

GIVING INCENTIVES AND THE WELL-BEING OF ADULT CHILDREN
WHO CARE FOR DISABLED PARENTS

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September, 1998

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Running Page Headline: Giving and Well-Being of Caregivers

Key Words: Intergenerational Transfers, Caregiver Well-Being, Altruism, Bequests, Family
Economics, Time Allocation and Work

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ABSTRACT

Do altruism and bequest incentives motivate adult children to care for disabled parents? Using an economic framework, this paper examines these caregiving incentives. It explores implications for adult childrens' overall well-being, financial-, family life-, and life-satisfaction when they give time, money, and/or do not work in the labor market in order to care for disabled parents.

Data from the 1992 Health and Retirement Study indicate that motives to increase bequests from parents and parents' disabilities (ADLs or cannot be left alone) influence adult childrens' decisions about not working and giving time or money to disabled parents. When parents cannot be left alone, general well-being is lower for adult children who are not employed and family life satisfaction is higher for those who give money. Financial satisfaction is higher when adult children give time and are not employed. Family life satisfaction is lower when adult children give time.

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INTRODUCTION

As persons age, their chances of reduced physical ability (disability) increase. This occurs at the same time their economic resources and earnings opportunities are declining. Given the current regulatory environment, with proposed reductions in government responsibility for financing elder health care, older persons will become increasingly dependent on private sources of support to meet their long term care needs. In particular, public policy makers perceive that regulatory changes will lead older disabled persons to rely more heavily on the support provided by family caregivers, primarily adult daughters. Family care is considered a less costly source of support than government financed long term care.

In this paper, we examine the public policy perspective that assumes that if older disabled persons have unmet health care needs, then family members will provide care at a cost that is inconsequential and/or easily ignored. We investigate this perspective by asking two questions. First, how do older disabled persons mobilize this resource called “caregivers” and to what extent do adult children respond to these mobilization incentives? Second, when caregivers are mobilized to provide a solution for meeting the needs of disabled older persons, are there secondary effects (unmeasured costs) for caregivers that should not be ignored? We borrow from the theoretical perspectives of the intergenerational transfers and intergenerational giving

literature, and integrate this perspective with the general caregiving literature. The 1992 Health and Retirement Study (HRS) provides a unique data base to examine these issues. This is because a subsample of the data includes persons who were adult children with disabled parents in 1992.

Caregiving and Its Secondary Effects

Most research on caregiving begins with a sample of persons who have decided to provide support for older disabled persons (e.g., White-Means and Chollet, 1996; Smith and Wright, 1994; Kemper, 1992; Abel, 1991; Liu, McBride, and Coughlin, 1990). Then research questions are asked such as, how many hours of support will caregivers provide? How much monetary support will they provide? This research literature helps us understand the efforts of these caregivers and the characteristics of those who are most likely to give their resources to older persons. It finds that caregivers are primarily middle age daughters who provide significant support, including care hours comparable to part-time jobs. Some caregivers maintain full-time jobs in the labor market, as well as elder care responsibilities. Moen, Robison and Fields (1994) report that women between the ages of 45 and 54 are more likely to combine caregiving and labor market employment than when they are in the 30s or age 55 and older.

A consistent finding is that caregivers who work outside the home provide less informal support. Using data from the 1982 National Long Term Care Survey and a two-stage least squares estimation procedure, Boaz and Mueller (1992) found that caregivers with full- and part-time employment spend less time providing elder care. Gibeau and Anastas (1989) found that when caregiving efforts and employment are conflicting incentives, labor force adjustments, including partial retirement, occurs.

The costs of early retirement due to caregiving are nontrivial. Using data from the 1982 New Beneficiary Survey, Kingson and O'Grady-LeShane (1993), document that when women who leave the labor market due to caregiving are compared with women who leave voluntarily because of health problems, or leave involuntarily due to job-related reasons, monthly Social Security benefits are \$127, \$28, and \$52 lower, respectively. Additionally, Sandell and Iams (1994) find that married women face relatively smaller long-term losses of Social Security benefits resulting from caregiving responsibilities; while their Social Security benefits are lower, their spouses' benefits are higher.

For caregivers of disabled older persons, the gerontology literature has examined extensively the tradeoffs made by caregivers in allocating their time between work and caregiving. The nature of the tradeoffs between giving care time and giving financial support to disabled older persons are less clear. The gerontology literature contrasts with the intergenerational transfers and intergenerational giving literature that primarily focuses on the tradeoffs between giving time and money to all parents, and combines samples of disabled and nondisabled parents in the analysis. In this paper, we bridge the foci of these two literatures and examine the tradeoffs between giving time, money, and employment opportunities that caregivers make for disabled parents.

We know that many caregivers provide both time and financial support to care for older disabled parents. Using the 1988 National Survey of Families and Households, Freedman, Wolf, Soldo, and Stephen (1991) examined intergenerational giving. In their study, about one-fifth of adult children provided an older parent with assistance in household tasks (giving time), while 12 percent gave financial assistance.

In economics, the theoretical perspective of the caregiving literature begins with an assumption that caregivers are utility maximizers who obtain personal satisfaction when an older disabled person receives long term care services in the home. Caregivers are a central input in the production of these services because they contribute their time and financial resources to the services. Utility maximizing caregivers are concerned with how their short-run decisions about giving time or financial support affect their circumstances today.

Unclear are the motivations behind their decisions to become caregivers and whether efforts to provide support for older persons have long term implications for caregivers. Why do caregivers obtain satisfaction from spending time in the production of long term care services for older disabled persons? Is caregiving an effort that is motivated solely by social and psychological factors, or are there also economic motivations? Do caregivers derive personal satisfaction or utility from knowing that the older person's needs are met, facilitating (in contrast to typical economics hypotheses) interdependent satisfaction or utility between the older person and the caregiver? Is the caregiver's decision to provide care motivated by an interest to enhance the future welfare of the caregiver? Is reduction of financial resources the only long term consequence for caregivers, or are caregivers' lives and mental well-being impacted in other ways over the long term, due to caregiving responsibilities?

Attachment and Filial Obligation

Research in psychology and aging has shown that filial obligation and attachment are motivations for caregiving (Cicirelli, 1993; Cantor, 1989). Adult children believe that they have a duty or social obligation to care for their parents. These feelings of obligation lead to greater

hours of assistance (Callahan, 1985; Walker, et al., 1990). Adult children also engage in caregiving to protect and prolong life of an attachment figure whose health is declining. Stronger attachment corresponds with greater hours of assistance (Cicirelli, 1993).

The ways that families define their responsibilities affect caregiving efforts, as well as the sharing of responsibility among siblings (Piercy, 1998). Caregivers' attachment and filial obligation motivations have been carefully tested and documented.

Altruism or Motives to Increase Bequests and Caregiving

The economics literature on intergenerational giving and transfers also examines the factors that motivate adult children to support their parents. It suggests that both motives to obtain bequests (i.e., future wealth accumulation) and altruism motives (conscientious efforts to show love to parents and desires to be loved later in life by ones own children) affect giving. Conceptually, the literature suggests that caregivers' efforts to maximize long term financial and human capital resources may influence (motivate) care efforts for their parents. This conceptualization suggests that there are economically motivated giving patterns of adult children when their parents face the disability stage of their life cycle (Altonji, Hayashi, and Kotlikoff, 1996). The literature has a strong theoretical base, with testable hypothesis. However, since the corresponding empirical analysis typically uses a sample of adult children whose parents may or may not be disabled, empirical documentation of economic motives of caregivers for disabled parents is scanty.

In the economics literature on intergenerational transfers, bequests from parents to children are a form of wealth transfers. Data from the 1983-85 Survey of Consumer Finances indicate that over 75 percent of financial transfers involve parents giving to children (Bernheim,

Shleifer, and Summers, 1985). Furthermore, bequests represent 31 percent of aggregate net wealth transfers. More than eight trillion dollars of net wealth will transfer from one generation to the next over the coming 20 years (Zabner, 1993).

Parents may hold bequestable wealth to influence the behaviors of their children (Bernheim, Shleifer, and Summers, 1985; Cox, 1987). They may leave bequests to their heirs in exchange for services heirs provide. Or parents may pose a credible threat that bequests will be withdrawn if services are not provided. Siblings may even compete for bequestable wealth (Stark, 1995). If caregivers support the needs of older disabled persons due to a bequest motive, caregivers will respond to conditional terms of bequests (Bernheim, Shleifer, and Summers, 1985). Thus, to maximize their bequests, they must meet some specific service or goods requirement of the bequester. According to Bernheim, Shleifer, and Summers (1985), Cox (1987), and Zabner (1993), a testable hypothesis of the bequest motive is that as the parents' bequestable wealth increases, the amount of giving by the child should increase.

A second testable hypothesis is that wealthy children should be less easily influenced by bequest motives and less likely to give elder care support. A third testable hypothesis is that children give more to parents in families with large numbers of siblings, due to the competition for bequests. Alternatively, Wolf, Freedman, and Soldo (1997) posit and provide empirical support from the 1993 Asset and Wealth Dynamics Among the Oldest Old (AHEAD) data base that when siblings work as a team that is solely motivated by the desire to meet the needs of a disabled parent, the giving efforts of each child will decrease as the number of siblings increases. This is because there are more persons to share the work load.

Similar to the bequest motive, one can conceptualize an altruism motive among

caregivers that is based on an effort to enhance the long term welfare of caregivers¹. Stark (1995) theoretically conceptualizes altruism among caregivers that is bestowed upon elderly parents. He also provides an empirical test of this form of altruism by developing a concept of economically motivated altruism. He postulates that the bequest motive for elder care is an inadequate explanation for the time intensive care given to impoverished older persons with inadequate resources for current consumption and nothing to leave for heirs as a bequest. Stark suggests that showing love, i.e., altruism, is a human capital characteristic that parents want to instill in their children. The relationship among persons in three generations may reflect altruism incentives. Specifically, providing caregiving services for ones parents not only meets the need of a disabled parent, but also it is a way to encourage ones children to learn altruism. As the children of adult caregivers observe their parents caring for their grandparents, they are more likely to show altruism to their parents in later years.

In essence, showing altruism to disabled parents is also "preference shaping" and development of a human capital characteristic (altruism) in ones children. This preference shaping may increase an adult child caregiver's resource base of time and money in later years when the caregiver faces disability. This is a "do as I do" approach to caregiving that assures one

¹ It is important to note that this conceptualization of the altruism motive is distinct from that found in a portion of the intergenerational transfer literature. For example, Cox (1987) and other researchers have defined parental (care recipient) altruism, based on the parent's desire to maximize his/her utility, as a factor associated with adult children's giving. Cox predicts that parental altruism may imply that parents income and giving by the child are negatively related or the adult child's (caregiver's) income and services to parents may be positively related. Both outcomes suggest that altruistic parents may compensate their children in amounts that are greater than the services given to them by their children.

This conceptualization of altruism is also distinct from one that views altruism as an emotional response that is focused on other's welfare (Schultz, 1990).

will have a caregiver in the future. It is conceptually linked to real world evidence that children emulate parents. For example, children of teen or divorced parents tend to the states of teen parenting and divorce when they are grown.

An alternative to the demonstration effect for inculcating altruism in children is religion (Stark, 1995). Religion is a process to develop training in the skill of loving parents. For example, Christian religions promote the Ten Commandments that teach the philosophy of honoring fathers and mothers. Religious training enhances parents' ability to develop altruism. Stark predicts that religion is positively associated with giving to parents.

Stark's (1995) altruism framework suggests that elder care services received by ones parents are greater when caregivers have children than when they do not. With more children, the likelihood that at least one child will emulate parents increases and giving to parents has greater benefits for caregivers. Thus, it is possible to test empirically for the altruism motive by examining the sign of the variable (number of children) in models of caregivers' activities. This positive predicted effect of children on giving to disabled parents differs from that of another economic approach to understanding caregiving (the Beckerian household time allocation analysis framework) and predictions based on other social science disciplines. The later perspectives predict that with more children, demands on the caregiver's time increase, the caregiver's roles increase, and thus the caregiver will provide less care to older disabled parents. Therefore, caregiving competes for scarce time that is needed for other activities, i.e., child care.

Long-Term Implications (Unmeasured Costs) for Caregivers

Are the long term costs of caregiving solely financial? Caregiving is a physically demanding activity and may affect the quality of life and health status of caregivers (White-Means and Thornton, 1996; Schultz and Williamson, 1994). However, this aspect of the cost of caregiving is seldom linked to caregiver decision-making and economic motivations.

To examine the quality of life and health status of caregivers, researchers have developed measures of caregiver burden, stress, and well-being. An extensive literature is equivocal about the relationship between caregiving and factors reflecting caregiver welfare. Liberman and Fisher (1995) and White-Means and Thornton (1996) found that hours of caregiving had a negative effect on the health and well-being of caregivers. Among employed caregivers, Neal et al. (1993) and Scharlach, Lowe and Schneider (1991) found that stress increases with hours of caregiving and workers face greater difficulty combining work and family responsibilities as hours of employment and caregiving increase. Moen, Robison and Dempster-McClain (1995) also found that longer durations of caregiving lead to greater strain.

In contrast, Spitze, et al., (1994) report that caregiving increases the well-being of women and increases the distress that men face. Among employed caregivers, Skaff and Pearlin (1992) and Brody (1990) found that combining employment and caregiving buffered negative effects of caregiving on well-being. Finally, Young and Kahana (1995) report that hours of caregiving assistance are insignificant in affecting caregiver well-being.

Studies that examine depression among caregivers indicate that caregivers have higher rates of depression than the general population (eg., Greene and Coleman, 1990). Gage and Kinney (1995) find that current and former caregivers have lower levels of life satisfaction than

noncaregivers. In a regression analysis using the Center for Epidemiologic Studies-Depression Scale (CES-D), Tennstedt, Cafferata, and Sullivan (1992) found that employed caregivers have lower depression scores than non employed caregivers, and those who perceive that caregiving had a negative impact on their life had higher depression scores. They also found that the caregiver tasks and informal support are unrelated to the CES-D score.

The literature on caregivers' burden, stress, and well-being links caregiving hours (modeled as an endogenous variable) and measures of the caregiver's welfare (Cicirelli, 1993). Yet, hours are not the only sacrifice made by caregivers. They sacrifice money and jobs. However, we know very little about how the later sacrifices affect caregivers.

This paper makes three unique contributions to the literature. For a sample of adult children who are age 51-61 and have disabled parents, we provide an explicit test of whether economic (altruism and/or bequest) motives influence decisions to provide care to disabled older persons. Second, the paper examines the interrelationship among three forms of giving/caring for older persons-- giving time to care for a parent, giving current financial resources, and giving future financial resources (reflected by decisions to not work in the labor market).² These three forms of giving are considered simultaneous and potentially affected by bequest and/or altruism motives. We examine whether unique factors motivate each form of giving. Finally, the paper examines secondary effects of the three forms of giving on the caregiver's general well-being, financial satisfaction, family life satisfaction, and overall life satisfaction.

²A fourth form of giving, sharing physical space in ones home, is not examined due to the small numbers of persons who reside with parents (McGarry and Schoeni, 1995).

METHODS

Data Source

The data for this study are from the 1992 Health and Retirement Study (HRS). The data were collected by the Institute for Social Research at the University of Michigan and the National Institute on Aging (Juster and Suzman, 1994). It is a national longitudinal study that focuses on labor force participation, pensions, health insurance, health status, retirement, housing and mobility, family structure, and economic status of 12,654 individuals born between January 31, 1931 and December 31, 1941 and their spouses and partners. The HRS is ideal for our study because this age group (age 51-61) is thought to provide the bulk of caregiving assistance to disabled parents. The data include one respondent per household.

We use a subsample of these data in our research. Since we are concerned with giving to parents when they are limited physically or impaired in their ability to care for themselves, our sample includes 1,704 adult children who have at least one living parent or parent in law (either biological or step) who cannot be left alone more than one hour or who has a limitation in at least one of the following activities of daily living (ADLs)-- dressing, eating, or bathing.

Estimation Procedure

The empirical model is a four equation, simultaneous system. Three logistic regression equations estimate the determinants of various forms of giving--giving time to care for a parent, giving current financial resources to care for a parent, and not working in the labor force (and giving up future financial earnings opportunities and benefits) to provide care for a parent. The fourth equation is the well-being equation, and related recursively to the other equations of the

system. It is modeled as a function of giving patterns.

Each form of giving is jointly determined with the two other forms of giving, as well as influenced by altruism and bequest incentives, the caregiving environment, and characteristics of the adult child. Since the endogenous giving patterns are not independent of the regression error terms, the three giving equations are estimated using a two-stage least squares procedure. In the first stage, we use a logistic regression procedure and regress each form of giving on all exogenous variables of the three giving equations. This first stage estimation generates instrumental variable measures of giving. In the second stage, we estimate the three equation, structural model of giving using logistic regression procedures. Each equation includes the instrumental variable measures of the alternate forms of giving and exogenous variables uniquely associated with that form of giving. Finally, predicted values of the three forms of giving, derived from the two stage least squares procedure, are included in the ordinary least squares and ordered logit models for adult child well-being.

Measures of Dependent Variables

Table 1 describes independent and dependent variable measures. The dependent variables need further discussion. We dichotomize each of the three giving variables. The first variable, GIVETIME equals one if an adult child indicates that he/she or his/her spouse spent 100 hours or more helping with basic needs care of at least one disabled parent or parents-in-law during the last 12 months. The second variable GIVEMONEY equals one if the adult child and/or the adult child's spouse gave \$500 or more to support the care of at least one disabled parent or parent-in-law during the last 12 months.

The third variable, NOWORK, equals one if the adult child is not currently employed. While incorporating some measurement error, NOWORK is the best available measure of the caregiver's loss of long-term financial resources. Our sample of caregivers, who are age 51-61, are in an age cohort that typically works in the labor market. Data from the 1992 Current Population Survey (CPS) indicates that 67.4% of persons who were age 55-59 participated in the labor force and 64% were employed. Whether they worked or not affected the availability and amount of their Social Security benefits and future retirement income (Wiatrowski, 1993). Because they had not reached age 65, employment (or working part- or full-time, post retirement) was still a viable option for some adult children and caregiving responsibilities led some to not avail themselves of this option. For the NOWORK variable, the one category includes persons who have permanently left the labor force due to caregiving responsibilities, those who have temporarily left the labor force due to caregiving responsibilities, and those who are in the labor force but not working because caregiving responsibilities absorb so much time that they cannot search extensively for a job. Since the one category also includes those who are not working for reasons other than caregiving, it overestimates the persons who have made caregiving choices that impact on their long term financial resources.

We estimate the fourth equation of the four equation simultaneous system four times. Each time we use a different measure of adult child well-being. We include an index of general well-being (created by using principal components analysis), and categorical measures of financial, family life, and overall life satisfaction.

The HRS does not include a comprehensive measure of caregiver well-being, such as those recently developed by Schofield, et al. (1997) or Tebb (1995). However, it includes questions from the eleven item Center for Epidemiologic Studies-Depression Scale (CES-D) (Radloff, 1977; Kohout, et al., 1983) and also questions about physical energy and life satisfaction. Thus, we develop an index that combines the CES-D questions and those on physical energy to obtain an objective measure of well-being. Three questions regarding life satisfaction provide subjective measures of well-being.

The index of general well-being (GWB) is a measure of depressive symptomology and the extent of physical energy. It combines eleven questions from the CES-D and three additional questions that ascertain whether the respondent had a lot of energy (V12), felt tired (V13), and felt really rested when I woke up in the morning (V14). The eleven CES-D questions are: I felt depressed (V1), I felt that everything I did was an effort (V2), My sleep was restless (V3), I was happy (V4), I felt lonely (V5), I felt people were unfriendly (V6), I enjoyed life (V7), I felt sad (V8), I felt people disliked me (V9), I could not "get going" (V10), and I did not feel like eating (V11). Respondents' answers to the fourteen questions that compose the GWB index included these options: all or almost all the time, most of the time, some of the time, and none or almost none of the time. We recoded responses to each question, with higher values reflecting more positive levels of well-being.

We use principal components analysis to derive the index of GWB. Principal components analysis is a linear transformation of a large set of correlated variables. The procedure makes analysis easier for constructing an index that is more manageable by eliminating problems of multicollinearity (Vogt, 1993). An index created by using principal

components analysis is considered to be a better measure than a cumulative index or scale because relative importance of each variable used is reflected from the results of principal components analysis. A cumulative index or scale assumes equal importance of each variable used. From the results of principal components analysis, the following is the formula for the index of general well-being (GWB):

$$\text{GWB} = 0.3196 * V_1 + 0.2602 * V_2 + 0.2585 * V_3 + 0.2932 * V_4 + 0.2748 * V_5 + 0.2077 * V_6 + 0.2705 * V_7 + 0.3052 * V_8 + 0.2065 * V_9 + 0.2820 * V_{10} + 0.2263 * V_{11} + 0.2820 * V_{12} + 0.2839 * V_{13} + 0.2426 * V_{14}.$$

The index ranges from 4.13 to 14.85. Higher values of the index reflect higher levels of this multidimensional measure of well-being. To test the construct validity of this GWB measure, we examined the correlation between it and the CES-D score. The correlation was 0.99, indicating a substantial degree of validity.

The other three measures of well-being are subjective measures and reflect unique dimensions of well-being, i.e., levels of satisfaction with financial status, family life, and overall life. We include ordinal measures of all satisfaction variables: One if somewhat or very dissatisfied, two if neutral, and three if somewhat satisfied or very satisfied. Ordered logistic regressions of well-being incorporate these measures.

Model Specification and Identification of the Simultaneous System

Each of the three equations in the simultaneous system of giving includes variables to test bequest and altruism motives, and measure the caregiving environment and caregiver

characteristics. The bequest motive variables correspond with hypotheses derived from the previous literature. We include four measures: number of houses owned by disabled parents, savings of the adult child, and two dummy variable measures of whether a sibling of the adult child has transferred money or time to the disabled parent in the last 12 months. We hypothesize that if the adult child is motivated by an incentive to establish themselves in the good graces of the older person to receive a financial or capital (housing) inheritance, there will be enhanced motives to care for a parent when the parent has greater resources (Bernheim, Shleifer, and Summers, 1985). On the other hand, the greater the adult child's savings, the less dependent they are on parents' bequests and the less likely they are to respond to a bequest motive (Bernheim, Shleifer, and Summers, 1985). If siblings compete for bequests, an adult child will give more care to a disabled parent if siblings give care. If siblings give money, we predict that adult child respondents will be more likely to give money. Similarly, if siblings give time, we predict more time contributions by the adult child respondent. The altruism variables also correspond with the literature. We include two measures: number of children and religion. According to Stark's (1995) framework, if developing altruism in their children (preference shaping) motivates families, greater efforts of giving will occur when parents have more children. Religion serves as an alternate mechanism for developing altruism in children. We also include interaction terms of children and religion to capture the intervening influence of religion on the motivation to preference shape children.

For purposes of identification of the simultaneous system of equations, each equation of the system includes unique variable measures. Measures of the caregiving environment and caregiver characteristics vary in each equation. By doing so, the system of simultaneous

equations is overidentified.

The NOWORK equation includes two measures of the opportunity cost of leaving the workforce: post-retirement health insurance (=1 if have insurance) and an opportunity wage. The opportunity wage is a measure of the opportunity cost of the caregiver's time. We impute this measure for all adult children by first estimating wage regressions for employed adult children. The natural log of wages per hour is predicted by education, race, potential experience (age-education-6) and its square, region, and disability status. This equation is estimated separately for men and women. Coefficients from these regressions are used to impute values of the opportunity wage for all adult children.

The GIVETIME equation includes regional dummy variables to reflect variations in regional health **care** practices and financing policies for the aging population. Those who live in the South and West are less likely to have insurance and the South has the highest concentration of older persons who live in poverty (Ries, 1987). Thus, structural characteristics of the community of residence may increase demands on adult children to give time to care for disabled parents. Market-purchased home care may represent a care option that is unavailable or not affordable to some disabled parents in these regions.

The GIVEMONEY equation includes measures of the number of parents who are poor. We predict that disabled parents who live in poverty are more likely to have adult children who contribute financial resources. However, the more poor parents that the adult child and his/her spouse have, the less financial resources are likely to be available for any particular disabled parent.

Previous research has shown that the needs of the disabled parent influence the amount of

support given by individual caregivers (e.g., White-Means and Thornton, 1996; Altonji, Hayashi, and Kotlikoff, 1996). In each giving equation, we included variables to measure these aspects of the caregiving environment--the total number of parents' with ADLs or who cannot be left alone and an interaction term of the number of parents' with ADLs and number of parents who cannot be left alone.

The final group of independent variables for the giving equations are caregiver characteristics. They include the caregivers' nonwage income, self-assessed health status, age, gender, education, marital status, and race. The nonwage income measure incorporates all other sources of household income, including the spouse's income. We include a measure of the hours volunteered to capture the altruistic spirit of the adult child, a type of altruism that is independent of economic motivations to benefit the adult child in the future. The variable inherited (=1 if the adult child has received an inheritance or was given substantial assets in the form of trust at some previous time) captures an incentive of the adult children to give care to disabled parents when they have been recipients of gifts in the form of inheritances or trusts. Finally, we include a measure of the adult child's attitudes about bequests, a measure of whether the adult child plans to leave a bequest for his/her child.

The fourth equation identifies the determinants of the caregiver's welfare (general well-being, financial satisfaction, family life satisfaction, or overall life satisfaction). Included in these regressions are predicted values of giving time, giving money, and not working in the labor force. We also include four demographic characteristics of the adult child: age, gender, marital status, and education.

RESULTS

How unique are the experiences of adult children who provide support for disabled parents? To address this question, we compare them to a similarly aged sample of adult children whose parents are not disabled. Table 2 reports the results and stratifies the sample of adult children who care for disabled parents according to the type of parental disability. Some children attend to the needs of parents with ADL limitations only, or with the inability to be left alone, or both. The data show that when adult children have parents with disabilities, the children have significantly lower levels of the four indicators of well-being (financial, family, or life satisfaction, and also general well-being). Those who care for parents with ADL limitations, and who cannot be left alone, have significantly lower general well-being scores, financial satisfaction, and family life satisfaction than adult children whose parents are not disabled.

Corresponding with these lower levels of well-being, adult children spend significantly more hours in support care for their parents if their parents have ADL disabilities and also cannot be left alone. When parents have both types of limitations, adult children average 20 times the hours spent with parents who are not disabled. Adult children who assist with parents who are only limited in ADLs average almost 16 times the hours spent with parents who are not disabled.

Additionally, Table 2 provides a contrast of the levels of well-being, time given, money given, and employment, according to whether the adult child gives time or money to disabled parents. Each measure of well-being is lower (although not statistically significant) for adult children who give time to care for disabled parents, compared to adult children who do not spend time in elder care. Similarly, each of the four measures of well-being is lower for adult children

who give financial support to care for disabled parents, compared to those who do not provide financial support. Those who give time also give significantly more money and are less likely to hold jobs in the labor market than adult children who do not give time. Those who give money also give significantly more time, yet are more likely to hold jobs in the labor market than adult children who do not give money.

Based on the descriptive statistics of Table 2, giving money and giving time, not working in the labor market and giving time appear complementary. On the other hand, not working in the labor market and giving money appear substitutable. When adult children give time, they average higher monetary giving (\$925.27) than those who do not give time (\$93.34). They also are less likely to work in the labor market (61.57% vs. 71.07%). Similarly, when adult children give money to disabled parents, they also average more annual hours in support of parents (271.82 vs. 31.80), yet are slightly more likely to work in the labor market (77.13% vs. 70.25%). These unexpected relationships require further investigation, particularly in a multivariate framework.

Table 3 reports descriptive statistics for model variables, according to the parents' disability status. Since the data in Table 2 suggest that the demands on adult children are more extensive when parents are limited in ADLs or have ADLs and also cannot be left alone, we stratify the empirical models to reflect these differences in care environments. In Table 4 and all remaining tables, the data are stratified according to whether parents are limited in ADLs (with ADLs only or ADLs and cannot be left alone) or whether parents cannot be left alone (either with or without ADLs).

Tables 4 and 5 report the results of the second stage logistic regressions for the

simultaneous model of giving.³ The results indicate that the different forms of giving are interrelated, with the nature of this relationship varying with the type of disabilities faced by parents. They provide support for the hypothesis that bequest motives influence caregiving among adult children. There is only weak support for an altruism motive. Moreover, the caregiver's altruistic spirit (altruism that is independent of economic motives) affects giving. As hypothesized, we find that the type of disability faced by the parent affects giving patterns.

When parents face ADL limitations or cannot be left alone, giving care time and giving up jobs in the labor market are complements. Caregivers who do not work will provide more care time for disabled parents. Additionally, the higher the probability that adult children give money to their cognitively disabled parents, the more likely they are to work in the labor market (See Table 5).

There is some, although weak, support for an economically motivated altruism incentive. As predicted, non-Catholic Christians with more children are more likely to give transfers to parents with ADL limitations. However, among non-Catholic Christians who have parents with ADL limitations (Table 4), having more children decreases the likelihood of not working (i.e., decreases the likelihood of giving up long-term resources). Among adult children whose parents cannot be left alone (Table 5), religion is significant, but not of the predicted sign. Catholics are less likely than non-Christians to not work in the labor market.

In both Tables 4 and 5, the empirical findings are consistent with the bequest motive hypothesis. As predicted, we find that adult children are more likely to give to parents when their siblings give to their parents. According to the bequest motives hypothesis, this is evidence

³ First stage results are available from authors upon request.

that sibling rivalry motivates efforts to give time and money to parents who are disabled with ADLs or cannot be left alone. If siblings transfer money, adult children are more likely to transfer time and money to parents who have ADL limitations or cannot be left alone. If siblings transfer time, adult children are more likely to transfer time. Bequest motives also seem to influence the employment decisions of adult children who care for parents who cannot be left alone; money transfers by siblings increase the likelihood that an adult child is not working in the labor market. In both tables, we also note that when adult children's savings are larger, the probability of not working decreases. This finding is consistent with the hypothesis that if adult children have savings, they are less likely to engage in giving to enhance the probability of receiving bequests from parents.

When parents have ADL disabilities, neither the number of parents with ADLs nor the number of parents with ADLs and also cannot be left alone influences the giving decisions of adult children (Table 4). In contrast, when parents cannot be left alone (Table 5), the number of parents with this limitation or this limitation and ADL disabilities influences giving. The more parents who cannot be left alone, the more likely an adult child does not work in the labor market, and the less likely they give time or give money. In essence, the adult child gives future resources (employment opportunities, earnings and benefits) rather than current resources. With both greater numbers of parents who have ADL limitations and cannot be left alone, time transfers and money transfers (current resources) increase.

If adult children have an altruistic spirit (as evidenced by the number of hours volunteered), they are more likely to give money to parents with ADL limitations or cannot be left alone and to reduce labor force participation when parents cannot be left alone. If adult

children plan to leave a bequest to their children, they are more likely to make money transfers to parents with ADL limitations.

The opportunity cost of time (measured by the imputed wage) is not statistically significant for caregivers with disabled parents who have ADLs or cannot be left alone. However, increases in other sources of income decrease the probability that adult children who have disabled parents will work in the labor market. Adult children who have higher income from other (nonwage) sources are more likely to give time and money to parents with ADL limitations. Post-retirement health insurance increases the opportunity cost of leaving labor force for adult children and is associated with a lower probability of not working in the labor market. Adult children with greater levels of health (sometimes associated with higher productivity) are more likely to participate in the labor market.

The results of the well-being models (Tables 6 and 7) show that the adult child's choices to give to parents affect the adult child's well-being. Only one measure of well-being (overall life satisfaction) is unaffected by the adult child's caregiving choices.

Among adult children who have parents who cannot be left alone, choosing not to work in the labor market (not giving long-term economic resources) reduces general well-being. Not working is associated with higher levels of financial satisfaction for adult children whose parents have ADL limitations or cannot be left alone. In contrast, giving time is associated with greater financial satisfaction and lower family life satisfaction. Giving money enhances the family life satisfaction of adult children whose parents cannot be left alone.

The adult child caregivers' health and marital status are consistently important factors enhancing each type of well-being. With greater health levels and a spouse, adult child

caregivers have higher levels of general well-being, and also financial-, family life-, and life-satisfaction. Older adult children have higher levels of general well-being, financial satisfaction, and overall life satisfaction. Those with more education have higher levels of family life and overall life satisfaction.

DISCUSSION

What motivates adult children to care for their disabled parents? Similar to Cox's (1987) analysis of private income transfers to all parents, we find that bequest incentives dominate adult children's motivations to give time and money to their disabled parents. We find little support for an economically motivated altruism incentive among adult children age 51-61 and their spouses. Additionally, non economically motivated altruism (caregivers who are community volunteers) and opportunity cost are key factors. These factors influence adult childrens' decisions about employment, giving time, and giving money to support disabled parents.

By estimating giving patterns as a simultaneous system of choices, we find that different forms of giving are interrelated. Giving money and not working are substitutes. Thus, an adult child who shares current financial resources with their parent is less likely to give up long term financial resources by not working in the labor market. On the other hand, the choice to share current time resources with a disabled parent is positively associated with giving up long term financial resources by not working in the labor market. Our analysis does not indicate a relationship between giving care time and giving money. The analysis presented in this paper extends Altoinji, Hayashi, and Kotlikoff's work (1996) that used single equation models with

dummy variable measures of the alternate forms of giving, to provide preliminary measures of the interrelationship between time and money transfers. Their preliminary results contrast ours and suggest that giving time and giving money to parents are complements.

In the decision to give care to an older disabled parent, the care environment is important for adult children age 51-61. The contrasting findings in the models, presented in Table 4 vs. Table 5 and Table 6 vs. Table 7, indicate that there are significant differences in decisions of adult children who care for parents with ADL disabilities and those who cannot be left alone. The parent's health status (i.e., number of ADLs and ability to be left alone) significantly affect time and money transfers of adult children who care for parents who cannot be left alone and is not a significant factor for those who care for parents with ADL disabilities.

In much of the literature that contrasts altruism vs. bequest motives for giving, a critical variable is income (Cox, 1987; Altonji Hayashi, and Kotlikoff, 1996; McGarry and Schoeni, 1995). The hypothesis is that the altruism motive is supported if there is a positive relationship between an adult child's income and giving to a parent. If a negative relationship exists, this finding supports the motive to increase the likelihood of receiving a bequest from parents. In this paper, we have grouped adult children's income/financial resources in three categories: (1) wage of adult child, (2) nonwage income, and (3) savings. We examine the regression coefficient for the savings variable to test for altruistic vs. bequest incentives. This third category of financial resources provides the best source of information about the adult child's wealth and lack of financial dependence on the parent's intention to leave bequests. The finding of a negative relationship between this variable and parental giving in the form of not working, along with the results for the sibling transfer measures, is consistent with the bequest incentives hypothesis.

Nonetheless, it is important to note that the nonwage income measure is positively associated with money and time transfers and not working in the labor market, corresponding with the altruism hypothesis. The later result is also consistent with McGarry and Schoeni (1995) who use measures of adult child income and wealth quartiles and find a positive association with financial giving to parents.

Our findings for the role of the wage rate differ from those of Altonji Hayashi, and Kotlikoff (1996) who used the 1988 Panel Study on Income Dynamics (PSID) to examine giving patterns among all adult children who have living parents. Wages were significant and negatively related to giving time to parents. Similarly, White-Means and Chollet (1996) used data from the 1982 and 1989 National Long Term Care Survey (NLTC) and found (in both time periods) a positive and significant relationship between wages and employment of caregivers for disabled elderly. White-Means and Chollet (1996) note that reductions in the unemployment rate between 1982 and 1989 partly explain the more significant role of wages in employment decisions in 1982, compared with 1989. Greater earnings opportunities in 1989 made leaving paid employment a difficult choice. The data for the present study are for 1992, correspond with a recessionary period with high unemployment, and may partly explain our finding of an insignificant effect of wages on not working and giving time to care for disabled parents.

The literature is equivocal about the relationship between elder care and the well-being of caregivers. We find that within the context where the three forms of giving by 51-61 year old adult child caregivers are modeled as simultaneous endogenous variables, general well-being decreases with efforts to risk long term income resources by decreasing labor market participation. In contrast to the current literature, general well-being is not affected by decisions

to give current time or money resources. While giving time decreases family life satisfaction, giving money increases it. On the other hand, giving time increases financial satisfaction.

The present public policy emphasis is to decrease government responsibility for the financial support of disabled older persons. There are proposed changes to Medicare and Medicaid that include increasing age eligibility, increasing premiums and deductibles, giving nursing homes more flexibility in discharging patients to their homes, and allowing states to require spouses of nursing home residents to sell their homes and other assets. Our results suggest that these types of policy changes could lead to unexpected secondary effects. First, bequest motives influence caregivers' incentives to provide elder care support. Public policy that decreases the wealth of disabled older persons may lead to reduced caregiving efforts by adult children, particularly in providing time and monetary support.

A second consideration is the long term impact of caregiving on the well-being of adult children. If adult children respond to public policy changes by increasing caregiving time and not working, they will face higher levels of depression and reduced health levels of adult child caregivers as they increase their care efforts. Thus, the secondary impact of proposed changes in elder care policy is a reallocation of demand for governmental financial resources from the current to a future period. Today's caregiving efforts may lead to depleted health levels of adult children and the potential for disability at earlier stages of the life course, corresponding with an increase in demand for governmental resources.

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Table 1

Measurement of Variables

| Variables | Measurements |
|-------------------------------|---|
| Dependent Variables: | |
| General well-being | index of depressive symptomology and physical energy |
| Financial satisfaction | 1 if somewhat dissatisfied or very dissatisfied, 2 if even, 3 if somewhat satisfied or very satisfied |
| Family life satisfaction | 1 if somewhat dissatisfied or very dissatisfied, 2 if even, 3 if somewhat satisfied or very satisfied |
| Overall life satisfaction | 1 if somewhat dissatisfied or very dissatisfied, 2 if even, 3 if somewhat satisfied or very satisfied |
| Independent Variables: | |
| Ehat | predicted probability of not working |
| Mhat | predicted \$ value of money transfer |
| That | predicted amount of time transfer |
| Altruism | |
| # children | number of children younger than 18 |
| Religion | |
| Catholic | 1 if Catholic, 0 otherwise |
| Other Christian | 1 if non-Catholic Christian, 0 otherwise |
| # hours volunteered | # hours volunteered in the past 12 months. |
| Race | 1 if white, 0 if African-American |
| Bequest | |
| # houses owned by parents | total # of houses owned by parents and parents-in-law |
| Savings (\$) | \$ value of savings |
| Money transferred by siblings | 1 if \$ was transferred to parent by sibling(s) in the past 12 months, 0 otherwise |
| Time transferred by siblings | 1 if time was transferred to parent by sibling(s) in the past 12 months, 0 otherwise |

| | |
|----------------------------------|--|
| Caregiving Environment | |
| #ADL | number of parents and parents-in-law with one or more ADLs. |
| #Not alone | number of parents and parents-in-law who can not be left alone for more than one hour. |
| Not alone | 1 if parent(s) or parents-in-law cannot be left alone more than one hour, 0 otherwise |
| # poor parents | total number of living parents who are poor |
| Region | 1 if live in Northeast, 0 otherwise |
| Northeast | 1 if live in Midwest, 0 otherwise |
| Midwest | 1 if live in West, 0 otherwise |
| West | 1 if live in South, 0 otherwise |
| South | |
| Caregiver Characteristics | |
| Inherited | 1 if received an inheritance or was given substantial assets in the form of a trust, 0 otherwise |
| Plan to leave bequest | |
| Bequest 1 | 1 if yes definitely or probably expect to leave a sizable inheritance to heirs, 0 otherwise |
| Bequest 2 | 1 if yes possible or probably won't expect to leave a sizable inheritance to heirs, 0 otherwise |
| Unearned income (\$) | total income-earned income |
| Post-retirement health insurance | |
| Wage | 1 if have coverage after retirement, 0 if not |
| Age | wage/hour |
| Gender | age in years |
| Marital status | 1 if male; 0 otherwise |
| Education | 1 if married; 0 otherwise |
| Health status | years of formal education |
| Excellent | |
| Very good/good | 1 if excellent, 0 otherwise |
| | 1 if very good or good, 0 otherwise |

Table 2
Differences in Characteristics of Adult Children by Presence of Parents with ADLs, Whether
 Parents Can Be Left Alone, Giving Time, and Giving Money

| Variables | With ADLs, Not Alone, ADLs & Not Alone, & No Disability | | | | GIVETIME | | GIVEMONEY | |
|--|---|-------------------------|----------------------------------|-------------------------------|----------------|---------------------|----------------|---------------------|
| | ADL (N=682) | NOT ALONE (N=323) | ADL & NOT ALONE (N=669) | No Disability (N=3,214) | YES (N=216) | NO (N= 4,672) | YES (N=293) | NO (N= 4,595) |
| General well-being ^{b f} | 12.63 | 12.44 | 12.37 | 12.73 | 12.09 | 12.69 | 12.48 | 12.67 |
| Financial satisfaction ^f | 2.42 | 2.46 | 2.57 | 2.38 | 2.72 | 2.40 | 2.54 | 2.41 |
| Family life satisfaction ^f | 1.46 | 1.50 | 1.50 | 1.39 | 1.62 | 1.42 | 1.52 | 1.42 |
| Overall life satisfaction ^d | 1.65 | 1.59 | 1.61 | 1.55 | 1.81 | 1.57 | 1.61 | 1.58 |
| Time given (Hours) ^{a c d f} | 125.89 | 15.95 | 162.89 | 8.02 | 1045.27 | 0 | 271.82 | 31.80 |
| Money given (\$) ^{g h} | 162.99 | 77.01 | 270.43 | 99.24 | 925.27 | 93.34 | 2170.43 | 0 |
| Employment (%) ^{g h} | 65.95 | 67.07 | 67.85 | 72.62 | 61.57 | 71.07 | 77.13 | 70.25 |

Note: For the general well-being measure, higher values indicate higher levels of satisfaction. For the measures of financial, family life and overall life satisfaction, the means correspond with the raw data measures of these variables and not the recoded measures described in Table 1. The raw data ranges from values 1-5, with one indicating very satisfied.

- ^a significantly different at .05 or better between ADL and Not Alone
- ^b significantly different at .05 or better between ADL and ADL & Not Alone
- ^c significantly different at .05 or better between Not Alone and ADL & Not Alone
- ^{d-f} significantly different at .05 or better between none and (ADL, Not Alone, or ADL & Not Alone, respectively)
- ^g significantly different at .05 or better between those who give time and those who did not
- ^h significantly different at .05 or better between those who give money and those who did not

Table 3: Descriptive Statistics

| Variables: | ADL | NOT ALONE | ADL & NOT ALONE |
|--|---------------------|---------------------|---------------------|
| Continuous variables with mean and standard deviation: | | | |
| # children | 0.29 (0.69) | 0.32 (0.74) | 0.28 (0.69) |
| # hours volunteered | 26.09 (184.23) | 32.24 (225.88) | 25.37 (174.2) |
| # houses owned by parents | 0.97 (0.99) | 1.06 (0.97) | 1.01 (0.98) |
| Savings (\$) | 83,238 (369,224) | 94,796 (415,806) | 82,494 (332,971) |
| Unearned income (\$) | 14,834 (22,107) | 13,557 (21,777) | 14,142 (21,515) |
| # ADLs | 1.09 (0.31) | 0.75 (0.59) | 0.89 (0.51) |
| #Not alone | 0.53 (0.60) | 1.14 (0.39) | 0.65 (0.64) |
| Age | 55.93 (4.83) | 55.43 (5.11) | 55.72 (4.91) |
| Education | 12.27 (3.21) | 12.15 (3.17) | 12.24 (3.24) |
| # poor parents | 0.22 (0.55) | 0.24 (0.58) | 0.23 (0.56) |
| Wage | 12.45 (4.97) | 12.06 (4.67) | 12.37 (4.87) |
| Categorical variables with frequency and percentage: | | | |
| Money transferred by siblings (yes) | 96 (8.1) | 57 (6.9) | 112 (7.2) |
| Time transferred by siblings (yes) | 168 (14.2) | 88 (10.6) | 178 (11.4) |
| Not alone (yes) | 769 (65.1) | 559 (67.4) | 829 (53.2) |
| Religion | | | |
| Other Christian | 769 (65.1) | 559 (67.4) | 1010(64.9) |
| Catholic | 304 (25.7) | 206 (24.8) | 406 (26.1) |
| Other | 109 (9.2) | 64 (7.7) | 161 (9.0) |
| White | 946 (80.0) | 652 (78.6) | 1241 (79.7) |
| Inherited | 164 (13.9) | 111 (13.4) | 221 (14.2) |
| Plan to leave bequest | | | |
| Yes, definitely or yes, probably | 365 (30.9) | 253 (30.5) | 469 (31.4) |
| Yes, possibly or probably not | 494 (41.8) | 358 (43.2) | 655 (42.1) |
| No, definitely | 323 (27.3) | 218 (26.3) | 413 (26.5) |
| Married | 877 (74.2) | 629 (75.9) | 1162 (74.6) |
| Female | 641 (54.2) | 439 (53.0) | 894 (57.4) |
| Health | | | |
| Excellent | 255 (21.6) | 187 (22.6) | 339 (21.8) |
| Very good/good | 631 (53.4) | 437 (52.7) | 846 (54.3) |
| Fair/poor | 296 (25.0) | 205 (24.7) | 372 (23.9) |
| Region | | | |
| Northeast | 211 (17.9) | 131 (15.8) | 276 (17.7) |
| Midwest | 271 (22.9) | 185 (22.3) | 359 (23.1) |
| West | 185 (15.7) | 150 (18.1) | 261 (16.8) |
| South | 515 (43.6) | 363 (43.8) | 661 (42.5) |
| Post-retirement health insurance | 591 (50.0) | 424 (51.1) | 796 (51.1) |

Table 4

Second Stage Logit Estimates for the Models of No Work, Time Transfers and Money Transfers
to Disabled Parents with ADLS (N=1162)

| Variables | No WORK | Time Transfers | Money Transfers |
|--------------------------------------|----------------------------|------------------------|-------------------------|
| Ehat1 | | 2.7825 (1.2602)** | 0.8388 (1.3012) |
| That1 | -1.1987 (1.3134) | | 0.5192 (1.8338) |
| Mhat1 | -5.5036 (3.9091) | -5.0377 (3.9557) | |
| Altruism: | | | |
| # children | 0.5582 (0.3711) | 0.3975 (0.3711) | -1.0310 (0.6458) |
| Religion | | | |
| Other Christian (OC) | -0.0879 (0.3042) | -0.2876 (0.4806) | |
| Catholic | -0.3991 (0.3317) | 0.6097 (0.5057) | |
| Children* (OC) | -0.9104 (.3943)** | -0.1269 (0.4007) | 1.0907 (0.6705)* |
| Children* Catholic | -0.5548 (0.4150) | -0.6314 (0.4283) | 0.9188 (0.7008) |
| Bequest: | | | |
| # houses owned | -0.1727 (.0838)** | -0.0606 (0.1178) | 0.0897 (0.1381) |
| Savings | -5.239E-6 (1.197E-6)*** | 2.769E-6 (2.951E-7) | -1.11E-7(4.497E-7) |
| Money transferred | 0.5402 (0.4468) | 0.8804 (0.5055)* | 2.3056 (0.2895)*** |
| Time transferred | -0.0288 (0.2987) | 0.8928 (0.2305)*** | -0.4006 (0.4106) |
| Caregiver Environ. | | | |
| #ADLs | -0.2758 (0.2859) | -0.4395 (0.3923) | -0.2999 (0.4582) |
| #ADLs*Not alone | 0.1346 (0.1856) | 0.3496 (0.2744) | 0.2955 (0.2710) |
| # poor parents | | | -0.5605 (0.3363) * |
| Region | | | |
| Northeast | | -0.3564 (0.3185) | |
| Midwest | | -0.6103 (0.2831)** | |
| West (South) | | 0.00482 (0.2896) | |
| Caregiver Characteristics | | | |
| Inherited | 0.1048 (0.2242) | 0.2871 (0.1178) | -0.4418 (0.4127) |
| Bequest 1 | 0.0981 (0.2100) | 0.00210 (0.2903) | 0.6981 (0.3388)** |
| Bequest 2 | -0.0478 (0.1785) | -0.2162 (0.2470) | 0.2219 (0.3148) |
| # hours volunteered | .00074 (0.000488) | 0.000249 (0.000453) | 0.00165 (0.00062)*** |
| White | -.0298 (0.2016) | -0.1807 (0.2583) | 0.2550 (0.3141) |
| Unearned income | 0.00001 (3.958E-6)** | 9.13E-6 (5.306E-6)* | 0.000011 (5.86E-6)* |
| Postret. health ins. | -0.7191 (0.1567)*** | | |
| Wage | -9.658E-6 (0.000163) | -0.00004 (0.000216) | |

| | | | |
|-------------------------------|---------------------|---------------------|------------------------|
| Age | 0.1136 (0.0196)*** | -0.00018 (0.0322) | -0.00798 (0.0310) |
| Male | -1.2375 (.2927)*** | -3.5631 (0.5258)*** | -1.5483 (0.5281)*** |
| Married | -0.0610 (0.2042) | -0.6002 (0.2541)** | -0.9972 (0.2914)*** |
| Education | -0.0264 (0.0286) | 0.0728 (0.0417)* | 0.0266 (0.0514) |
| Health | | | |
| Excellent | -1.3931 (0.2331)*** | 0.1383 (0.3491) | 0.7591 (0.4915) |
| Very good/Good (Fair/Poor) | -1.5553 (0.1805)*** | 0.2875 (0.2603) | 0.2714 (0.4405) |
| Intercept | -4.0654 (1.1399)*** | 1.0242 (2.4326) | -1.8689 (2.5272) |
| -2loglikelihood | 1132.580 | 639.295 | 504.909 |
| Chi Squared | 350.348 | 231.442 | 167.278 |

Note: * significant at .1 ** significant at .05 *** significant at .01 or better

Table 5

Second Stage Logit Estimates for the Models of No Work, Time Transfers and Money Transfers
to Disabled Parents Who Cannot Be Left Alone (N=815)

| Variables | No Work | Time Transfers | Money Transfers |
|--------------------------------------|---------------------------|---------------------|------------------------|
| Ehat1 | | 3.5637 (1.7173)** | 1.3624 (1.5275) |
| That1 | -1.2408 (2.4917) | | 1.9899 (3.5350) |
| Mhat1 | -13.6519 (5.8969)** | -9.2676 (6.1780) | |
| Altruism: | | | |
| # children | 0.6069 (0.4589) | 0.1805 (0.4935) | -0.5865 (0.5913) |
| Religion | | | |
| Other Christian (OC) | 0.3883 (0.4087) | -1.7657 (0.6730)*** | 0.2515 (0.8332) |
| Catholic | -0.0651 (0.4417)** | -0.7171 (0.6997) | 0.3856 (0.5810) |
| Children * (OC) | -0.7010 (0.4866) | 0.0602 (0.5336) | 0.4616 ((0.6485) |
| Children * Catholic | -0.4471 (0.5030) | -0.2807 (0.5718) | 1.0367 (0.6532) |
| Bequest: | | | |
| # house owned | -0.0687 (0.2631) | 0.0290 (0.1707) | -0.0642 (0.1884) |
| Savings | -2.153E-6 (7.892E-7)** | 5.24E-7 (3.488E-7) | 2.9E-7 (4.17E-7) |
| Money transferred | 1.3121 (0.6134)** | 1.5918 (0.7192)** | 2.9378 (0.3824)*** |
| Time transferred | -0.4755 (0.4423) | 1.9166 (0.3623)*** | -0.7490 (0.6644) |
| Caregiver Environ. | | | |
| #Not alone | 0.5857 (.2519)** | -1.5889 (0.8264)** | -1.4981 (0.8745)* |
| #ADLs*Not alone | -0.1534 (0.1081) | 0.8321 (0.2597)*** | 0.6003 (0.2439)** |
| # poor parents | | | -0.486 (0.4360) |
| Region | | | |
| Northeast | | -0.4594 (0.4866) | |
| Midwest | | -0.6225 (0.4271) | |
| West (South) | | -0.4441 (0.4204) | |
| Caregiver Characteristics | | | |
| Inherited | 0.2124 (0.2729) | 0.6393 (0.4479) | -0.0946 (0.5113) |
| Bequest 1 | 0.1093 (0.2631) | 0.1137 (0.4322) | 0.2022 (0.4363) |
| Bequest 2 | -0.2161 (0.2275) | -0.2388 (0.3685) | -0.3997 (0.4135) |
| # hours volunteered | 0.00089(0.00051)* | 0.000176 (0.00059) | 0.00133 (0.00055)** |
| White | -1.6840 (0.3556)*** | -0.8475 (0.3616)** | -0.1416 (0.4193) |
| Unearned income | 0.00002 (4.899E-6)*** | 4.827E-6 (8.2E-6) | 7.123E-7(8.718E-6) |
| Postret. health ins. | -0.9634 (0.1969)*** | | |
| Wage | -0.000188 (0.00019) | -0.00027 (0.0004) | |

| | | | |
|-------------------------------|---------------------|---------------------|--------------------|
| Age | 0.1155 (0.0235) | -0.00018 (0.0439) | 0.00599 (0.0387) |
| Male | -1.6840 (.3556)*** | -4.0710 (0.8561)*** | -1.3147 (0.6933)** |
| Married | -0.1141 (0.2606) | -0.2522 (0.3830) | -0.2647 (0.3998) |
| Education | -0.0568 (0.0371) | 0.1065 (0.0625)* | -0.00705 (0.0679) |
| Health | | | |
| Excellent | -1.3654 (0.2762)*** | -0.4042 (0.4767) | 0.5905 (0.5905) |
| Very good/Good (Fair/Poor) | -1.7279 (0.227)*** | -0.3081 (0.3783) | 0.4875 (0.4875) |
| Intercept | -4.4356 (1.4149)*** | 3.7260 (3.4167) | -0.8757 (3.3259) |
| -2loglikelihood | 759.805 | 321.513 | 297.990 |
| Chi Squared | 273.977 | 174.625 | 115.183 |

Note: * significant at .1 ** significant at .05 *** significant at .01 or better

Table 6
General Well-Being, Financial Satisfaction, Family Life Satisfaction, and Overall Life Satisfaction of Caregiving Adult Children: OLS and Ordered Logit Results for Those Who Care for Disabled Parents With ADL Limits (N=1162)

| Variables | General well-being (log) | Financial satisfaction | Family life satisfaction | Over life satisfaction |
|-------------------------------|----------------------------|------------------------|--------------------------|------------------------|
| Ehat2 | -0.016605 (0.3087) | 0.8321 (0.3927)** | -0.2111 (0.4366) | 0.00022 (0.4139) |
| That2 | -0.461520 (0.4189) | 1.4519 (0.5709)*** | -1.1123 (0.5669)** | 0.1890 (0.5396) |
| Mhat2 | 0.114352 (0.7755) | -0.4701 (1.0081) | 0.2725 (1.0351) | -0.5580 (1.0241) |
| Age | 0.0212 (0.0128)* | -0.0894 (0.0166)*** | -0.0133 (0.0183) | -0.0342 (0.0172)** |
| Male | 0.410738 (0.1515)*** | 0.3328 (0.1952)* | -0.3989 (0.2123)** | 0.00878 (0.2012) |
| Married | 0.2232 (0.1169)** | -0.4433 (0.1507)*** | -1.0291 (0.1571)*** | -0.7040 (0.1516)*** |
| Education | 0.0122 (0.0148) | -0.0110 (0.0189) | 0.0658 (0.0217)*** | 0.0580 (0.0201)*** |
| Health | | | | |
| Excellent | 2.2397 (0.1451)*** | -1.4451 (0.1889)*** | -1.1308 (0.2111)*** | -1.6314 (0.2010)*** |
| Very good/good (Fair/poor) | 1.5858 (0.1549)*** | -0.3893 (0.1988)** | -0.7286 (0.2157)*** | -0.9560 (0.2042)*** |
| Intercept 1 | 9.487 (0.7697)*** | 5.4994 (1.009)*** | -0.8574 (1.0944) | 0.3964 (1.0308) |
| Intercept 2 | | 7.3343 (1.0123)*** | 0.9034 (1.0933) | 2.4026 (1.0325)** |
| Adj R squared | 0.2785 | | | |
| F-statistic | 50.798 | | | |
| -2 log likelihood | | 2337.176 | 1853.559 | 2073.967 |
| Chi-square | | 173.191 | 83.47 | 120.361 |

Note: * significant at .1 ** significant at .05 *** significant at .01 or better

Table 7
General Well-Being, Financial Satisfaction, Family Life Satisfaction, and Overall Life Satisfaction of Caregiving Adult Children: OLS and Ordered Logit Results for Those Who Care for Disabled Parents Who Cannot Be Left Alone (N=815)

| Variables | General well-being (log) | Financial satisfaction | Family life satisfaction | Over life satisfaction |
|-------------------------------|----------------------------|------------------------|--------------------------|------------------------|
| Ehat2 | -0.5778 (0.3307)* | 2.3535(0.4197)*** | 0.9341 (0.4574)** | 0.5543(0.4332) |
| That2 | -0.2091 (0.3251) | 1.1963 (0.4218)*** | -0.8640 (0.4360)** | -0.0382 (0.4189) |
| Mhat2 | -0.5285 (0.3961) | 0.3303 (0.5218) | 1.4856 (0.5087)*** | 0.2323 (0.5094) |
| Age | 0.0306 (0.0127)*** | -0.1062(0.0166)*** | -0.0361 (0.0179)** | -0.0431 (0.0169)*** |
| Male | 0.1635 (0.1988) | 0.8467 (0.2522)*** | -0.2875(0.2678) | 0.1073 (0.2590) |
| Married | 0.5129 (0.1377)*** | -0.7120 (0.1817)*** | -0.9889 (0.1795)*** | -0.7081 (0.1746)*** |
| Education | 0.0069 (0.0184) | -0.0284 (0.0235) | 0.0769 (0.0267)*** | 0.0573 (0.0247)** |
| Health | | | | |
| Excellent | 2.2799 (0.2029)*** | -0.6445 (0.2540)*** | -0.7787 (0.2886)*** | -1.7703 (0.2771)*** |
| Very good/good (Fair/poor) | 1.5201 (0.1843)*** | 0.0484 (0.2328) | -0.1893 (0.2491) | -0.8569 (0.235)*** |
| Intercept 1 | 8.5895 (0.7533)*** | 6.8348 (0.9879)*** | 0.40 (1.0553) | 1.07 (0.9948) |
| Intercept 2 | | 8.8378 (1.0091)*** | 2.1132 (1.0562)** | 3.0889 (0.9998)*** |
| Adj R squared | 0.3115 | | | |
| F-statistic | 41.917 | | | |
| -2 log likelihood | | 1576.612 | 1278.009 | 1410.009 |
| Chi-square | | 153.881 | 70.817 | 100.970 |

Note: * significant at .1 ** significant at .05 *** significant at .01 or better