The Effect of Support to Multiple Generations on Labor Supply in Late Middle Age

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Abstract

Men and women in late middle age may be required to support both adult children and aging parents. Existing studies have largely focused on estimating the size of this "sandwich generation" but the combined effects of caregiving to multiple generations on labor supply are unknown. This project uses the Health and Retirement Study to examine the relationship between labor supply and family support for both men and women. We examine the effect of transfers of time, money, and coresidence on whether an individual works, is retired, and the number of hours worked. We find that for women, providing time to children decreases the probability of paid work and providing time to parents increases the probability of retirement. Providing time to children increases the probability of retirement for men but providing time to parents does not affect labor supply. For both sexes, giving money to children or parents is associated with an increase in hours worked.

In the decades leading up to retirement, at the same age when saving rates reach their peak (Attanasio, 1998), individuals may also have obligations of support to multiple family members including adult children and grandchildren as well as aging parents and parents-in-law. Although women are more likely than men to provide care to children and grandchildren (Byrson and Casper, 1998; Wang and Marcotte, 2007), and to aging parents (Coward and Dwyer, 1990; Dwyer and Coward, 1991; Wolf, Freedman, and Soldo, 1996; McGarry 1998; 2006), both men and women spend considerable time and money helping and supporting others in the years leading up to and following retirement (Dwyer and Coward, 1991; Moen et al., 1994). The support that men and women provide to family in late middle age may have important implications for labor supply (see Van Houtven et al. 2013, Wolf and Soldo, 1994 and Ettner, 1996 amongst many others). Providing some types of help to family members – caring for a disabled parent or providing childcare for a grandchild - may lead to reduced labor market hours or early withdrawal from the labor force. On the other hand, having an adult child who needs substantial financial assistance may keep an individual in the labor force longer than he or she had anticipated. In the aging literature, the majority of research has focused on care for parents but care and support for adult children is actually more prevalent in late middle age (Kahn et al., 2011). Relatively few studies have recognized that the demands for care and support are unlikely to come from only one family member and that individuals in late middle age are often sandwiched between the needs of their children and grandchildren and the needs of their parents.

This project uses the Health and Retirement Study [HRS] to examine the relationship between labor supply and family support for parents and children. We consider three types of support: time transfers for care, chores, or babysitting; financial transfers; and coresidence. We examine the effect of these transfers on the labor supply decisions of men and women age 50-70.

We look at the effect of transfers on labor supply on both the intensive and extensive margin examining whether an individual works, whether an individual is retired, and the number of hours worked conditional on working. Our findings are preliminary but suggest that for women, providing time to children decreases the probability of paid work and providing time to parents increases the probability of retirement. Providing time to children increases the probability of retirement for men but providing time to parents does not affect labor supply. For both sexes, giving money to children or parents is associated with an increase in hours worked.

Related Literature

Help to Elderly Parents

About 40% of older disabled people rely on unpaid help (Spillman and Pezzin, 2000). Adult children are the most common source of informal care, particularly for the unmarried elderly; 44% of primary caregivers are adult children (Center on an Aging Society, 2005). Dwyer and Coward (1991) show that 12 percent of women and 3.9 percent of men with living disabled parents provide assistance to parents in activities of daily living like walking, dressing, and bathing and 31.7 percent of women and 16.5 percent of men provide assistance with instrumental activities of daily living like housework or preparing meals.

The research on the relationship between labor force participation and caring for an aging parent is well developed but a clear consensus on the effect of caring on work has not emerged, nor has the literature attempted to consider demands from multiple generations. In the United States the effect of caring for an aging parent on female labor supply depends on the intensity of care and the measure of labor supply. Women who live with elderly disabled parents are less likely to work (Ettner, 1995; Pezzin and Schone, 1999). However, women with very strong labor force participation do not seem to respond to caregiving by exiting the labor force (Detinger and

Clarkberg, 2002), nor do hours of work differ between women who care for elderly parents and those who do not (Wolf and Soldo, 1994; Ettner, 1996; McGarry, 2006).

The evidence from longitudinal studies of transitions in female labor force participation and caregiving is also mixed. McGarry (2006) finds that the onset of caregiving is not associated with leaving employment. In contrast, Pavalko and Artis (1997), using different data and methods, find that beginning a spell of caregiving decreases hours worked and that women who stop giving care later in life do not return to the labor market. Van Houtven et al. (2013) look at chore and personal caregiving separately and find that caring for parents decreases the probability of working slightly for men and decreases hours worked and wages for female caregivers. Female caregivers are also more likely to be retired. Unlike the evidence from the United States, the evidence in Europe almost universally indicates that caregiving, particularly intensive caregiving, reduces labor force participation and hours worked (Bolin, Lindgren and Lundborg, 2008; Heitmueller; 2008; Carmichael, Charles, and Hulme, 2010; Lilly, Laporte, and Coyte, 2010; Michaud, Heitmueller, and Nazarov; 2010). In keeping with the evidence that female labor supply is more elastic than male labor supply, most studies focus only on women (there is a long literature that suggests that female labor supply is more elastic with respect to childbearing and fertility including, amongst others, Mincer, 1963; Rosenzweig and Wolpin, 1980; Heckman and Walker, 1990; Angrist and Evans, 1998;—see Browning, 1992 for a review of this literature). In the few studies that include men, the effects or caring on the labor supply of men is slightly smaller than for women (Ettner, 1996; Bolin, Lindgren and Lundborg, 2008). Help to Adult Children and Grandchildren

A number of trends are increasing the likelihood that parents may be required to support adult children at later ages. Among the highly-educated, people have children later in life which

means that parents are older – closer to their own retirement ages – when their children are adolescents or young adults. Young adults have also been taking longer to establish financial independence from parents and longer to establish their own households (Furstenberg, 2010; Schoeni and Ross, 2005; Settersten and Ray, 2010). Young people increasingly delay marriage: the average age at first marriage is now age 28 for men and age 26 for women in the U.S., as compared to age 26 for men and age 24 for women in 1980 (U.S. Census Bureau). Unmarried adult children are much more likely to remain living in the parental home than those who marry.

In terms of transfers of money later in life, adult children are more likely to be recipients than elderly parents. In the Health and Retirement Study, 11 percent of adults under age 65 with living parents report financial transfers to parents while nearly 40 percent of individuals ages 55-64 with children report transfers to adult children (HRS Data Book, Growing Older in America). Kahn et al. (2011) find similar patterns for adults in their 50s in the Wisconsin Longitudinal Study (WLS); 83 percent of women (73 percent of men) report helping children in the past month compared with 61 percent of women (51 percent for men) who report helping a parent.

Schoeni and Ross (2005) show that parental monetary transfers to adult children in the ages of 18-34 are large. They estimate that in the late 1980s, an adult child age 18-34 received a total of \$38,340 (in 2001 \$) in combined financial transfers and benefits from co-residence with parents. Transfers of time are also substantial, with about 3,800 hours of time assistance given by parents on behalf their children over the years when a young adult ages from 18 to 34.

Some of the time transfers to children are for the care of grandchildren. There has been considerable work on the role of grandparents caring for grandchildren much of which has

¹One possibility is that parents make transfers to children in adulthood and create obligations for children to "repay" parents later. Cox and Stark (2005) suggest that parents may make housing transfers to adult children to incentivize them to have children of their own. These adult children who care for their elderly parents may "demonstrate" to their own children expectations about being cared for later in life.

focused on grandchildren born into cohabiting relationships or to single mothers (Bryson and Casper 1999; Pebley and Rudkin 1999; Wang and Marcotte, 2007). Especially among the less-educated where cohabitation and single parenting are most prevalent, older adults may find themselves raising their grandchildren, either in three-generation households or in skipped-generation households (Wang and Marcotte, 2007). In less extreme cases, grandparents may not live with grandchildren but still may provide substantial time and money assistance to their adult children and grandchildren (Kahn et al. 2011). Grandparents with primary caregiving responsibilities for grandchildren may be unable to cut back on work because of the financial demands that this responsibility entails. Recent work by Wang and Marcotte (2007) on coresidence between grandparents and grandchildren shows that these relationships are quite complex and depend crucially on the presence of other resources for caregiving and income in the household including spouses and the middle generation.

Sandwich Caregiving

Studies of sandwich caregiving are limited and largely focus on estimating the size of the so-called "sandwich generation" rather than on examining the effects of caring on labor supply. One of the best descriptions is Pierret's (2006) analysis of the National Longitudinal Study – Young Women cohort. Using definitions of "sandwich caregiving" that vary in the intensity of assistance to parents and children, he finds that between 9 and 33 percent of women 45-54 are "sandwiched caregivers." A recent Pew Research Center Report on the sandwich generation (Pew Research Center, 2013) uses a more liberal definition of the "sandwich generation" and finds that 47 percent of adults in their 40s and 50s are members of the sandwich generation. Henretta, Grundy and Harris (2001) use the 1994 Health and Retirement Study (HRS) to estimate the percentage "at risk" of sandwich care for those aged 50 and over. Between 32 and

37 percent have both living children and at least one living parent, with higher estimates for more highly educated women than for women with less education. Grundy and Henretta (2006) combine financial and time assistance to estimate the percentage of women age 55 to 69 (in the 1998 HRS) who provide care to both generations. About 36 percent of married women and 27 percent of unmarried women are helping both parents and children simultaneously. These studies combined suggest that caring for parents and children is common for individuals in late middle age.

Empirical Strategy

Our empirical framework assumes that labor supply decisions are a function of measurable individual characteristics X_{ii} , transfers that an individual provides to children and parents Tr_{ii}^c and Tr_{ii}^p respectively, a factor that includes observable and unobservable characteristics of an individual that do not vary over time d_i , and an idiosyncratic time varying error term e_{ii} . Transfers can be decomposed into coresidence, money transfers, and time transfers. Let C_{ii}^p denote whether individual i coresides with a parent or parent-in-law, and C_{ii}^c denote whether individual i coresides with one or more children. Corresponding variables for money and care transfers given to parents or parents-in-law or children are given by M_{ii}^p and M_{ii}^c and T_{ii}^p respectively. We estimate the following equations:

$$Y_{it}^* = \partial_0 + \partial_1 C_{it}^p + \partial_2 C_{it}^c + \partial_3 M_{it}^p + \partial_4 M_{it}^c + \partial_5 T_{it}^p + \partial_6 T_{it}^c + \partial_7 X_{it} + \mathcal{O}_i + \mathcal{O}_{it}$$
(1)

$$H_{it} = b_0 + b_1 C_{it}^p + b_2 C_{it}^c + b_3 M_{it}^p + b_4 M_{it}^c + b_5 T_{it}^p + b_6 T_{it}^c + b_7 X_{it} + d_i + u_{it}$$
 (2)

where Y_{ii}^* is a dichotomous variable equal to 1 if the individual works for pay or reports being retired, H_{ii} measures the number of hours worked for individuals who work for pay, and \mathcal{O}_i is an

individual fixed effect that accounts for non-time varying sources of endogeneity. We control for these time invariant unobserved factors because, for example, individuals with weak labor force attachment may be called upon more frequently to care for family members because the opportunity cost of their time is lower. However, there may be remaining sources of endogeneity that may bias our estimates of the effect of transfers on labor supply. For example, individuals could experience a spell of unemployment that forces them out of the labor market and increases the probability of care which we would incorrectly interpret as a causal effect of transfers on labor supply. We are currently working on an instrumental variables approach in which we use arguably exogenous characteristics of parents and children (such as age and health) as instruments for transfers. This will allow for a causal interpretation of the effect of transfers on labor supply.

Data and Sample

This paper uses data from the Health and Retirement Study [HRS] because of its extensive information on transfers and labor supply over a long period of time. The HRS is a biennial longitudinal survey of individuals and couples 50 and over and provides information on transfers to children and parents, labor supply, wealth, income, health, and family structure. *Transfers*

The HRS collects extensive data on transfers between parents and children. We consider transfers of three types: financial transfers, time transfers, and coresidence. Respondents and their spouses are asked about financial transfers to parents and to children. Specifically, they are asked whether they (or their spouse) gave \$500 or more to their parents (children) over the last two years. Questions about children and parents are asked separately. We use a dichotomous variable for financial transfers to parents (children) and consider an individual to have made a

financial transfer to a parent (child) if either the respondent or their spouse gave a financial transfer to a parent (child) in the last two years.

Respondents are also asked about several types of time transfers. For time transfers to parents, respondents and spouses are asked if they provided 100 hours or more in help with "basic personal activities like dressing, eating, and bathing" over the last two years. They are also asked if they provided 100 hours or more in help with "other things such as household chores, errands, transportation." For both questions on time transfers to parents, respondents and their spouses are asked the number of hours that each of them provided. We create a dichotomous variable that equals one if an individual reported that they gave a positive number of hours of either type of time transfers to parents over the last two years. For couples, if only the wife reports hours of caring over the last two years, only the wife is be coded as giving a time transfer to parents. We also consider time transfers to children. The only type of time transfer that is collected is time spent caring for grandchildren. Respondents and their spouses are asked if they spent 100 hours or more taking care of grandchildren in the last two years. Respondents and their spouses are asked the number of hours that each of them provided. We create a dichotomous variable that equals one if an individual reported that they spent a positive number of hours caring for grandchildren in the last two years.

We also consider transfers in the form of coresidence. Coresidence with both parents and children is ascertained from the household roster. For couples, individuals are considered to coreside with a parent (or child) if they live with their own parents (children) or their spouse's parents (children).

Labor Supply

We consider three measure of labor supply. We consider whether an individual works for pay, whether an individual reports being retired, and the number of hours an individual reports working, conditional on paid work. An individual is considered to be working if they report that they are working for pay as either an employee or self-employed, and not working otherwise. Individuals are retired if they report being completely or partially retired. Hours worked is measured as usual hours worked for individuals who report paid work.

Sample

We use eight waves of the HRS between 1994 and 2008.² We examine men and women in original HRS cohort who were born between 1931 and 1941 and were interviewed for the first time in 1992. We follow these individuals over time and include all observations on these individuals between age 50 and 70. To be consistent with prior analysis, we follow Van Houtven et al. (2013) very closely in our sample selection. They consider the effect of time transfers to parents on labor supply. Our close replication of their sample allows us to examine whether including a broader set of transfers, in particular transfers to children affects estimates of effect of transfers to parents on labor supply. Unlike Van Houtven et al. (2013), we restrict our sample to individuals who have a living parent in the current or prior wave and have at least one grandchild. We do so to ensure that everyone in our sample is at risk of providing a transfer to both a parent and a child. Our sample includes 3,189 women and 2,987 men. The 3,189 women contribute a total of 11,462 person-years and the 2,987 men contribute a total of 10,162 person-years.³

Results

² We do not use the first wave of the HRS in 1992 because the questions about transfers to parents were not consistent with questions in later waves.

³ We lose a small number (less than 20 for men and women) of observations who are missing information on labor supply.

Descriptive Results

We begin by describing the characteristics of individuals in our sample. In what follows we consider men and women separately. Table 1a and 1b show the characteristics of individuals in our sample. Because our panel is unbalanced, in Table 1a and 1b we measure characteristics for all individuals in the first wave in which they appear in the HRS (there is one observation per individual). Table 1a and 1b show characteristics for the sample overall and disaggregate these characteristics by the types of transfers that individuals provide. We have disaggregated transfers to include individuals who have never made transfers, those who have ever made transfers to children only, to parents only, to parents and children in the same wave, and to parents and children but not in the same wave. Table 1a shows that women who provide transfers of any sort are more likely to work and are less likely to be retired. Sixty percent of women who never give transfers report working for pay at baseline compared with between 65 and 72 percent of women who provide transfers. Similarly, 30 percent of women who never provide transfers report being retired at baseline compared with between 21 and 24 percent of women who ever provide transfers. Hours worked conditional on working does not vary substantially between groups. We see a similar pattern for men in Table 1b with even larger differences in labor supply between those who do and do not provide transfers

Difference in demographic characteristics between individuals in these groups are likely one factor explaining differences in labor supply. Women who never provide transfers are on average 2.5 years older and 10 percentage points more likely to report poor health at baseline than women who do provide transfers. Women that provide transfers to both children and parents are even younger and more healthy than women who only provide transfers to one generation. The pattern for men is similar. These differences in demographic characteristics could be

problematic for our analysis. However, we control for differences in observable factors including age and health in our regression analysis. Because women who give transfers may differ from those who do not in other ways, we also control for non-time varying unobserved individual factors through an individual level fixed effect.

We examine the incidence of transfers to children and parents across waves in Table 2a and 2b (there is one observation per person-year). In Tables 2a and 2b we combine all transfers of money, time, and coresidence and look at the prevalence of transfers to parents, transfers to children, and transfers to both parents and children. Transfers are quite common for both women and men. In only 17 percent of person-years for women and 20 percent of person-years for men are no transfers being made—in the remaining 80 percent of person-years at least one type of transfer is being made. Transfers to multiple generations are also common—in over 30 percent of all person-years both men and women are making transfers to multiple generations. Transfers to children are as common for men as they are for women but transfers to parents are about 6 percentage points more likely for women. Our findings are consistent with Van Houtven et al. (2013) in which the incidence of time transfers to parents was approximately equal for men and women though men were more likely to give time transfers in the form of chore help and women were more likely to give time transfers in the form of personal care.

In order to examine the type of transfers more carefully, in Table 3 we look at the type of transfers separately for person-years in which transfers are made only to parents (Panel A), only to children (Panel B), and to both parents and children (Panel C). Table 3 shows the breakdown of transfer type separately for women and men. Panel A shows the distribution of the type of transfers for women and men who only make transfers to parents—that is, it includes those person-years in which transfers are made only to parents. The rows in this section sum to 100,

such that each combination of transfer is accounted for and each person-year in which a transfers is made is counted only once. For both men and women, the most common type of transfer to parents is a transfer of time only, followed by money only, and then care and money together. Nearly 80 percent of transfers with parents involve a transfer of time compared with only 27 percent for money and 13 percent for coresidence. Men are slightly more likely to make money transfers and less likely to make time transfers than women.

Panel B examines the distribution of transfers for person-years in which a transfer is made only to children. Money transfers to children and coresidence with children are common. Nearly 40 percent of person-years in which a transfer is made to children include a transfer in the form of coresidence and over 50 percent of person-years in which a transfers is made to children involve a transfer of money. However time transfers in the form of care for grandchildren are also very common. Sixty percent of person-years for women and 50 percent for men include a time transfer in the form of grandchild care. For women, time transfers are the most common type of transfer (24%), followed by money (19%), money and time together (18%), and coresidence (12%). For men money transfers are the most common (24%) followed by time (20%). Coresidence only and money and time together are about equally common (15%).

Finally, in Panel C we examine those person-years in which transfers are made to multiple generations. While the full distribution of types of transfers to multiple generations is too complex, we have listed all of the combinations of transfers in which one transfer is made to each generation. For both women and men, the most common combinations are time transfers to parents combined with either money transfers to children or time transfers to children. Although time transfers to children are more common for women and money transfers to children are more

common for men. These are followed by a combination of money to both generations and a combination of money to parents and time to children.

Our descriptive results show that transfers are very common. In over 80 percent of the person-years in our sample both men and women are making at least one type of transfer to at least one generation. Transfers to multiple generations are also common—in about 30 percent of person-years, men and women make transfers to multiple generations. Our analysis of the types of transfers show three patterns. First, consistent with prior research, time transfers to parents are more common than money transfers or transfers of coresidence (Schoeni 1993). Second, transfers of time to children are substantial. Schoeni and Ross (1995) show that both money and time transfers are common for children during the transition to adulthood and our evidence is consistent with this. Finally, although men are more likely to provide transfers of money and women are more likely to provide transfers of time, the gender differences in transfer behavior are small. We should note that we have not disaggregated time transfers to parents into chore and personal care tasks in which we would expect to see larger gender differences.

Main Results

Tables 4a and 4b show the results of estimating equation (1) and (2) for women and men respectively. The first column shows the effect of transfers on hours worked using OLS (equation 2), the second column shows the effect of transfers on retirement using a linear probability model (equation 1), and the third column shows the effect of transfers on working for pay (equation 1). We have included a full set of individual covariates along with individual fixed effects but only the main variables of interest are reported for brevity. We include the main effects of each type of transfer to parents and children along with interaction terms for the most common types of transfer for those providing multiple transfers. The interactions include money

to children and parents, time to children and parents, time to parents and money to children, and time to parents and coresidence with children.

Starting with the effects of providing transfers to parents and children on the intensive margin of labor supply, we find that for both men and women, giving money to children is associated with an increase in weekly hours worked by between 1 and 2 hours per week. There is not a statistically significant effect of other types of transfers on hours worked. We hesitate to interpret the coefficients on financial transfers as causal because individuals may choose to work more in times when they anticipate that children may require financial transfers. Although we have controlled for time invariant factors associated with both labor supply and transfers, for financial transfers in particular, there are likely to be time varying unobservable individual characteristics that are associated with labor supply and transfers. These unobservable characteristics may bias the coefficients on financial transfers. We are currently working on an instrumental variables strategy for estimating the effect of financial transfers on labor supply. However, the direction of the results is sensible even if we interpret them merely as correlations.

The second column in Tables 4a and 4b shows the effect of transfers to parents and children on the probability of being retired. Consistent with Van Houtven et al. (2013) we find that even after controlling for individual fixed effects, providing time transfers to parents reduces the probability of retirement for women by about 3 percentage points. Although there still may be unobservable time varying characteristics associated with retirement and providing time transfers to parents, we interpret these results as close to causal parameters. In a similar analysis, Van Houtven et al. (2013) cannot reject the exogeneity of parental care in retirement and working decisions for men or women. Our estimate of a 3 percentage point decrease in the probability of retirement matches their results closely and suggests that accounting for transfers

to children does not change the effect of time transfers to parents on retirement decisions for women. In contrast to women, providing time to children increases the probability of retirement for men by 3 percentage points and having a coresident child decreases the probability of retirement by 4 percentage points. There is no effect of providing transfers to parents on the probability of retirement for men.

The final column of Tables 4a and 4b show the effect of transfers on the probability of working for pay. For women, proving time transfers to a child decreases the probability of working for pay by 3 percentage points while providing money to either parents or children increases the probability of working for pay. For men, providing money to children is associated with an increased probability in working for pay. Again we hesitate to interpret the results on money transfers as causal and in future work we plan to use an instrumental variables strategy. However, the effects point in the correct direction and the magnitudes are consistent with expectations.

Future Research and Conclusions

This paper uses data from the HRS to examine the effect of transfers of time, money, and coresidence to both parents and children on labor supply for women and men in late middle age. We also show that transfers to parents and children are quite common in late middle-age—nearly 80 percent of person-years contain a transfer to at least one generation. The type of transfer that women and men provide is similar although men are slightly more likely to provide money while women are slightly more likely to provide time. We also show that transfers to parents and children affect labor supply for men and women on both the intensive and extensive margin. In particular, providing time transfers to children increases the probability of retirement for men and decreases the probability of paid work for women by three percentage points. Providing time

transfers to parents increases the probability of retirement for women but does not affect labor supply for men. Providing money transfers to parents or children is associated with increases in the probability of paid work of about four percentage points and an increase in hours for both men and women of about two hours per week.

Our results are preliminary and we are currently working on an instrumental variables strategy in which age, health, and widowhood will be used as instruments for transfers to parents and age, marital status, and number of children will be used as instruments for transfer for children. In particular, we are concerned that transfers of money may be biased because men and women who anticipate giving transfers to children for college or weddings may increase their labor supply on either the intensive or extensive margin.

Understanding how demands to multiple generations affects labor supply in late middle age is important because it is the time in which individual savings rates are at their peak (Attanasio (1998) estimates that savings rates peak around age 60), and when workers with defined benefit pension plans are likely to experience their highest earning years critical for determining benefits. This crucial period that affects financial well-being in retirement is also the period during which obligations to family members both up and down the generations are at their peak (Moen et al., 1994). This paper provides some of the first estimates of the effect of family demands on labor supply. By understanding the way in which family demands affect labor supply during late middle ages we are better equipped to understand how the well-being of the retiring Baby Boom generation is likely to be affected by family demands in late middle age.

References

- Angrist, J., and Evans, W. (1998). "Children and their Parents' Labor Supply: Evidence from Exogenous Variation in Family Size." American Economic Review: 88(3): 450-477.
- Attanasio, O. 1998. "Cohort Analysis of Saving Behavior by U.S. Households." *Journal of* Human Resources, 33(3): 575-609.
- Bolin, K., Lindgren, B., and Lundborg, P. (2008). "Your next of kin or your career? Caregiving and working among the 50+ of Europe." Journal of Health Economics, 28: 718-738.
- Browning, M. (1992). "Children and Household Economic Behavior." Journal of Economic Literature, 30(3): 1434-75.
- Bryson, K. and Casper, L. (1999). "Co-resident Grandparents and Their Grandchildren." Current Population Reports, P23-198. Washington, DC: U.S. Bureau of the Census.
- Carmichael, F., Charles, S., and Hulme, C. (2010). "Who will care? Employment participation
- and willingness to supply informal care." *Journal of Health Economics*, 29: 182-190. Center on an Aging Society. (2005). *Adult Children: The Likelihood of Providing Care for an* Older Parent. Data Profile Number 2. Washington, DC: Georgetown University.
- Coward, R. and Dywer, J. (1990). "The Association of Gnder, Sibling Network Composition, and Patterns of Parent Care by Adult Children." Research on Aging 12:158-81.
- Cox, D., Stark, O. (2005). "On the Demand for Grandchildren: Tied Transfers and the Demonstration Effect." Journal of Public Economics 89: 1665-1697.
- Dentinger, E. and Clarkberg, M. (2002). "Informal Caregiving and Retirement Timing among Men and Women: Gender and Caregiving Relationships in Late Midlife." Journal of Family Issues 23(7): 857-879.
- Dwyer, J. and Coward, R. (1991). "A Multivariate Comparison of the Involvement of adult sons versus daughters in the care of impaired parents. Journal of Gerontology: Social Sciences 46:S259-S269.
- Ettner, S. (1995). "The Impact of 'Parent Care' on Female Labor Supply Decisions." Demography, 32(1): 63-80.
- Ettner, S. (1996). "The Opportunity Costs of Elder Care." *Journal of Human Resources*, 31(1): 189-205.
- Furstenberg, F.F., Jr. (2010). On a New Schedule: Transitions to Adulthood and Family Change. *The Future of Children*, 20(1), 19-41.
- Grundy E., Henretta, JC. 2006. Between Elderly Parents and Adult Children: A New Look at the Intergenerational Care Provided by the 'Sandwich Generation', Ageing & Society, vol. 26, no. 5, pp. 707-722
- Heckman, J. and Walker, J. (1990). "The Relationship between Wages and Income and the Timing and Spacing of Births: Evidence from Swedish Longitudinal Data." Econometrica, 58(6): 1411-1441.
- Heitmueller, A. (2007). "The chicken or the egg? Endogeneity in labour market participation of informal caregivers in England." Journal of Health Economics, 26: 536-559.
- Henretta, JC, Grundy, E, Harris S. 2001. Socioeconomic differences in having living parents and children: A U.S. – British comparison of middle-aged women. Journal of Marriage and Family 63: 852-867
- Kahn, J.R., McGill, B. and Bianchi, S.M. (2011). "Help to Family and Friends: Are There Gender Differences at Older Ages? *Journal of Marriage and Family*. 73 (1) (February): 77-92.

- Lilly, M.B., Laporte, A., and Coyte, P. (2010). Do they care too much to work? The influence of caregiving intensity on the labour force participation of unpaid caregivers in Canada. *Journal of Health Economics*, 29: 895-903.
- McGarry, K., & Schoeni, R. (1995). Transfer Behavior in the Health and Retirement Study. *Journal of Human Resources*, 30 (supplement): S184-S226.
- McGarry, K. (1997). Transfer Behavior within the Family: Results from the Asset and Health Dynamics Study. *Journals of Gerontology*, 52B: 82-92.
- McGarry, K. 1998. "Caring fro the Elderly: The Role of Adult Children." In *Inquiries in the Economics of Aging*, ed. David A. Wise, 133-63. Chicago: University of Chicago Press.
- McGarry, K. 2006. "Does Caregiving Affect Work: Evidence Based on Prior Labor Force Experience." Pp. 209-228 in David A. Wise and Naohiro Yashiro (eds.), *Health Care Issues in the United States and Japan*. Chicago: University of Chicago Press.
- Michaud, P.C., Heitmueller, A., and Nazarov, Z. 2010. "A dynamic analysis of informal care and employment in Europe." *Labour Economics*, 17: 455-465.
- Mincer, J. (1963). "Market Prices, Opportunity Costs and Income Effects." In Carl Christ (Ed.), *Measurement in Economics*, (pp. 67-82). Stanford: Stanford University Press.
- Moen, P., J. Robison and V. Fields. (1994). "Women's Work and Caregiving Roles: A Life Course Approach." Journals of Gerontology: Social Sciences, 49: S176-S186.
- Pavalko, E. K. and Artis, J.E. (1997). "Women's Caregiving and Paid Work: Causal Relationships in Late Midlife." *Journals of Gerontology: Social Sciences*, 52B: S170-S179.
- Pebley, A., & Rukdin, L.L. (1999). Grandparents Caring for Grandchildren: What Do We Know? *Journal of Family Issues*, 20, 218-42.
- Pew Research Center. 2013. The Sandwich Generation: Rising Financial Burdens for Middle-Aged Americans. Washington DC. Available at http://www.pewsocialtrends.org/2013/01/30/the-sandwich-generation/
- Pezzin, L.E., and Schone, B. (1999). "Intergenerational Household Formation, Female Labor Supply and Informal Caregiving: A Bargaining Approach." *Journal of Human Resources*, 34(3): 475-503.
- Pierret CR. 2006. The "Sandwich Generation": Women Caring for Parents and Children. *Monthly Labor Review* September, 3-9
- Rosenzweig, M., and Wolpin, K. (1980). "Life-Cycle Labor Supply and Fertility: Causal Inferences from Household Models." *Journal of Political Economy*, 88(2): 227-40.
- Settersten, R.A., Jr., & Ray, B. (2010). What's Going on with Young People Today? The Long and Twisting Path to Adulthood. *The Future of Children*, 20(1), 300-323.
- Schoeni, R.F. (1997). Private Interhousehold Transfers of Money and Time: New Empirical Evidence. *Review of Income and Wealth* 43(4): 423-448.
- Schoeni, R.F., & Ross, K.E. (2005). Material Assistance from Families during the Transition to Adulthood. In R. A. Settersten, Jr., F.F. Furstenberg, Jr., & R.G. Rumbaut (Eds.), *On the Frontier of Adulthood*, (pp. 396-416). Chicago: University of Chicago Press.
- Spillman, B.C., & Pezzin, L.E. (2000). Potential and Active Family Caregivers: Changing Networks and the 'Sandwich Generation'. *Milbank Quarterly*, 78(3), 347-374.
- Van Houtven C, Coe N, and Skira M. 2013. The effect of informal care on work and wages. *Journal of Health Economics* 32: 240-252.
- Wang, Ying and Dave E. Marcotte. (2007). "Golden Years? The Labor Market Effects of Caring for Grandchildren." *Journal of Marriage and Family*69 (December): 1283-1296.

- Wolf, D.A. and Soldo, B. (1994). "Married Women's Allocation of Time to Employment and Care of Elderly Parents." *Journal of Human Resources*, 29(4): 1259-1276.
- Wolf, D.A., Soldo, B., & Freedman, V. (1996). The Demography of Family Care for the Elderly. In T. Hareven (Ed.), *Aging and Generational Relations Over the Life Course : A Historical and Cross-Cultural Perspective*, (pp.115-138). Hawthorne, NY: Walter de Gruyter.

Table 1a. Women's Characteristics by Transfers Given (N=3,189)

	Total Sample	Never Helped Parents or Children	Ever Helped Parents Only	Ever Helped Children Only	Ever Helped Parents and Children in Same Wave	Ever Helped Parents and Children But Not in Same Wave
Working for pay	69.9	60.8	66.1	68.8	72.4	65.4
Hours worked	36.2	36.0	35.6	35.4	36.6	36.7
Retired	22.3	30.0	24.0	21.7	21.2	24.2
Age	56.0	58.3	56.6	56.3	55.6	55.5
Marital Status	79.2	72.4	77.6	78.7	80.4	79.7
Non-white	26.3	25.8	28.4	26.7	26.2	24.2
Education	12.3	11.5	12.1	11.9	12.6	11.9
Fair/Poor health	19.2	29.0	21.3	21.4	16.7	19.6
Home Ownership	83.5	76.0	78.1	82.0	86.1	79.1
HH Size	2.5	1.9	2.0	2.7	2.7	2.1
Stepchild Indicator	24.4	32.3	36.1	22.7	22.5	32.0
Total # Children	3.7	3.7	3.4	3.9	3.6	3.8
N	3,189	217	183	874	1,762	153

Table 1b. Men's Characteristics by Transfers Given (N=2,987)

	Total Sample	Never Helped Parents or Children	Ever Helped Parents Only	Ever Helped Children Only	Ever Helped Parents and Children in Same Wave	Ever Helped Parents and Children But Not in Same Wave
Working for pay	70.4	57.7	62.1	68.3	74.8	73.6
Hours worked	43.7	42.4	41.5	42.9	44.3	46.0
Retired	30.5	41.6	37.4	33.8	26.0	24.8
Age	58.6	60.3	59.0	59.3	57.9	57.9
Marital Status	92.3	84.2	81.6	93.9	94.0	96.1
Non-white	23.9	26.5	25.8	22.8	24.2	19.4
Education	12.2	11.5	12.0	11.8	12.6	12.0
Fair/Poor health	20.7	30.1	25.3	22.1	17.9	16.3
Home Ownership	86.3	78.5	78.4	84.7	89.5	89.2
HH Size	2.7	2.0	2.1	2.8	2.8	2.4
Stepchild Indicator	13.4	17.9	17.4	14.0	11.9	10.1
Total # Children	3.7	3.7	3.5	3.8	3.7	3.9
N	2,987	279	190	917	1,472	129

Tables 2a. Incidence of Transfers for Women: # Observations and % of Total Person-Wave Records

Helps Children

	No	Yes
No	Cell NN N=1,983 17.30%	Cell NY N=4,188 36.54%
Yes	Cell YN N=1,384 12.07%	Cell YY N=3,907 34.09%

Helps Parents

Tables 2b. Incidence of Transfers for Men: # Observations and % of Total Person-Wave Records

Helps Children

	No	Yes
No	Cell NN N=2,036 20.04%	Cell NY N=3,978 39.15%
Yes	Cell YN N=1,122 11.04%	Cell YY N=3,026 29.76%

Helps Parents

 $\begin{tabular}{ll} Table 3. Types of Transfers for Men and Women who Provide Transfers: \#Observations and \% of Total Person-Wave Records \\ \end{tabular}$

Women			Men		
Panel A. Helps Parents Only	N	%	Panel A. Helps Parents Only	N	%
\$ Only	191	13.8	\$ Only	210	18.7
Cores. Only	60	4.3	Cores. Only	51	4.5
Time Only	852	61.5	Time Only	633	56.4
\$ + Cores.	10	0.7	\$ + Cores.	7	0.6
\$ + Time	156	11.3	\$ + Time	123	10.9
Time + Cores.	92	6.6	Time + Cores.	68	6.0
All Three	23	1.6	All Three	30	2.6
Total	1,384	100	Total	1,122	100
Panel B. Helps Children			Panel B. Helps Children		
Only	N	%	Only	N	%
\$ Only	817	19.5	\$ Only	964	24.2
Cores. Only	534	12.7	Cores. Only	617	15.5
Time Only	1,018	24.3	Time Only	795	19.9
\$ + Cores.	316	7.5	\$ + Cores.	408	10.3
\$ + Time	767	18.3	\$ + Time	633	15.9
Time + Cores.	408	9.7	Time + Cores.	276	6.9
All Three	328	7.8	All Three	285	7.2
Total	4,188	100	Total	3,978	100
Panel C. Helps Both	N	%	Panel C. Helps Both	N	%
P. \$ + C. \$	1,013	25.9	P. \$ + C. \$	858	28.4
P. Cores. + C. Cores.	137	3.5	P. Cores. + C. Cores.	87	2.9
P. Time + C. Time	2,058	52.7	P. Time + C. Time	1,399	46.2
P. \$ + C. Cores.	508	13.0	P. \$ + C. Cores.	415	13.7
P. \$ + C. Time	946	24.2	P. \$ + C. Time	650	21.5
P. Cores. + C. \$	285	7.3	P. Cores. + C. \$	194	6.4
P. Cores. + C. Time	279	7.1	P. Cores. + C. Time	172	5.7
P. Time + C. \$	1,889	48.3	P. Time + C. \$	1,470	48.6
P. Time + C. Cores.	935	23.9	P. Time + C. Cores.	643	21.2
P. All 3 + C. All 3	11	0.3	P. All 3 + C. All 3	7	0.2

Table 4a. Transfers and Labor Supply for Women

	Hours	Retirement	Working For Pay
	(OLS)	(LPM)	(LPM)
C. Time	-0.440	0.0103	-0.0313**
	(0.439)	(0.0133)	(0.0121)
P. Time	-0.102	0.0317*	-0.00970
	(0.555)	(0.0161)	(0.0146)
C. Cores.	-0.219	0.0114	-0.0280
	(0.694)	(0.0194)	(0.0190)
P. Cores.	1.787	0.0243	-0.0387
	(1.036)	(0.0263)	(0.0236)
C. \$	1.276*	-0.0122	0.0347**
	(0.502)	(0.0123)	(0.0116)
P. \$	0.166	-0.00229	0.0411*
	(0.629)	(0.0184)	(0.0182)
P. \$ C. \$	-0.255	-0.0214	-0.0307
	(0.793)	(0.0226)	(0.0213)
P. Time C. \$	-0.102	-0.00547	-0.0190
	(0.703)	(0.0182)	(0.0172)
P. Time C. Time	-0.397	0.00899	0.0145
	(0.692)	(0.0183)	(0.0173)
P. Time C. Cores	-0.660	0.0159	0.0185
	(0.807)	(0.0216)	(0.0215)
N	6500	11450	11448
Within R ²	0.0841	0.2140	0.1495

Clustered standard errors in parentheses. Also included in the model: age, age squared, early retirement age and full retirement age dummy variables, wealth in quartiles, home ownership, number of parents, number of children, marital status, health, household size as well as individual fixed effects.

^{*} p<0.05, ** p<0.01, *** p<0.001

Table 4b. Transfers and Labor Supply for Men

	Hours	Retirement	Working For Pay
	(OLS)	(LPM)	(LPM)
C. Time	-0.387	0.0342**	-0.0156
	(0.484)	(0.0123)	(0.0122)
P. Time	0.0821	0.0116	-0.00572
	(0.707)	(0.0164)	(0.0159)
C. Cores.	0.258	-0.0426*	0.00917
	(0.760)	(0.0185)	(0.0193)
P. Cores.	0.939	-0.0169	0.0117
	(1.052)	(0.0248)	(0.0250)
C. \$	-0.0799	-0.0164	0.0372**
	(0.493)	(0.0116)	(0.0118)
P. \$	1.802*	-0.00641	0.0189
	(0.848)	(0.0196)	(0.0192)
P. \$ C. \$	-0.0924	0.0189	-0.0208
	(1.052)	(0.0231)	(0.0226)
P. Time C. \$	-0.141	0.0149	-0.0304
	(0.801)	(0.0185)	(0.0186)
P. Time C. Time	-0.962	-0.00899	0.0160
	(0.828)	(0.0196)	(0.0190)
P. Time C. Cores	1.628	0.0298	-0.00954
	(0.984)	(0.0240)	(0.0234)
N	6085	10148	10145
Within R ²	0.1263	0.2829	0.1735

Clustered standard errors in parentheses. Also included in the model: age, age squared, early retirement age and full retirement age dummy variables, wealth in quartiles, home ownership, number of parents, number of children, marital status, health, household size as well as individual fixed effects.

^{*} p<0.05, ** p<0.01, *** p<0.001