.00207***
	(0.000345)	(0.000594)	(0.000537)	(0.000638)
Wife	0.00283***	0.00257***	0.00128**	0.00223***
	(0.000333)	(0.000542)	(0.000545)	(0.000630)
Age Husband	-0.0115	-0.0156	-0.0330	0.0100
	(0.0199)	(0.0296)	(0.0390)	(0.0367)
Age Husband ^ 2	5.84e-05	7.97e-05	0.000348	-0.000155
	(0.000245)	(0.000366)	(0.000471)	(0.000450)
Experience Husband	-0.00186***	-0.00105	-0.00181	-0.00291**
	(0.000614)	(0.000897)	(0.00117)	(0.00119)
Age Wife	0.0516***	0.0498*	0.0758**	0.0288
	(0.0193)	(0.0289)	(0.0381)	(0.0352)
Age Wife ^ 2	-0.000587**	-0.000568	-0.000908*	-0.000306
	(0.000244)	(0.000368)	(0.000470)	(0.000443)
Experience Wife	-0.00136**	-0.00189**	-0.000202	-0.000664
	(0.000565)	(0.000820)	(0.00103)	(0.00114)
MSA	0.164***	0.146***	0.137***	0.165***
	(0.0213)	(0.0346)	(0.0334)	(0.0398)
Constant	4.114***	4.249***	4.826***	5.481***
	(0.317)	(0.491)	(0.523)	(0.654)
Observations	10,343	4,851	2,628	2,864
R-squared	0.199	0.143	0.223	0.110

Standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

H5: Incomes should rise for both husbands and wives as a result of migration in the dual power couple population.

Under the hypothesis that dual power couples have members that are less willing to become tied movers both husband and wives incomes should rise as a result of migration. However there is a counter argument to this hypothesis. Under the gender specialization hypothesis, highly educated wives specialize in female specific careers. These careers have lower earnings growth. Therefore, because migrations advantage the spouse with higher earning potential, under the specialization theory highly educated wives may be disadvantaged by migration behavior.

Interestingly models 3 and 7 in Table 7 show that wives predominately have income losses as the result of migration even among dual power couples while husband's income increase. In addition for low power couples incomes of both husbands' and wives had negative signs for the migration coefficient. This may indicate migration behavior that is more subject to premigration conditions such as job turnover than a human capital investment.

The estimations in Table 7 are performed on a population of dual earners in time t-1. Therefore the model includes those families who had a member, more likely to be the wife, who did not return to the labor force following migration. To test if migrations spur poor labor matches or retreat from the labor force, for dual power and low power wives equally a second set of estimations is performed with a restricted sample of only those couples with both members employed in time t-1 and time t+1. This restricts the sample to 8,682 couple years.

For family income effects of migration, this restricted sample displays similar effects of migration on family income growth and loss. A table of the results of the migration effect on family income when restricting to dual earners in the periods before and following migration can be seen in the appendix.

Table 8 shows the estimations of couples income changes resulting from migration among couples for whom both members were employed both before and after migration. While the declines to wives' incomes are lessened among this restricted population they are still negative and economically significant for the dual power populations. This indicates that even among dual power couple wives are predominately the tied mover and are enjoying poor labor matches following migration. This runs contrary to hypothesis 5 and may indicate that even with educational homogamy, highly educated households are still subject to interfamily gender roles concerning in which spouse's human capital the family invests.

Table 7: Effect of Migration on Husband's and Wives' Income in Time t+1

	Wives				Husbands			
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	All	Low Power	Dual Power	Unequal Power	All	Low Power	Dual Power	Unequal Power
Migration T=1	-0.780***	-0.381	-0.643**	-1.397***	0.0222	-0.405*	0.222	0.186
	(0.163)	(0.277)	(0.269)	(0.314)	(0.122)	(0.217)	(0.177)	(0.236)
Newborn T= t+	-1.387***	-1.461***	-1.673***	-0.890***	0.0395	0.0925	-0.0371	-0.00213
	(0.112)	(0.188)	(0.204)	(0.200)	(0.0824)	(0.145)	(0.132)	(0.149)
Premigration Controls								
Labor Income	1.064***	1.113***	1.003***	1.068***	0.942***	1.019***	0.894***	0.789***
	(0.0323)	(0.0507)	(0.0576)	(0.0636)	(0.0332)	(0.0544)	(0.0577)	(0.0649)
Occupational P	0.00951***	0.0110***	0.00886***	0.00795***	0.00640***	0.00567***	0.00642***	0.00571***
	(0.00105)	(0.00160)	(0.00219)	(0.00195)	(0.000811)	(0.00138)	(0.00141)	(0.00149)
Age	0.0309	0.0796	-0.0619	0.0527	0.00572	-0.0331	-0.0144	0.0958
	(0.0434)	(0.0616)	(0.0947)	(0.0820)	(0.0337)	(0.0500)	(0.0648)	(0.0651)
Age^2	-0.000306	-0.000982	0.00109	-0.000722	-0.000308	0.000111	-0.000104	-0.00128
	(0.000560)	(0.000802)	(0.00120)	(0.00106)	(0.000421)	(0.000629)	(0.000799)	(0.000810)
Experience	-0.000308	-0.000956	0.00207	-0.000696	-0.00305**	-0.00385*	-0.000479	-0.00248
	(0.00176)	(0.00240)	(0.00405)	(0.00335)	(0.00143)	(0.00207)	(0.00299)	(0.00266)
MSA	-0.0977	-0.151	-0.118	0.0135	0.172***	0.194**	0.0635	0.209**
	(0.0675)	(0.102)	(0.134)	(0.123)	(0.0506)	(0.0804)	(0.0889)	(0.0928)
Constant	-2.524***	-3.908***	-0.468	-2.683	0.271	0.271	1.392	0.0273
	(0.856)	(1.224)	(1.877)	(1.635)	(0.705)	(1.062)	(1.328)	(1.407)
Observations	10,343	4,851	2,628	2,864	10,343	4,851	2,628	2,864
R-squared	0.142	0.135	0.160	0.126	0.103	0.088	0.108	0.071

Standard errors in parentheses

Table 8: Effect of Migration on Husband's and Wives' Income in Time t+1 Restricted Population of Husbands & Wives Who Were Employed in Time t+1

	Wives				Husbands			
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	All	Low Power	Dual Power	Unequal Power	All	Low Power	Dual Power	Unequal Power
Migration T=1	-0.135***	-0.0109	-0.257***	-0.196**	0.0391	-0.0401	0.0751	-0.0721
	(0.0437)	(0.0698)	(0.0746)	(0.0888)	(0.0353)	(0.0585)	(0.0555)	(0.0720)
Newborn T= t+	-0.243***	-0.281***	-0.362***	-0.143***	0.0201	-0.00839	0.0379	-0.0627
	(0.0298)	(0.0473)	(0.0572)	(0.0536)	(0.0238)	(0.0394)	(0.0420)	(0.0430)
Premigration Controls								
Labor Income	0.569***	0.527***	0.587***	0.561***	0.598***	0.550***	0.651***	0.495***
	(0.00888)	(0.0135)	(0.0164)	(0.0177)	(0.00975)	(0.0148)	(0.0187)	(0.0192)
Occupational P	0.00324***	0.00238***	0.00374***	0.00241***	0.00281***	0.00252***	0.00129***	0.00208***
	(0.000269)	(0.000383)	(0.000593)	(0.000512)	(0.000225)	(0.000352)	(0.000433)	(0.000422)
Age	0.0109	0.0246*	-0.00741	-0.000163	0.00996	0.00431	0.00489	0.0153
	(0.0112)	(0.0149)	(0.0254)	(0.0217)	(0.00941)	(0.0129)	(0.0196)	(0.0186)
Age^2	-0.000134	-0.000322*	0.000104	1.48e-05	-0.000117	-4.88e-05	-9.33e-05	-0.000156
	(0.000144)	(0.000193)	(0.000322)	(0.000279)	(0.000117)	(0.000161)	(0.000242)	(0.000231)
Experience	-0.000306	-0.000806	0.000357	0.000660	-0.00195***	-0.00240***	-0.00123	-0.000971
	(0.000451)	(0.000579)	(0.00109)	(0.000879)	(0.000399)	(0.000536)	(0.000913)	(0.000749)
MSA	0.0988***	0.103***	0.0582	0.0883***	0.0977***	0.0846***	0.0990***	0.0600**
	(0.0172)	(0.0245)	(0.0362)	(0.0320)	(0.0140)	(0.0206)	(0.0271)	(0.0261)
Constant	4.420***	4.588***	4.659***	4.752***	4.348***	4.930***	4.118***	5.398***
	(0.223)	(0.303)	(0.505)	(0.435)	(0.199)	(0.277)	(0.406)	(0.406)
Observations	8,682	3,989	2,233	2,460	8,682	3,989	2,233	2,460
R-squared	0.382	0.326	0.415	0.333	0.381	0.312	0.402	0.265

Standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

H6: Migrations among dual power couples should lead to more equity between spousal income.

The above hypothesis comes from the bargaining model whereby decisions are a two step process. Not only do initial bargaining positions effect the decision but so to do the relative bargaining position following a decision. (Two part bargaining) For a migration decision these bargaining position will be the relative incomes of husbands both before and after a migration. The three period model is employed again here but with the dependent variable as the index of income equality in the period following migration. Along with variables for income, prestige, and the Mincer equation controls employed in the above estimations the initial income equality index in the period preceding migration is included. Table 9 shows the predicted effect migration has on income equality across education groups.

Against what would be predicted according to hypothesis 6, migrations among dual power couples do not increase income equality among couples. In fact migration has a negative effect on the index of approximately 6 percent. This negative association between migration and income equality between dual power couples garners more evidence toward the gender role specialization hypothesis even with the egalitarian attitudes that university education likely engenders. Similar results hold for couples who are dual earners prior to and following migration. (Appendix II)

Table 9: Effect of Migration on Income Equality Index in Time t+1

	(1) All	(2) Low Power	(3) Dual Power	(4) Unequal
Migration T=t	-0.0638***	-0.0191	-0.0684***	-0.0985***
	(0.0142)	(0.0244)	(0.0215)	(0.0283)
Newborn T= t+	-0.0927***	-0.0949***	-0.128***	-0.0415**
	(0.00976)	(0.0166)	(0.0162)	(0.0181)
Index T= t-1	0.447***	0.397***	0.558***	0.406***
	(0.0128)	(0.0203)	(0.0232)	(0.0239)
Premigration Controls T= t-1				
Log Labor Income				
Husband	-0.0218***	-0.00675	-0.0312***	-0.0225***
	(0.00399)	(0.00633)	(0.00720)	(0.00776)
Wife	0.0216***	0.0249***	0.0135**	0.0287***
	(0.00357)	(0.00603)	(0.00574)	(0.00705)
Occupational Prestige				
Husband	0.000189**	0.000268*	0.000692***	-0.000235
	(9.58e-05)	(0.000156)	(0.000175)	(0.000179)
Wife	0.000781***	0.000846***	0.000582***	0.000883***
	(9.25e-05)	(0.000142)	(0.000177)	(0.000177)
Age Husband	-0.00231	-0.00268	-0.00241	0.00261
	(0.00555)	(0.00778)	(0.0127)	(0.0103)
Age Husband ^	5.35e-05	5.12e-05	0.000107	-3.12e-05
	(6.82e-05)	(9.62e-05)	(0.000154)	(0.000126)
Experience Hus	-5.69e-06	0.000112	-0.000192	-0.000117
	(0.000171)	(0.000235)	(0.000382)	(0.000335)
Age Wife	0.00224	0.00826	-0.0124	0.00436
	(0.00537)	(0.00759)	(0.0124)	(0.00988)
Age Wife ^ 2	-4.81e-05	-0.000124	0.000107	-6.13e-05
	(6.78e-05)	(9.67e-05)	(0.000153)	(0.000125)
Experience Wif	-0.000135	-0.000250	-5.28e-05	6.00e-05
	(0.000157)	(0.000216)	(0.000336)	(0.000321)
MSA	-0.0117**	-0.0137	-0.00785	-0.00397
	(0.00594)	(0.00905)	(0.0109)	(0.0113)
	(0.105)	(0.135)	(0.346)	(0.233)
Constant	-0.00731	-0.0115	-0.00481	0.00343
	(0.00593)	(0.00910)	(0.0109)	(0.0112)
Observations	10,343	4,851	2,628	2,864
R-squared	0.221	0.180	0.337	0.204

Standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

5.1 Matching Estimators

A problem exists with estimation of income subsequent to move in that many of the income estimators used in the model may be endogenuous to the error term in the decision to move. Migration is a choice variable and therefore it is not randomly assigned. Evidence has pointed to this selection issue being reason for biased estimates to the returns to migration. (Robinson & Tomes, 1982; Gabriel & Schmitz, 1995) In order to account for this selection issue matching estimators will be applied.

The effect of moving on those who move is given by:

$$\Delta Y_i = E(Y_{1i} - Y_{oi} | M_i = 1) = E(Y_{1i} | M_i = 1) - E(Y_{0i} | M_i = 1)$$

While data exists on movers:

$$E(Y_{1i} | M_i = 1)$$

The counterfactual does not exist:

$$E(Y_{0i} | M_i = 1)$$

The traditional OLS model employed elsewhere in this paper treats nonmovers as the counterfactual such that:

$$E(Y_{0j} | M_j = 0) = E(Y_{0i} | M_i = 1)$$

However as discussed above migration is not a randomly selected variable. As such the above assumption may not hold.

In order to alleviate this problem a matching estimator is employed. For each member on the nonmovers (group j) a score is constructed with a matrix of premigration characteristics that predict migration. This score is then used to ”match” these nonmovers to movers of similar characteristics.

For matching estimators to be acceptable several conditional must apply. (Angrist & Pischke, 2009)

$$Condition\ I: Y_0 \perp M \parallel Z$$

The above condition states that once conditioned on Z the outcome without treatment is independent of the decision to migration.

A weaker condition can be employed if the interest is only in mean effects of treatment:

$$Condition\ Ia: E(Y_0|Z, M = 1) = E(Y_0|Z, D = 0) = E(Y_0|Z)$$

Probability of treatment (migration) must be constructed such that:

$$0 < Pr(D = 1|Z) < 1$$

An important advantage of matching estimators is that it allows information that is endogenous to treatment and the treatment effect to be included in the model. (Heckman et al., 1998) Due to the fact that premigration income, home ownership, and occupational prestige may be expected to endogenous to the error term, matching estimators will help deal with this selection issue. There are significant disadvantages to the matching estimator as well. The matching information must be good enough that once conditioned on Z there is no longer a selection problem. Another problem is that there may be many individuals for which good matches are unable to be found. This may be especially true for couples who have very high migration propensities.

Nearest neighbor matching was employed for couples who migrated with couples who stayed using a constructed score of the probability to migrate. The matching estimator is constructed from a variation model 1 which includes husbands’ and wives’ wages, husbands’ and wives’ occupational prestige, children controls, a dummy for a nonwhite individual in the couple, homeownership controls, a dummy for cohabitating couples, and

age controls. In addition, the matching estimator is constructed with educational class dummies with low power couples being the reference category.

The matching estimator is derived from our initial model of the propensity to migrate.

$$Pscore_i = \beta_0 + \beta_1 log\ income\ wife_i + \beta_2 log\ income\ husband_i + \beta_3 Dual\ Power_i + \beta_5 Unequal\ Power_i + \boldsymbol{X'\beta} + \varepsilon_i,$$

$$i = 1, 2, \ldots n$$

Matches were constructed within groups by adding a constant to the matching estimator by for each education class. The matching estimator and distributions of the matching score can be seen in Appendix III. Matching scores require a strong predictive probability of Z, or the matching estimator, because of what was outlined in condition I. Therefore, with an extremely low Pseudo R^2 of .043 the matching estimator employed here should only be approached with a high degree of skepticism.

Average treatment effects were calculated for the incomes for both husbands and wives and family income across all education classes. In addition the treatment effect of migration on the index of household equality was also calculated. Standard errors were calculated with 100 bootstraps.

As can be seen in Table 10 the average treatment effect of migration on family income migration still has a negative relationship between income growth in low power couples and positive growth for dual power couples. Although for dual power couples the ATE is insignificant with a t-score of 0.342. Still observed is the decline in wives income following a migration among the dual power couples. Though this ATE is not significantly different from zero and has a large standard error. Under the matching estimator the changes in income inequality following migration was lessened from -0.068 to -0.056. While this result may indicate that the changes in income equity within dual power couples is not as large as was estimated in the OLS equation the negative sign and significance still leads to the reject of hypothesis 6.

Table 10: Treatment Effects with Matching Estimators

	(1) All	(2) Low Power	(3) Dual Power	(4) Unequal
		ATE Migration		
Family Income				
ATE	-0.0739	-0.301	0.0584	-0.0522
S.E.	(0.119)	(0.236)	(0.171)	(0.106)
t score	-0.623	-1.76	0.342	-0.492
n. controls	399	148	145	105
Wife Income				
ATE	-0.668	-0.339	-0.213	-1.882
S.E.	(0.315)	(0.59)	(0.682)	(0.601)
t score	-2.121	-0.574	-0.312	-3.134
n. controls	401	150	146	105
Husband Income				
ATE	-0.018	-0.355	0.314	-0.032
S.E.	(0.186)	(0.404)	(0.308)	(0.388)
t score	-0.116	-0.878	1.016	-0.084
n. controls	398	119	144	106
n. controls	510	148	203	131
Index				
ATE	-0.058	-0.003	-0.056	-0.127
S.E.	(0.061)	(0.039)	(0.042)	(0.048)
t score	-1.941	-0.071	-1.332	-2.646
n. Controls	390	145	138	104
Number Treated	510	176	203	131

5.2 Sensitivity Analysis and Sample Corrections

In order to test the effect of sample selection from divorce and attrition three equations are used:

$$a_i = \boldsymbol{V_i}\boldsymbol{\delta} + v_i, \qquad i = 1, 2, \dots, N_1 \quad (1)$$
$$d_i = \boldsymbol{Z_i}\boldsymbol{\gamma} + w_i, \qquad i = 1, 2, \dots, N_2 \quad (2)$$
$$y_i = \boldsymbol{X_i}\boldsymbol{\beta} + \varepsilon_i, \qquad i = 1, 2, \dots, N_3 \quad (3)$$

Where equation one is the probability of attriting from the group for the whole population of married couples within the age range (N_1). Equation two is the probability of selecting into the divorced state from our population of individuals who were not lost due to attrition (N_2). Equation three is the probability of migrating for our population (N_3) which is the remainder of the population that was not lost through attrition or change of marital status. Equation 2 only estimates the probability of divorce and not other changes of marital status (read widowdom) as death is assumed to not be selected into and there are only a small number of widow state changes in the sample. In the absence of selection bias issues we assume that v_i, w_i, and ε_i to be i.i.d. with mean of zero. Therefore the equation for the probability of migration can be written as:

$$y_i = \boldsymbol{X_i}\boldsymbol{\beta} + \lambda_1 w_i + \lambda_2 v_i + \eta_i, i = 1, \dots N_3$$

If sample selection issues do not exist we would expect that λ_1 and λ_2 to be equal to zero and η_i to be equal to ε_i. For our estimation we replace w_i and v_i with the estimated residuals which are equal to the inverse Mills ratio (Compton & Pollak, 2007; Heckman, 1976)

$$y_i = \boldsymbol{X_i\beta} + \lambda_1 \frac{\phi(d'\gamma)}{\Phi(d'\gamma)} + \lambda_2 \frac{\phi(a'\delta)}{\Phi(a'\delta)} + \eta_i, i = 1, \dots N_3$$

Models used for equation (1) and equation (2) can be seen in Appendix III

By comparing the Heckman correct estimations with the initial estimation the degree to which sample selection effects results can be seen. All Heckman Models can be found in Appendix IV.

For the predictive power that husband's and wives' income effect the decision to migrate the results remain fairly consistent. While there is a point change on the effect wive's income has on migration propensities from negative to positive the coefficient remains insignificant. Also of note is the high economic power and significance of λ_2 among the dual power couple population. The coefficient is 8.377 and significant at $p<0.05$. This may signify that among dual power couples the external threat point of separation is more economically viable due to either the labor market position of these couples and, in conjunction, the good potential position upon reentry to the marriage market. Related to this the effect of being a cohabiting couple changes from negatively and significantly influencing migration decisions to being positive and insignificant. Indicating that once divorce or separation sample selection controls are implemented the effect that cohabitating has on migration is negligible.

In the models for the absolute difference in occupational prestige estimations with selection controls were consistent with initial models. Across all education populations the sample selection controls were not significantly different than zero.

Once Heckman corrections were included in the model which predicts migration on the interfamily equality index results remained fairly consistent. However the effect that income equality had on migration adjusted from -0.343 and significant at $p<0.05$ to -0.131 and insignificant. Although because there was no point change once Heckman correction were introduced, the results still suggest that greater income equality does reduce the probability to migrate. However, to a much lesser degree than was initial determined in earlier estimations. While the degree to which income equality effects migration was lessened for dual power couples the selection controls λ_1 and λ_2 were not found to be significantly different than zero.

With Heckman corrections the estimates for the returns to family income and the change in income equality remained consistent to estimations without correction.

The largest degree of variation when Heckman correction were employed were the losses to migration that were incurred on the part of wives income. In the initial models these loses amounted to -0.780 and -0.643 or a 51% and 47% decline in income for the whole population and the dual power subsample respectively. With Heckman corrections these losses increased to -1.347 and -1.256 or a 74% and 72% decline in incomes for the whole population and the dual power couples subsample respectively. This large variation may indicate that there is a veritable sample selection issue that arises when calculating wives income following migration. One possible sample selection that may precipitate this difference are divorces that result from wives who are unwilling to become a tied mover. Evidence from the model points to this being a problem as λ_2, the control derived from divorce is quite large for dual power couples at 5.482, although this coefficient is not significantly different than zero.

These results remained large even when restricted the sample to couples that were fully employed at both time t-1 and t+1.

Table 11: Effect of Husband's and Wives' Income on Migration Propensities with Correction

	(1) All	(2) Low Power	(3) Dual Power	(4) Unequal
Log Labor Inco				
Wife	0.00260	-0.0155	0.00572	-0.0158
	(0.0121)	(0.0198)	(0.0175)	(0.0262)
Husband	0.0387**	0.0348	0.00469	0.0167
	(0.0195)	(0.0313)	(0.0256)	(0.0411)
Occupational Prestige				
Wife	-0.000301	-0.000353	-0.000384	-0.00225
	(0.00101)	(0.00172)	(0.00172)	(0.00194)
Husband	-0.000818	0.00232	-0.00372**	-0.00299
	(0.000948)	(0.00165)	(0.00145)	(0.00185)
Cohabitating	0.238	-0.0500	0.419	0.153
	(0.247)	(0.379)	(0.480)	(0.502)
Children				
No Children	0.338**	0.186	0.132	0.403
	(0.132)	(0.198)	(0.238)	(0.289)
2 + Children	-0.133*	0.0322	-0.305**	-0.0781
	(0.0705)	(0.114)	(0.122)	(0.139)
Under 7	0.188**	0.0296	0.0988	0.281
	(0.0933)	(0.135)	(0.168)	(0.209)
Age Husband	-0.00658	-0.0331*	-0.0262	0.0202
	(0.0140)	(0.0195)	(0.0251)	(0.0304)
Own Home	-0.736***	-0.540***	-0.934***	-0.587***
	(0.0942)	(0.143)	(0.165)	(0.200)
NonWhite	-0.00641	-0.0726	0.113	-0.0565
	(0.0732)	(0.104)	(0.136)	(0.154)
MSA	-0.0758	-0.00845	-0.154*	-0.156*
	(0.0498)	(0.0814)	(0.0822)	(0.0950)
$\lambda 1$	1.498	-0.334	0.523	2.257
	(0.963)	(1.362)	(1.723)	(2.047)
$\lambda 2$	3.866**	2.036	8.377**	1.003
	(1.903)	(2.819)	(3.803)	(3.963)
Constant	-1.317**	-0.788	0.881	-1.515
	(0.587)	(0.924)	(1.084)	(1.241)
Observations	13,204	6,164	3,375	3,665

Robust standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

Table 12: Effect of Migration on Husband's and Wives' Incomes with Corrections

	Wives				Husbands			
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	All	Low Power	Dual Power	Unequal Power	All	Low Power	Dual Power	Unequal Power
Migration T=1	-1.347***	-0.544	-1.256**	-2.404***	0.0707	-0.721*	0.459	0.501
	(0.307)	(0.505)	(0.517)	(0.601)	(0.226)	(0.389)	(0.338)	(0.450)
Newborn T= t+	-2.590***	-2.649***	-3.224***	-1.586***	0.0645	0.244	-0.109	-0.0501
	(0.210)	(0.334)	(0.396)	(0.381)	(0.153)	(0.254)	(0.254)	(0.282)
Premigration Controls								
Labor Income	1.036***	1.072***	0.962***	1.071***	0.858***	0.907***	0.862***	0.743***
	(0.0309)	(0.0478)	(0.0561)	(0.0618)	(0.0331)	(0.0527)	(0.0576)	(0.0646)
Occupational P	0.0174***	0.0205***	0.0167***	0.0134***	0.00956***	0.00802***	0.0108***	0.00935***
	(0.00203)	(0.00306)	(0.00427)	(0.00374)	(0.00153)	(0.00255)	(0.00271)	(0.00284)
Age	-0.0134	0.0380	-0.0700	0.0214	-0.192***	-0.256***	-0.222*	-0.0139
	(0.0775)	(0.105)	(0.193)	(0.152)	(0.0600)	(0.0848)	(0.132)	(0.123)
Age^2	0.000362	-0.000425	0.000993	2.43e-05	0.00249***	0.00340***	0.00237	0.000466
	(0.00102)	(0.00141)	(0.00246)	(0.00199)	(0.000794)	(0.00116)	(0.00169)	(0.00162)
Experience	-0.00134	-0.00223	0.00361	-0.00417	-0.00116	-0.00326	0.00194	0.00170
	(0.00341)	(0.00459)	(0.00786)	(0.00670)	(0.00272)	(0.00390)	(0.00574)	(0.00515)
MSA	-0.142	-0.171	-0.229	-0.00600	0.357***	0.447***	0.0854	0.414**
	(0.129)	(0.194)	(0.259)	(0.235)	(0.0958)	(0.150)	(0.171)	(0.178)
λ1	0.362	0.247	-3.098*	2.537*	4.634***	5.521***	2.589	4.068***
	(0.763)	(1.074)	(1.845)	(1.424)	(0.784)	(1.187)	(1.613)	(1.531)
λ2	1.290	1.876	5.482	-1.727	6.680***	5.818***	11.04**	4.711
	(1.962)	(2.441)	(7.174)	(4.144)	(1.672)	(2.230)	(5.262)	(3.662)
Constant	-2.877*	-4.405**	-0.681	-3.834	6.547***	6.748***	7.824***	4.879*
	(1.552)	(2.092)	(3.978)	(3.051)	(1.329)	(1.878)	(2.868)	(2.745)
Observations	10,343	4,851	2,628	2,864	10,343	4,851	2,628	2,864
R-squared	0.147	0.141	0.166	0.130	0.115	0.102	0.116	0.078

6 Discussion

This paper was concerned with the causes and outcomes of migration among educationally homogamous couples. There were several reasons why differences were expected. The first is that with highly educated similar investments in human capital was expected. These investments were hypothesized to decrease the likelihood that wives agree to become tied movers. The second primary reason why dual power couples were assumed to have different migration dynamics than their low power counterpart is the egalitarian values that higher education supposedly imbues. The findings of this paper point to interfamily income dynamics acting to reject the hypotheses. The results suggest that even with increases in female education, labor market attachment and entry into predominately male led fields women still bear the brunt of the cost to migration.

Several explanations can be posited why this is the case. The first follows the gender specialization hypothesis. Even among highly educated and homogamous couples wives select into traditionally female dominated fields. These fields have high transferability and low-income growth and therefore families will decide to migrate based on husband's human capital investment. The fact that the results in this paper are similar to earlier research, which drew on data from the 1970s to the 1990s, suggests that this dynamic of gender specialization persists today. (Bielby & Bielby, 1992; Shihadeh, 1991; Shauman, 2010)

One particular finding of interest is the effect the absolute difference in occupational prestige had on migration propensities. For dual power couples a large difference in prestige was positive and significant. In fact once separate subpopulations were estimated the degree to which the absolute difference in occupational prestige effected migration

was insignificant for both low lower couples and unequal power couples suggesting that dual power couples are driving the significance of this variable in the full population. This finding fails to reject hypothesis 3 that occupational prestige differences are more of factor in determining migration among dual power couples than couples of other classifications. This suggests that dual power couple have more difficulty in deciding in whose human capital to invest.

A problem with analyzing migration outcomes is the difference in purchasing power between origin and destination locations. Among the low power couples, migration was responsible for an income decline. While this could be due to push factors such as job loss or poor economies in origin states they could also be attributed to these couples migrating to locations where less income goes further due to lower costs of living. However without better controls for purchasing power in the two locations of interest determining the relationship between cost of living and incomes in origin and destination locations is impossible. While geographic data exists in the PSID the public access data restricts data only to the state level. Due to the variability between urban and rural purchasing power and variability between cities in the same state, state CPI controls were unlikely to ameliorate this problem. Further research that employs PSID's restricted dataset, which includes county level controls, could strengthen the robustness of these estimates.

To account for the selection issues that are apparent in migration research two methods were employed. Matching estimators, using nearest neighbor matching, were employed. While the matching model was not significantly robust, the results from the matching estimator were consistent with the treatment effect estimated from traditional OLS.

Heckman correction were employed to correct for selection issues that arise from attrition and divorce. Attrition and divorce may be significant factors effecting bias in migration estimates. Estimates with Heckman corrections were fairly consistent with estimates without correction with some notable exceptions. The effect that being a cohabiting couples had on migration propensities experienced a point change for dual power couples and became insignificant. This may indicate that among these couples many chose divorce rather than migration and left the sample. Evidence that points to the effect that divorce has on migration among dual career couples is the high economic and significant coefficient for the Heckman control constructed from the divorce equation.

Migration is not solely an economic decision. Other factors enter into the choice of whether or not to migrate. Include among these are life-cycle behaviors, amenities, and locations of other family member such as parents or siblings. The estimates in this paper disregard these influences due to scarcity of measurements of these aspects in the data. However, further research that includes controls for these factors would improve the robustness of the findings provided here. Attempts were made to ameliorate selection problems through the use of matching estimators, however without better controls even matching estimators are lacking in their applicability.

7 Conclusion

The interactions between household income and migration are complicated. This paper sought to examine how income dynamics and migration differed between educationally homogamous couples. The hypotheses proposed in this paper suggested that highly educated couples would have more equitable income dynamics surrounding migration. However, the results of the estimations reject the majority of these hypotheses with a possible exception of hypothesis 3, which involved educational prestige. Instead the results from this paper suggest that even among highly educated and homogamous couples, husbands are still the drivers of migration and wives are predominately tied movers. While this is in line with previous research much of the literature predates 2000. It was expected that new incursions into predominately male led fields on the part of women would dramatically alter the migration landscape. This expectation does not bear out in the data.

While educationally homogamous and highly educated couples exhibit similar migration behavior to their lower power counterparts more research is required in the migration field. This paper separated education subpopulations quite broadly, due in part to insufficient observations. The broad definition of dual power couples may have led to a heterogeneous population where some couples are dual career families and others are only duel earners. This may be especially true if some wives are entering into university education to select into gender specialized fields. A better definition of dual career couples may be required in further research.

Another problem with the estimation techniques employed here was the definition of migration. Migration was defined as a change in state of residence. While this disregards many instate migrations it was preferable to other possible measures due to insufficient observations of regional moves and ambiguous measures of stated reason. Further research that can better describe a change in place of employment would improve the robustness of these estimates.

Corrections and estimation techniques were employed to ameliorate selection issues in the migration data. However, migration is a complicated process and may involve unmeasured factors such as life-cycle behavior, location amenities, and family reasons. Better measures of these factors would improve the results presented here.

A possible approach moving forward is to employ the PSID's restricted dataset. This data includes geographic information down to the county level. The use of county level data not only allows for capturing instate migration, but it would enable the researcher to set cost of living controls to better measure changes in true income. Data on the county level could also allow researchers to control for the effect that the current labor market has on migration decisions. By capturing instate migration the number of observed migrators would be increased allowing for a more restricted definition of dual career couple.

Works Cited

Abraham, M., Auspurg, K. & Hinz, T., 2010. Migration Decisions Within Dual-Earner Partnerships: A Test of Bargaining Theory. *Journal of Marriage and Family*, 72(4), pp.876-92.

Alwin, D.F. & Krosnick, J.A., 1991. Aging, Cohorts, and the Stability of Sociopolitical Orientations Over the Life Span. *Aging, Cohorts, and the Stability of Sociopolitical Orientations Over the Life Span Duane F. Alwin and Jon A. Krosnick American Journal of Sociology*, 97(1), pp.169-95.

Anderson, D.J., Binder, M. & Krause, K., 2003. The Motherhood Wage Penalty Revisited: Experience, Heterogeneity, Work Effort, and Work-Schedule Flexibility. *Industrial Relations & Labor*, 56(2), pp.273-94.

Angrist, J.D. & Pischke, J.-S., 2009. *Mostly Harmless Econometrics: An Empiricist's Companion*. Princeton University Press.

Becker, G.S., 1974. A Theory of Marriage. In Theodore W. Schultz, e. *Economics of the Family: Marriage, Children, and Human Capital*. University of Chicago Press. pp.299-351.

Becker, G.S., 1981. *A Treatise on the Family*. 1991st ed. Cambridge, MA: Harvard University Press.

Becker, G.S., 1981. Altruism in the Family and Selfishness in the Market Place. *Economica*, 48(189), pp.1-15.

Bell, M. & Muhidin, S., 2009. *Cross-National Comparisons of Internal Migration*. Research Paper. Human Development Reports.

Bielby, W.T. & Bielby, D.D., 1992. I Will Follow Him: Family Ties, Gender-Role Beliefs, and Reluctance to Relocate for a Better Job. *American Journal of Sociology*, 97(5), pp.1241-67.

Blackburn, M.L., 2010. Internal Migration and the Earnings of Married Couples in the United States. *Journal of Economic Geography*, 10(87-111).

Blau, F. & Kahn, L.M., 2006. The U.S. Gender Pay Gap in the 1990s: Slowing Convergence. *Industrial & Labor Relations Review*, 60(1), pp.45-66.

Blossfeld, H.-P., 2009. Educational Assortative Marriage in Comparative Perspective. *Annual Review of Sociology*, 35, pp.513-30.

Boye, K., 2014. Dual-Earner Couples/Dual-Career Couples. In A.C. Michalos, ed. *Encyclopedia of Quality of Life and Well-Being Research*. Springer Netherlands. pp.1703-06.

Boyle, P., Cooke, T., Halfacree, K. & Smith, D., 1999. Gender inequality in employment status following family migration in GB and the US: the effect of relative occupational status. *International Journal of Sociology and Social Policy*, 19(9/10/11), pp.109-43.

Boyle, P., Cooke, T., Halfacree, K. & Smith, D., 2003. The Effect of Long-Distance Family Migration and Motherhood on Partnered Women's Labour-Market Activity Rates in Great Britain and the USA. *Environment and Planning A*, 35, pp.2097-114.

Boyle, P.J. et al., 2008. Moving and union dissolution. *Demography*, 45(1), pp.209-22.

Branden, M., 2013. Couples' Education and Regional Mobility – the Importance of Occupation, Income and Gender. *Population, Space and Place*, 19(5), pp.522-36.

Bryant, A., 2003. Changes in Attitudes Toward Women's Roles: Predicting Gender-Role Traditionalism Among College Students. *Sex Roles*, 48(3), pp.131-42.

Budig, M.J. & England, P., 2001. The Wage Penalty for Motherhood. *American Sociological Review*, 66(2), pp.204-25.

Burbidge, J.B., Magee, L. & Robb, A.L., 1988. Alternative Transformations to Handle Extreme Values of the Dependent Variable. *Journal of the American Statistical Association*, 83(401), pp.123-7.

Bureau of Labor Statistics, 2016. *Employed persons by detailed occupation, sex, race, and Hispanic or Latino ethnicity*. [Online] Available at: http://www.bls.gov/cps/cpsaat11.htm [Accessed 16 May 2016].

Bushin, N., 2009. Researching family migration decision-making: a children-in-families approach. *Population, Space and Place*, 15(5), pp.429-43.

Buss, D.M., Shackelford, T.K., Kirkpatrick, L.A. & Larsen, R.J., 2001. A Half Century of Mate Preferences: The Cultural Evolution of Values. *Journal of Marriage and Family* , 63(2), pp.491-503.

Chatard, A. & Selimbegovic, L., 2007. The Impact of Higher Education on Egalitarian Attitudes and Values: Contextual and Cultural Determinants. *Social and Personality Psychology Compass*, 1(1), pp.541-56.

Compton, J. & Pollak, R.A., 2007. Why are Power Couples Increasingly Concentrated in Large Metropolitan Areas? *Journal of Labor Economics*, 25(3), pp.475-512.

Cooke, T.J., 2008. Gender role beliefs and family migration. *Population, Space and Place*, 14(3), pp.163-75.

Cooke, T.J., 2008. Migration in a Family Way. *Population, Space and Place*, 14(4), pp.255-65.

Cooke, T.J., 2014. Metropolitan growth and the mobility and immobility of skilled and creative couples across the life course. *Urban Geography*, 35(2), pp.219-35.

Cooke, T.J., Boyle, P., Couch, K. & Feijten, P., 2009. A Longitudinal Analysis of Family Migration and the Gender Gap in Earnings in the United States and Great Britain. *Demography*, 46(1), pp.147-67.

Cooke, T.J. & Speirs, K., 2005. Migration and Employment Among the Civilian Spouses of Military Personnel. *Social Science Quarterly*, 86(2), pp.343-55.

Costa, D.L. & Kahn, M.E., 2000. Power Couples: Changes in the Locational Choice of the College Educated, 1940-1990. *The Quarterly Journal of Economics*, 115(4), pp.1287-315.

Duncan, R.P. & Perrucci, C.C., 1976. Dual Occupation Families and Migration. *American Sociological Review*, 41(2), pp.252-61.

England, P. & Kilbourne, B.S., 1990. Markets, Marriages and Other Mates: The Problem of Power. In Friedland, R.O. & Robertson, A.F. *Beyond the Marketplace: Rethinking Economy and Society*. Transaction Publishers. pp.163-88.

Frank, R.H., 1978. Why Women Earn Less: The Theory and Estimation of Differential Overqualification. *he American Economic Review*, 68(3), pp.360-73.

Funk, R.B. & Willits, F.K., 1987. College Attendance and Attitude Change: A Panel Study, 1970-81. *Sociology of Education*, 60(4), pp.224-31.

Gabriel, P.E. & Schmitz, S., 1995. Favorable Self-Selection and the Internal Migration of Young White Males in the United States. *The Journal of Human Resources*, 30(3), pp.460-71.

Gerstel, N. & Gross, H., 1984. *Commuter Marriage: A Study of Work and Family*. The Guilford Press.

Goldin, C., 1997. Career and Family: College Women Look to the Past. In Blau, F.D. & Ehrenberg, R.G. *Gender and Family Issues in the Workplace*. New York: Russell Sage Foundtation.

Green, A.E., 1997. A Question of Compromise? Case Study Evidence on the Location and Mobility Strategies of Dual Caeer Households. *Regional Studies*, 31(7), pp.641-57.

Greenwood, M.J., 1997. Internal Migration in Developed Countries. In M.R. Rosenzweig, O.S. *Handbook of Population and Family Economics*. Elsevier Science. pp.647-720.

Heckman, J., 1976. The Common Structure of Statistical Models of Truncation, Sample Selection and Limited Dependent Variables and a Simple Estimator for Such Models. *Annals of Economic and Social Measurement*, 5(4), pp.475-92.

Heckman, J., Ichimura, H., Smith, J. & Todd, P., 1998. Characterizing Selection Bias Using Experimental Data. *NBER Working Paper No. 6699*.

Hout, M., 1982. The Association between Husbands' and Wives' Occupations in Two-Earner Families. *American Journal of Sociology*, 88(2), pp.397-409.

Institute for Social Research, 2015. *PSID Main Interview User Manual*. University of Michigan.

Kalmijn, M., 1991. Shifting Boundaries: Trends in Religious and Educational Homogamy. *American Sociological Review*, 56(6), pp.786-800.

Kalmijn, M., 1994. Assortative Mating by Cultural and Economic Occupational Status. *American Journal of Sociology*, 100(2), pp.422-52.

Kalmijn, M., 1998. Intermarriage and Homogamy: Causes, Patterns, Trends. *Annual Review of Sociology*, 24, pp.395-421.

Long, L.H., 1991. Residential Mobility Differences among Developed Countries. *International Regional Science Review*, 14(2), pp.133-47.

Long, L.H. & Boertlein, C.G., 1976. *The geographical mobility of Americans: an international comparison*. US Dept. of Commerce, Bureau of the Census.

Lundberg, S. & Pollak, R.A., 1996. Bargaining and Distribution in Marriage. *Journal of Economic Prespectives*, 10(4), pp.139-58.

Lundeberg, S. & Pollak, R.A., 1996. Bargaining and Distribution in Marriage. *Journal of Economic Perspectives*, 10(4), pp.139-58.

Manser, M. & Brown, M., 1980. Marriage and Household Decision-Making: A Bargaining Analysis. *International Economic Review*, 21(1), pp.31-44.

Mariotti, F., Mumford, K. & Pena-Boquete, Y., 2015. Power-Couples and the Colocation Hypothesis Revisted. *IZA Discussion Paper No. 9059*.

McAuley, W.J. & Nutty, C.L., 1982. Residential Preferences and Moving Behavior: A Family Life-Cycle Analysis. *Journal of Marriage and Family*, 44(2), pp.301-9.

McElroy, M. & Horney, M.J., 1981. Nash-Bargained Household Decisions: Toward a Generalization of the Theory of Demand. *International Econimc Review*, 22(2), pp.333-49.

McFall, B.H. & Murray-Close, M., 2016. Moving Out to Move Up: Dual-Career Migration and Work Family Tradeoffs. *Economic Inquiry*, 54(1), pp.44-62.

Mckinnish, T., 2008. Spousal Mobility and Earnings. *Demography*, 45(4), pp.829-49.

Michielin, F. & Mulder, C.H., 2008. Family Events and Residential Mobility of Couples. *Environment and Planning A*, 40, pp.2770-90.

Mincer, J., 1958. Investment in Human Capital and Personal Income Distribution. 66(4), pp.281-302.

Mincer, J., 1978. Family Migration Decisions. *Journal of Political Economy*, 86(5), pp.749-73.

Molloy, R., L., S.C. & Wozniak, A., 2011. Internal Migration in the United States. *Journal of Economic Perspectives*, 25(3), pp.173-96.

Nam, C.B. & Boyd, M., 2004. Occupational status in 2000; Over a century of census-based measurement. *Population Research and Policy Review*, 23, pp.327-58.

Nivalainen, S., 2004. Determinants of family migration: short moves vs. long moves. *Journal of Population Econnomics*, 17(1), pp.157-75.

Osbeck, L.M. & Moghaddam, F.M., 1997. Similarity and attraction among majority and minority groups in a multicultural context. *International Journal of Intercultural Relations*, 21(1), pp.113-23.

Perales, F. & Vidal, S., 2013. Occupational Characteristics, Occupational Sex Segregation, and Family Migration Decisions. *Population, Space and Place*, 19(5), pp.487-504.

Quinn, M. & Rubb, S., 2011. Spouse Overeducation and Family Migration: Evidence from the US. *Journal of Family & Economic Issues*, 32(1), pp.36-45.

Robinson, C. & Tomes, N., 1982. Self-Selection and Interprovincial Migration in Canada. *Canadian Journal of Economics*, 15(3), pp.474-502.

Rouwendala, J. & Van Der Straatena, J.W., 2004. Dual Earners, Urban Labour Markets and Housing Demand. In *Contributions to Economic Analysis*. pp.249-83.

Samuelson, P.A., 1956. Social Indifference Curves. *The Quarterly Journal of Economics*, 70(1), pp.1-22.

Sandell, S.H., 1977. Women and the Economics of Family MIgration. *The Review of Economics and Statistics*, 59(4), pp.406-14.

Schiebinger, L., Henderson, A.D. & Gilmartin, S.K., 2008. *Dual-Career Academic Couples What Universities Need to Know*. Stanford: Stanford University.

Sen, A., 1989. Cooperation, Inequality, and the Family. *Population and Development Review*, 15(Supplement: Rural Development and Population: Institutions and Policy), pp.61-76.

Shauman, K.A., 2010. Gender Asymmetry in Family Migration: Occupational Inequality or Interspousal Comparative Advantage? *Journal of Marriage and Family*, 72(2), pp.375-92.

Shauman, K.A. & Noonan, M.C., 2007. Family Migration and Labor Force Outcomes: Sex Differences in Occupational Context. *Social Forces*, 85(4), pp.1735-64.

Shihadeh, E.S., 1991. The Prevalence of Husband-Centered Migration: Employment Consequences for Married Mothers. *Journal of Marriage and Family*, 53(2), pp.432-44.

Sjaastad, L.A., 1962. The Costs and Returns of Human Migration. *Journal of Political Economy*, 70(5), pp.80-93.

Smits, J., 2003. Social closure among the higher educated: trends in educational homogamy in 55 countries. *Social Science Research*, 32(2), pp.251-77.

Smits, J., Mulder, C.H. & Hooimeijer, P., 2004. Migration of couples with non-employed and employed wives in the Netherlands: the changing effects of the partners' characteristics. *Journal of Ethnic and Migration Studies*, 30(2), pp.283-301.

Smits, J., Ultee, W. & Lammers, J., 1998. Educational Homogamy in 65 Countries: An Explanation of Differences in Openness Using Country-Level Explanatory Variables. *American Sociological Review*, 63(2), pp.264-85.

Stevenson, B. & Wolfers, J., 2007. Marriage and Divorce: Changes and Their Driving Forces. *The Journal of Economic Perspectives*, 21(2), pp.27-52.

Sweeney, M.M. & Cancian, M., 2004. The changing importance of white women's economic prospects for assortative mating. *Journal of marriage and Family*, 66(4), pp.1015-28.

Tauchen, H.V., Witte, A.D. & Long, S.K., 1991. Domestic Violence: A Nonrandom Affair. *International Economic Review*, 32(2), pp.491-511.

Tenn, S., 2010. The Relative Importance of the Husband's and Wive's Characteristics in Family Migration 1960-2000. *Journal of Population Economics*, 23(4), pp.1319-37.

United States Census Bureau, 2015. *CPS Historical Migration/Geographic Mobility Tables*. [Online] Available at: http://www.census.gov/data/tables/time-series/demo/geographic-mobility/historic.html [Accessed 16 May 2016].

US Department of Labor, 2016. *Facts Over Time Women in the Labor Force*. [Online] Available at: https://www.dol.gov/wb/stats/facts_over_time.htm#wilf [Accessed 16 May 2016].

Waal, J.v.d., Achterberg, P. & Houtman, D., 2007. Class Is Not Dead—It Has Been Buried Alive: Class Voting and Cultural Voting in Postwar Western Societies (1956–1990). *Politics & Scoiety*, 35(3), pp.403-26.

Waldfogel, J., 1998. Understanding the "Family Gap" in Pay for Women with Children. *The Journal of Economic Perspectives*, 12(1), pp.137-56.

Winslow-Bowe, S., 2009. Husbands' and Wives' Relative Earnings Exploring Variation by Race, Human Capital, Labor Supply, and Life Stage. *Family Studies*, 30(10), pp.1405-32.

Wolfinger, N.H., Mason, M.A. & Goulden, M., 2008. Problems in the Pipeline: Gender, Marriage, and Fertility in the Ivory Tower. *The Journal of Higher Education*, 79(4), pp.388-403.

8 Appendix I

Table 13: Premigration Summary Statistics

	Mean	st. d	min	max
Log Labor Income				
Wife	10.50	1.06	2.73	13.92
Husband	11.16	0.81	1.18	16.14
Occupational Prestige				
Wife	50.86	30.89	0.00	100.00
Husband	52.60	31.78	0.00	100.00
Age				
Husband	39.26	8.04	24.00	54.00
Wife	37.61	8.02	24.00	53.00
index	0.52	0.29	0.00	1.00
Prestige Difference	28.85	26.31	0.00	100.00

	n.	freq.
Marital Status		
Married	12,151	92.03
Cohabitating	1,053	7.97
Number of Children		
0	4,180	31.66
1	3,408	25.81
2+	5,616	42.53
Lived in MSA		
No	8,013	60.69
Yes	5,191	39.31
Child Present Under 7		
No	8,556	64.8
Yes	4,648	35.2
State Migration T = t+1		
Stayed	12,694	96.14
Migrated	510	3.86

Table 14: Summary Statistics by Education Class

	Low Power	Dual Power	Unequal
Age			
Husband	37.6	37.7	37.6
	8.0	8.2	7.9
Wife	39.2	39.2	39.4
	8.0	8.2	7.9
Log Labor Income			
Husband	10.9	11.5	11.2
	0.8	0.8	0.8
Wife	10.3	10.8	10.6
	1.0	1.2	1.0
Occupational Prestige			
Husband	41.6	66.3	52.2
	27.5	30.9	30.3
Wife	43.1	65.9	56.4
	30.0	30.4	30.8
Index	0.5	0.5	0.5
	0.3	0.3	0.3
Prestige Difference	28.3	26.2	32.1
	25.0	27.7	26.9
Total	6,164	3,375	3,665

	Low Power	Dual Power	Unequal
No. Children			
No Children	1,841	1,153	1,186
1 Child	1,554	870	984
2+ Children	2,769	1,352	1,495
Under 7			
No	4,029	2,146	2,381
Yes	2,135	1,229	1,284
NonWhite			
No	3,912	2,810	2,624
Yes	2,252	565	1,041
MSA			
No	4,081	1,745	2,187
Yes	2,083	1,630	1,478
Couple Status			
Married	5,516	3,235	3,400
Cohab	648	140	265
	6,164	3,375	3,665
Migration			
No	5,988	3,172	3,534
Yes	176	203	131
Total	6,164	3,375	3,665

Table 15: Summary Statistics of Post Migration Estimation's Population

	Mean	st.d	min	max
Log Labor Income				
Wife	9.7	3.1	0	14.04
Husband	10.9	2.2	0	16.14
statechg	0.0	0.2	0	1
newborn				
Occupational Prestige				
Husband	52.1	30.3	0	100
Wife	50.6	32.2	0	100
Age				
Wife	38.3	7.9	24	54
Husband	40.0	7.9	24	54
Experience				
Husband	10.1	6.0	0	34
Wife	8.8	5.8	0	33
Newborn	n.	freq.	cum. freq.	
No	8,889	85.94	85.94	
Yes	1,454	14.06	100	
MSA				
No	6,313	61.04	61.04	
Yes	4,030	38.96	100	
State Migration				
No	9,907	95.78	95.78	
Yes	436	4.22	100	

9 Appendix II

The following are models made with a population of families that had a smooth labor force transition. That is they were employed at time t-1, prior to potential migration and at time t+ time after potential migration.

Table 16: Effect of Migration on Family Income Among Populations of Couples Dually Employed Time t-1 and t+1

	(1) All	(2) Low Power	(3) Dual Power	(4) Unequal
Migration T=t	0.0399*	0.00250	0.0315	-0.0532
	(0.0237)	(0.0388)	(0.0365)	(0.0463)
Newborn T= t+1	-0.0315*	-0.0897***	-0.0209	-0.0536*
	(0.0162)	(0.0264)	(0.0280)	(0.0280)
Premigration Controls T= t-1				
Log Labor Income				
Husband	0.381***	0.335***	0.423***	0.288***
	(0.00662)	(0.00998)	(0.0124)	(0.0124)
Wife	0.00168***	0.00117***	0.000840***	0.00119***
	(0.000148)	(0.000214)	(0.000295)	(0.000268)
Occupational Prestige				
Husband	0.00223***	0.00184***	0.00102***	0.00151***
	(0.000152)	(0.000235)	(0.000291)	(0.000271)
Wife	0.00171***	0.00123***	0.000840***	0.00120***
	(0.000147)	(0.000211)	(0.000296)	(0.000268)
Age Husband	0.0123	0.0215*	0.00917	-0.00216
	(0.00897)	(0.0119)	(0.0210)	(0.0159)
Age Husband ^ 2	-0.000185*	-0.000262*	-0.000177	-4.16e-05
	(0.000110)	(0.000147)	(0.000252)	(0.000194)
Experience Husband	-0.00176***	-0.00157***	-0.00210***	-0.00133***
	(0.000276)	(0.000362)	(0.000631)	(0.000506)
Age Wife	-0.00290	-0.0217*	0.00929	0.0140
	(0.00869)	(0.0117)	(0.0205)	(0.0151)
Age Wife ^ 2	8.61e-05	0.000272*	-3.98e-05	-6.56e-05
	(0.000110)	(0.000149)	(0.000252)	(0.000190)
Experience Wife	-0.000755***	-0.00102***	2.50e-05	-0.000694
	(0.000253)	(0.000330)	(0.000552)	(0.000486)
MSA	0.122***	0.0981***	0.118***	0.103***
	(0.00944)	(0.0138)	(0.0180)	(0.0168)
Constant	5.329***	5.953***	5.249***	6.541***
	(0.144)	(0.200)	(0.282)	(0.283)
Observations	8,682	3,989	2,233	2,460
R-squared	0.511	0.430	0.504	0.363

Table 17: Effect of Migration on Husband's and Wives' Incomes on Population Fully Employed time t-1 and t+1

	Wives				Husbands			
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	All	Low Power	Dual Power	Unequal Power	All	Low Power	Dual Power	Unequal Power
Migration T=1	-0.135***	-0.0109	-0.257***	-0.196**	0.0391	-0.0401	0.0751	-0.0721
	(0.0437)	(0.0698)	(0.0746)	(0.0888)	(0.0353)	(0.0585)	(0.0555)	(0.0720)
Newborn T= t+	-0.243***	-0.281***	-0.362***	-0.143***	0.0201	-0.00839	0.0379	-0.0627
	(0.0298)	(0.0473)	(0.0572)	(0.0536)	(0.0238)	(0.0394)	(0.0420)	(0.0430)
Premigration Controls								
Labor Income	0.569***	0.527***	0.587***	0.561***	0.598***	0.550***	0.651***	0.495***
	(0.00888)	(0.0135)	(0.0164)	(0.0177)	(0.00975)	(0.0148)	(0.0187)	(0.0192)
Occupational P	0.00324***	0.00238***	0.00374***	0.00241***	0.00281***	0.00252***	0.00129***	0.00208***
	(0.000269)	(0.000383)	(0.000593)	(0.000512)	(0.000225)	(0.000352)	(0.000433)	(0.000422)
Age	0.0109	0.0246*	-0.00741	-0.000163	0.00996	0.00431	0.00489	0.0153
	(0.0112)	(0.0149)	(0.0254)	(0.0217)	(0.00941)	(0.0129)	(0.0196)	(0.0186)
Age^2	-0.000134	-0.000322*	0.000104	1.48e-05	-0.000117	-4.88e-05	-9.33e-05	-0.000156
	(0.000144)	(0.000193)	(0.000322)	(0.000279)	(0.000117)	(0.000161)	(0.000242)	(0.000231)
Experience	-0.000306	-0.000806	0.000357	0.000660	-0.00195***	-0.00240***	-0.00123	-0.000971
	(0.000451)	(0.000579)	(0.00109)	(0.000879)	(0.000399)	(0.000536)	(0.000913)	(0.000749)
MSA	0.0988***	0.103***	0.0582	0.0883***	0.0977***	0.0846***	0.0990***	0.0600**
	(0.0172)	(0.0245)	(0.0362)	(0.0320)	(0.0140)	(0.0206)	(0.0271)	(0.0261)
Constant	4.420***	4.588***	4.659***	4.752***	4.348***	4.930***	4.118***	5.398***
	(0.223)	(0.303)	(0.505)	(0.435)	(0.199)	(0.277)	(0.406)	(0.406)
Observations	8,682	3,989	2,233	2,460	8,682	3,989	2,233	2,460
R-squared	0.382	0.326	0.415	0.333	0.381	0.312	0.402	0.265

Table 18: Effect of Migration on Index of Income Equality among Population Fully Employed at t-1 & t+1

	(1) All	(2) Low Power	(3) Dual Power	(4) Unequal
Migration T=t	-0.0482***	0.00584	-0.0739***	-0.0587**
	(0.0138)	(0.0235)	(0.0210)	(0.0283)
Newborn T= t+1	-0.0625***	-0.0710***	-0.0946***	-0.0100
	(0.00939)	(0.0159)	(0.0161)	(0.0171)
Index T= t-1	0.443***	0.395***	0.541***	0.411***
	(0.0121)	(0.0192)	(0.0223)	(0.0223)
Premigration Controls T= t-1				
Log Labor Income				
Husband	-0.0375***	-0.0292***	-0.0343***	-0.0363***
	(0.00393)	(0.00619)	(0.00728)	(0.00761)
Wife	0.0206***	0.0199***	0.0193***	0.0255***
	(0.00355)	(0.00616)	(0.00573)	(0.00687)
Occupational Prestige				
Husband	2.91e-05	0.000205	0.000539***	-0.000499***
	(8.86e-05)	(0.000142)	(0.000167)	(0.000166)
Wife	0.000417***	0.000280**	0.000376**	0.000761***
	(8.58e-05)	(0.000129)	(0.000170)	(0.000164)
Age Husband	-0.00280	0.000656	-0.0124	-0.00106
	(0.00520)	(0.00722)	(0.0120)	(0.00968)
Age Husband ^ 2	5.61e-05	8.04e-06	0.000213	1.87e-05
	(6.38e-05)	(8.90e-05)	(0.000145)	(0.000119)
Experience Husband	7.33e-05	0.000207	-0.000238	-8.19e-06
	(0.000160)	(0.000219)	(0.000362)	(0.000310)
Age Wife	0.000541	0.00494	-0.00831	0.00244
	(0.00504)	(0.00707)	(0.0117)	(0.00922)
Age Wife ^ 2	-2.52e-05	-7.65e-05	6.03e-05	-4.14e-05
	(6.35e-05)	(8.97e-05)	(0.000145)	(0.000116)
Experience Wife	-1.10e-05	-0.000119	0.000105	0.000136
	(0.000147)	(0.000199)	(0.000318)	(0.000297)
MSA	-0.00699	-0.00530	-0.00594	-0.00403
	(0.00548)	(0.00833)	(0.0104)	(0.0103)
Constant	0.522***	0.322***	0.746***	0.415**
	(0.0833)	(0.122)	(0.162)	(0.174)
Observations	8,682	3,989	2,233	2,460
R-squared	0.259	0.207	0.378	0.247

Standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

10 Appendix III

Table 19: Heckman Correction Models, Observed Variable Prediction of Divorce (1) and Attrition (2)

	(1) Attrition	(2) Divorce
Index	0.112**	0.222**
	(0.0535)	(0.0885)
Log Labor Income		
Wife	-0.00839*	-0.00801
	(0.00457)	(0.00727)
Husband	-0.0136***	-0.0150*
	(0.00478)	(0.00832)
Occupational Prestige		
Wife	-0.000384	-0.00191***
	(0.000426)	(0.000725)
Husband	-0.00135***	-0.00100
	(0.000409)	(0.000660)
Cohabitating	0.278***	0.489***
	(0.0412)	(0.0525)
Children		
No Children	0.343***	-0.0438
	(0.0338)	(0.0615)
1 Child	(ref.)	(ref.)
2+ Children	-0.0575	-0.0529
	(0.0428)	(0.0609)
under7	0.176***	-0.0630
	(0.0344)	(0.0544)
Age Husband	0.0451***	-0.0151***
	(0.00178)	(0.00274)
Own Home	-0.232***	-0.155***
	(0.0306)	(0.0442)
NonWhite	0.0835***	0.0445
	(0.0306)	(0.0476)
MSA	0.0150	-0.0276
	(0.0252)	(0.0418)
Constant	-2.817***	-0.895***
	(0.101)	(0.160)
Observations	27,566	21,116

Robust standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

Table 20: Matching Score Estimating Model

	(1) State Migration t+1
Index	-0.496***
	(0.0857)
Log Labor Income	
Wife	0.0767***
	(0.0217)
Husband	0.0693***
	(0.0241)
Cohabitating	-0.275***
	(0.0643)
Age Husband	-0.0234***
	(0.00246)
Own Home	-0.531***
	(0.0429)
MSA	-0.0640
	(0.0395)
Constant	-1.536***
	(0.306)
Observations	15,767

Standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

Figure 4: Distribution of Propensity Score

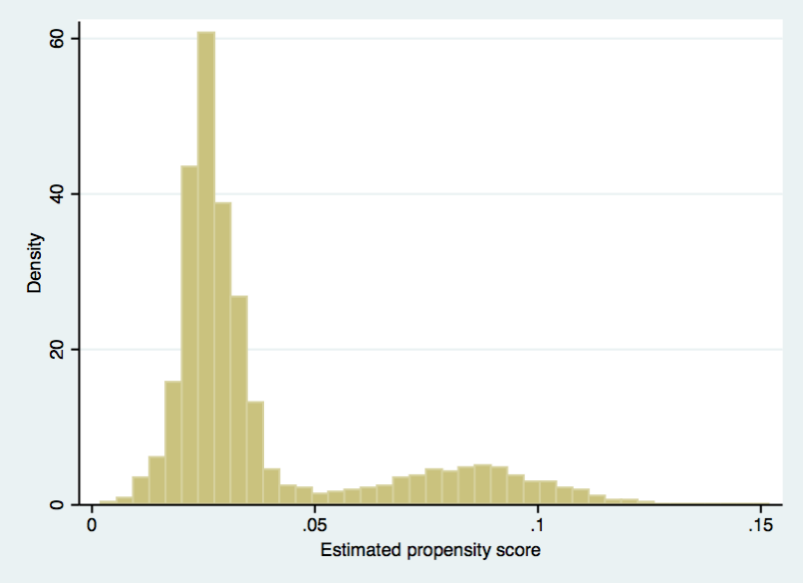
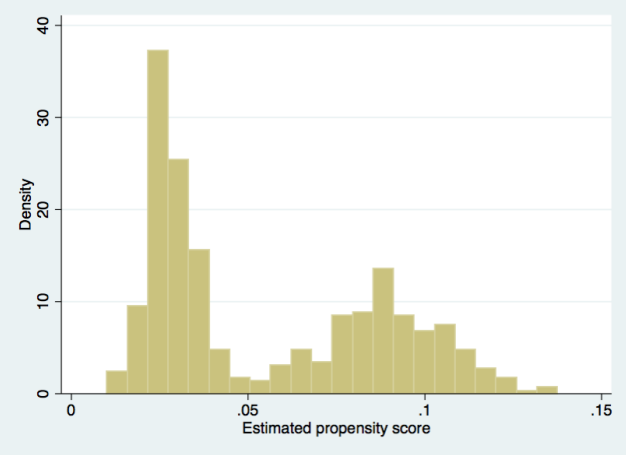
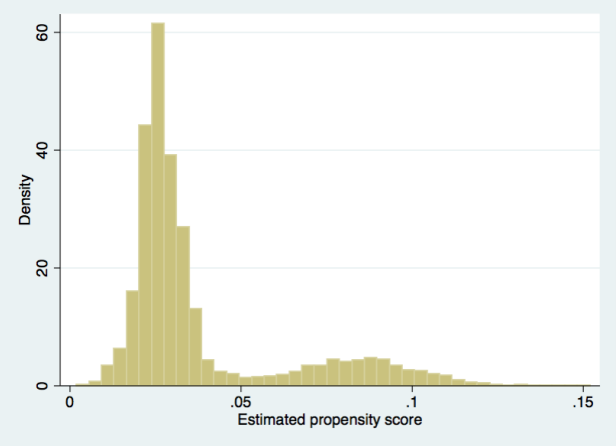


Figure 5: Propensity Score Distributions of Movers and Stayers



Moved



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11 Appendix IV

The Following are models estimated with full Heckmans Corrections.

Table 21: Effect of Husband's and Wives' Income on Migraiton Propensity, with correction

	(1) All	(2) Low Power	(3) Dual Power	(4) Unequal
Log Labor Inco				
Wife	0.00260	-0.0155	0.00572	-0.0158
	(0.0121)	(0.0198)	(0.0175)	(0.0262)
Husband	0.0387**	0.0348	0.00469	0.0167
	(0.0195)	(0.0313)	(0.0256)	(0.0411)
Occupational Prestige				
Wife	-0.000301	-0.000353	-0.000384	-0.00225
	(0.00101)	(0.00172)	(0.00172)	(0.00194)
Husband	-0.000818	0.00232	-0.00372**	-0.00299
	(0.000948)	(0.00165)	(0.00145)	(0.00185)
Cohabitating	0.238	-0.0500	0.419	0.153
	(0.247)	(0.379)	(0.480)	(0.502)
Children				
No Children	0.338**	0.186	0.132	0.403
	(0.132)	(0.198)	(0.238)	(0.289)
2 + Children	-0.133*	0.0322	-0.305**	-0.0781
	(0.0705)	(0.114)	(0.122)	(0.139)
Under 7	0.188**	0.0296	0.0988	0.281
	(0.0933)	(0.135)	(0.168)	(0.209)
Age Husband	-0.00658	-0.0331*	-0.0262	0.0202
	(0.0140)	(0.0195)	(0.0251)	(0.0304)
Own Home	-0.736***	-0.540***	-0.934***	-0.587***
	(0.0942)	(0.143)	(0.165)	(0.200)
NonWhite	-0.00641	-0.0726	0.113	-0.0565
	(0.0732)	(0.104)	(0.136)	(0.154)
MSA	-0.0758	-0.00845	-0.154*	-0.156*
	(0.0498)	(0.0814)	(0.0822)	(0.0950)
λ1	1.498	-0.334	0.523	2.257
	(0.963)	(1.362)	(1.723)	(2.047)
λ2	3.866**	2.036	8.377**	1.003
	(1.903)	(2.819)	(3.803)	(3.963)
Constant	-1.317**	-0.788	0.881	-1.515
	(0.587)	(0.924)	(1.084)	(1.241)
Observations	13,204	6,164	3,375	3,665

Robust standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

Table 22: Effect of Equality Index on Migration Propensity, with Corrections

	(1) All	(2) Low Power	(3) Dual Power	(4) Unequal Power
Index	-0.484***	-0.991***	-0.131	-0.241
	(0.138)	(0.247)	(0.251)	(0.259)
Log Labor Income				
Wife	0.0322**	0.0510**	0.0121	-0.00202
	(0.0145)	(0.0244)	(0.0209)	(0.0315)
Husband	0.0398**	0.0388	0.00643	0.0188
	(0.0175)	(0.0253)	(0.0253)	(0.0393)
Occupational Prestige				
Wife	0.00124	0.00255	0.000211	-0.00143
	(0.00112)	(0.00194)	(0.00213)	(0.00202)
Husband	0.000319	0.00450***	-0.00329**	-0.00241
	(0.000976)	(0.00167)	(0.00160)	(0.00191)
Cohabitating	-0.452	-1.285**	0.154	-0.211
	(0.322)	(0.579)	(0.646)	(0.581)
Children				
No Children	0.231*	0.0419	0.0948	0.344
	(0.132)	(0.198)	(0.247)	(0.294)
1 Child	(ref.)	(ref.)	(ref.)	(ref.)
2+ Children	-0.0770	0.142	-0.286**	-0.0450
	(0.0719)	(0.120)	(0.127)	(0.137)
Under 7	0.157*	0.0199	0.0922	0.261
	(0.0927)	(0.138)	(0.168)	(0.208)
Age Husband	-0.0128	-0.0367*	-0.0277	0.0164
	(0.0137)	(0.0195)	(0.0253)	(0.0304)
Own Home	-0.547***	-0.248	-0.861***	-0.480**
	(0.107)	(0.167)	(0.215)	(0.218)
NonWhite	-0.0654	-0.179	0.0946	-0.0886
	(0.0748)	(0.110)	(0.140)	(0.149)
MSA	-0.0715	0.0179	-0.152*	-0.154
	(0.0500)	(0.0815)	(0.0830)	(0.0951)
$\lambda 1$	0.288	-2.095	0.118	1.610
	(0.989)	(1.370)	(1.907)	(2.125)
$\lambda 2$	-1.247	-6.950*	6.133	-1.752
	(2.322)	(3.994)	(5.172)	(4.396)
Constant	-2.249***	-2.903***	0.518	-2.003
	(0.612)	(1.064)	(1.221)	(1.308)
Observations	13,204	6,164	3,375	3,665

Robust standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

Table 23: Effect of Difference in Occupational Prestige on Migration Propensity, with Corrections

	(1) All	(2) Low Power	(3) Dual Power	(4) Unequal
Difference in Occupational Prestige	0.00351**	0.00371	0.00428	0.000904
	(0.00151)	(0.00242)	(0.00305)	(0.00295)
Log Labor Income				
Wife	-0.00366	-0.0387	0.000655	0.00832
	(0.0157)	(0.0257)	(0.0217)	(0.0418)
Husband	0.00241	0.00432	-0.0151	-0.0141
	(0.0217)	(0.0365)	(0.0304)	(0.0500)
Occupational Prestige				
Wife	0.00441***	0.00622***	0.00423	-0.00111
	(0.00145)	(0.00229)	(0.00300)	(0.00306)
Husband	0.00505***	0.00638***	0.000467	0.00385
	(0.00140)	(0.00224)	(0.00281)	(0.00272)
Cohabitating	-0.342	-0.469	-0.284	-0.738
	(0.301)	(0.451)	(0.546)	(0.730)
Children				
No Children	0.381**	0.136	0.375	0.543
	(0.164)	(0.256)	(0.286)	(0.369)
1 Child	(ref.)	(ref.)	(ref.)	(ref.)
2+ Children	-0.0817	0.112	-0.261*	-0.0496
	(0.0856)	(0.139)	(0.143)	(0.166)
Under 7	0.261**	0.0521	0.251	0.477*
	(0.116)	(0.167)	(0.206)	(0.262)
Age Husband	-0.00137	-0.0287	-0.00781	0.0436
	(0.0171)	(0.0231)	(0.0304)	(0.0399)
Own Home	-0.580***	-0.394**	-0.766***	-0.479*
	(0.111)	(0.171)	(0.187)	(0.254)
NonWhite	-0.0173	-0.0801	0.0326	0.00436
	(0.0869)	(0.130)	(0.159)	(0.171)
MSA	-0.0951	0.0285	-0.121	-0.275**
	(0.0589)	(0.0987)	(0.0929)	(0.123)
$\lambda 1$	1.035	-1.173	0.993	3.158
	(1.202)	(1.651)	(2.138)	(2.748)
$\lambda 2$	-0.914	-1.741	3.011	-6.946
	(2.283)	(3.339)	(4.374)	(5.609)
Constant	-2.018***	-1.205	-0.588	-3.323**
	(0.700)	(1.086)	(1.268)	(1.659)
Observations	13,204	6,164	3,375	3,665

Robust standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

Table 24: Migration on Family Income with Corrections

	(1) All	(2) Low Power	(3) Dual Power	(4) Unequal
Migration T=t	0.0731***	-0.00636	0.0459	0.0651
	(0.0273)	(0.0463)	(0.0414)	(0.0516)
Newborn T= t+1	-0.0488***	-0.0843***	-0.0323	-0.0847***
	(0.0179)	(0.0292)	(0.0305)	(0.0309)
Premigration Controls T= t-1				
Log Labor Income				
Husband	0.167***	0.162***	0.175***	0.118***
	(0.00400)	(0.00627)	(0.00725)	(0.00710)
Wife	0.0832***	0.0781***	0.0694***	0.0836***
	(0.00273)	(0.00436)	(0.00444)	(0.00524)
Occupational Prestige				
Husband	0.00176***	0.00159***	0.000666*	0.000670**
	(0.000186)	(0.000299)	(0.000343)	(0.000319)
Wife	0.00167***	0.00160***	0.000458	0.000648**
	(0.000180)	(0.000277)	(0.000348)	(0.000314)
Age Husband	-0.00142	0.00387	0.0164	-0.0141
	(0.0109)	(0.0148)	(0.0264)	(0.0191)
Age Husband ^ 2	8.08e-05	4.26e-05	-0.000253	0.000189
	(0.000140)	(0.000194)	(0.000332)	(0.000245)
Experience Husband	-0.00147***	-0.00124***	-0.00136*	-0.00195***
	(0.000336)	(0.000468)	(0.000738)	(0.000601)
Age Wife	-0.0206**	-0.0358**	-0.0106	0.00159
	(0.0104)	(0.0144)	(0.0259)	(0.0182)
Age Wife ^ 2	0.000324**	0.000479**	0.000221	8.44e-05
	(0.000136)	(0.000190)	(0.000328)	(0.000236)
Experience Wife	-0.000416	-0.000530	-0.000641	-0.000183
	(0.000312)	(0.000426)	(0.000666)	(0.000595)
MSA	0.160***	0.130***	0.144***	0.155***
	(0.0115)	(0.0177)	(0.0212)	(0.0199)
λ1	0.940***	0.883***	0.256	0.783***
	(0.0991)	(0.147)	(0.217)	(0.181)
λ2	1.677***	0.908***	2.922***	2.175***
	(0.205)	(0.264)	(0.658)	(0.421)
Constant	6.519***	6.773***	6.484***	7.505***
	(0.177)	(0.247)	(0.385)	(0.344)
Observations	10,343	4,851	2,628	2,864
R-squared	0.427	0.337	0.389	0.301

Standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

Table 25: Effect of Migration on Husband's and Wives' Income with Corrections

	Wives				Husbands			
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	All	Low Power	Dual Power	Unequal Power	All	Low Power	Dual Power	Unequal Power
Migration T=1	-1.347***	-0.544	-1.256**	-2.404***	0.0707	-0.721*	0.459	0.501
	(0.307)	(0.505)	(0.517)	(0.601)	(0.226)	(0.389)	(0.338)	(0.450)
Newborn T= t+	-2.590***	-2.649***	-3.224***	-1.586***	0.0645	0.244	-0.109	-0.0501
	(0.210)	(0.334)	(0.396)	(0.381)	(0.153)	(0.254)	(0.254)	(0.282)
Premigration Controls								
Labor Income	1.036***	1.072***	0.962***	1.071***	0.858***	0.907***	0.862***	0.743***
	(0.0309)	(0.0478)	(0.0561)	(0.0618)	(0.0331)	(0.0527)	(0.0576)	(0.0646)
Occupational P	0.0174***	0.0205***	0.0167***	0.0134***	0.00956***	0.00802***	0.0108***	0.00935***
	(0.00203)	(0.00306)	(0.00427)	(0.00374)	(0.00153)	(0.00255)	(0.00271)	(0.00284)
Age	-0.0134	0.0380	-0.0700	0.0214	-0.192***	-0.256***	-0.222*	-0.0139
	(0.0775)	(0.105)	(0.193)	(0.152)	(0.0600)	(0.0848)	(0.132)	(0.123)
Age^2	0.000362	-0.000425	0.000993	2.43e-05	0.00249***	0.00340***	0.00237	0.000466
	(0.00102)	(0.00141)	(0.00246)	(0.00199)	(0.000794)	(0.00116)	(0.00169)	(0.00162)
Experience	-0.00134	-0.00223	0.00361	-0.00417	-0.00116	-0.00326	0.00194	0.00170
	(0.00341)	(0.00459)	(0.00786)	(0.00670)	(0.00272)	(0.00390)	(0.00574)	(0.00515)
MSA	-0.142	-0.171	-0.229	-0.00600	0.357***	0.447***	0.0854	0.414**
	(0.129)	(0.194)	(0.259)	(0.235)	(0.0958)	(0.150)	(0.171)	(0.178)
gen_residual	0.362	0.247	-3.098*	2.537*	4.634***	5.521***	2.589	4.068***
	(0.763)	(1.074)	(1.845)	(1.424)	(0.784)	(1.187)	(1.613)	(1.531)
gen_residualdiv	1.290	1.876	5.482	-1.727	6.680***	5.818***	11.04**	4.711
	(1.962)	(2.441)	(7.174)	(4.144)	(1.672)	(2.230)	(5.262)	(3.662)
Constant	-2.877*	-4.405**	-0.681	-3.834	6.547***	6.748***	7.824***	4.879*
	(1.552)	(2.092)	(3.978)	(3.051)	(1.329)	(1.878)	(2.868)	(2.745)
Observations	10,343	4,851	2,628	2,864	10,343	4,851	2,628	2,864
R-squared	0.147	0.141	0.166	0.130	0.115	0.102	0.116	0.078

Table 26: Effect of Migration on the Change of Index of Income Equality, with Corrections

	(1) All	(2) Low Power	(3) Dual Power	(4) Unequal
Migration T=t	-0.0643***	-0.0315	-0.0720***	-0.0865***
	(0.0140)	(0.0237)	(0.0212)	(0.0282)
Newborn T= t+1	-0.0905***	-0.0927***	-0.120***	-0.0393**
	(0.00957)	(0.0155)	(0.0163)	(0.0182)
Index T= t-1	0.439***	0.392***	0.548***	0.383***
	(0.0133)	(0.0207)	(0.0245)	(0.0255)
Premigration Controls T= t-1				
Log Labor Income				
Husband	-0.0101***	-0.00259	-0.0141***	-0.0106***
	(0.00205)	(0.00320)	(0.00366)	(0.00406)
Wife	0.0101***	0.0126***	0.00538*	0.0141***
	(0.00180)	(0.00297)	(0.00288)	(0.00365)
Occupational Prestige				
Husband	0.000187**	0.000219	0.000717***	-9.08e-05
	(9.53e-05)	(0.000153)	(0.000174)	(0.000179)
Wife	0.000819***	0.000885***	0.000746***	0.000865***
	(9.28e-05)	(0.000141)	(0.000179)	(0.000177)
Age Husband	0.000242	0.000513	-0.00590	0.00679
	(0.00521)	(0.00704)	(0.0128)	(0.0101)
Age Husband ^ 2	4.68e-05	4.80e-05	0.000168	-6.93e-05
	(6.57e-05)	(9.01e-05)	(0.000157)	(0.000128)
Experience Husband	-4.89e-05	3.96e-05	-0.000349	5.30e-05
	(0.000171)	(0.000235)	(0.000376)	(0.000342)
Age Wife	-0.000599	-0.000255	-0.00129	0.00308
	(0.00501)	(0.00690)	(0.0124)	(0.00955)
Age Wife ^ 2	-1.21e-05	-2.22e-05	-1.45e-05	-4.05e-05
	(6.38e-05)	(8.91e-05)	(0.000153)	(0.000121)
Experience Wife	-0.000120	-0.000225	0.000133	-8.83e-05
	(0.000158)	(0.000215)	(0.000331)	(0.000330)
MSA	-0.0117**	-0.0137	-0.00785	-0.00397
	(0.00594)	(0.00905)	(0.0109)	(0.0113)
λ1	0.0910*	0.134*	0.0597	0.0401
	(0.0492)	(0.0732)	(0.103)	(0.0986)
λ2	-0.307***	-0.183	-0.979***	-0.512**
	(0.105)	(0.135)	(0.346)	(0.233)
Constant	0.151*	-0.00833	0.268	-0.0758
	(0.0871)	(0.121)	(0.191)	(0.189)
Observations	10,343	4,851	2,628	2,864
R-squared	0.218	0.183	0.343	0.196

Standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1