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Giving Incentives and the Well-Being of Children Who Care for Disabled Parents

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Abstract: What motivates adult children in the United States to care for their disabled parents? This paper examines whether altruism and bequest motives influence adult childrens' decisions about giving time to care for a disabled parent, giving financial resources, and giving future financial resources. Further, the paper examines the ways these different forms of giving affect caregivers' overall well-being, financial, family life, and life satisfaction.

Using data from the 1992 Health and Retirement Study, we find that bequest incentives, noneconomicllly motivated altruism, the type of disability faced by the parent, and considerations of opportunity cost are key factors. They influence adult childrens' decisions about employment, giving time, and giving money to support disabled parents. General well-being, financial and family life satisfaction are lower when adult children risk long term income resources by decreasing labor market participation. Giving money increases family life satisfaction for adult children who care for parents who have cognitive limitations. While giving time to care for disabled parents increases financial satisfaction among adult children, it decreases their family life satisfaction.

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

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 financed 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 this 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. 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) also provides a unique data base to examine these issues, using a sample of adult children with disabled parents.

Caregiving and It's 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 Couglin, 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. 1

The costs of early retirement due to caregiving are nontrivial. Kingson and O'Grady-

LeShane2 (1993), using data from the 1982 New Beneficiary Survey, document that monthly Social Security benefits are $127, $28, and $52 lower for women who leave the labor market due to caregiving, compared with women who respectively leave voluntarily, leave because of health problems, or leave involuntarily due to job-related reasons. 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.

The nature of the tradeoffs between giving care time and giving financial support to disabled older persons are less clear than the tradeoffs made by caregivers in allocating their time between work and caregiving. 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, less than one-fifth of adult children provided an older parent with assistance in household tasks (giving time), while 12 percent gave financial assistance.

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 this care. 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 their utility derived from knowing that the older person's needs are met, enabling interdependent 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 impacted in other ways over the long term, due to caregiving responsibilities?

Altruism or Bequest Motives and Caregiving

To address issues of motivation, we borrow from and integrate the literature on intergenerational giving and transfers. The primary sample in this literature are adult children who may or may not visit, care for, and/or make phone calls to parents. Some of their parents are disabled and some are not. The intergenerational transfer literature examines the factors that motivate adult children to give to parents. It suggests that bequest motives (i.e., future wealth accumulation) affect giving. It also suggests that altruism motives (conscientious efforts to show love and desires to be loved later in life) affect giving. Conceptually, the literature suggests that caregivers efforts to maximize long term financial and human capital resources may influence (motivate) care efforts for parents.

Bequests from parents to children are a form of wealth accumulation. 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 accumulations. 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). They may leave bequests to their heirs based upon 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) 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.

Similar to the bequest motive, one can conceptualize an altruism motive for caregivers that is based on an effort to enhance the long term welfare of caregivers. Oded Stark's (1995) theoretical conceptualization of altruism provides some clues about assessing such altruism motives, and also an empirical test of them. Stark develops 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 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 she faces disability. This is a "do as I do" approach to caregiving that assures one 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 incalcating altruism in children is religion (Stark, 1995). Religion is a process to develop training in the skill of loving parents. Christian religions promote the Ten Commandments that teach the philosophy of honoring fathers and mothers.

Stark's (1995) altruism framework suggests that elder care services for ones parents are greater when caregivers have children than when they do not. With more children, the likelihood of imitation increases and giving to parents becomes even more productive 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 contrasts that of the Beckerian household time allocation analysis framework. The later suggests that with more children, demands on the caregiver's time increase and she will provide less care to older disabled parents. Thus, caregiving competes for time spent in other

activities, including child care.

Religious training enhances parents' ability to develop altruism. Stark predicts that religion is positively associated with giving to parents.

Long-Term Implications (Unmeasured Costs) for Caregivers

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

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.

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.

The literature on caregivers' burden, stress, and well-being links caregiving hours (modeled as an endogenous variable) and measures of the caregiver's welfare. 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 with disabled parents, we provide an explicit test of whether 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 give up labor market employment). 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 giving on the caregiver's health and quality of life. We investigate the ways the three forms of giving affect caregivers' general well-being, financial satisfaction, family life satisfaction, and overall life satisfaction.

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 12,656 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 is thought to provide the bulk of caregiving assistance to disabled parents.

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 1704 adult children who have at least one living parent (either biological or step) with a limitation on activities of daily living (ADL) or who can not be left alone more than one hour.

Conceptual Framework

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 giving up the option of labor force employment (and future financial earnings opportunities) to provide care for a parent. Each form of giving is endogenous. 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.

A. 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. GIVETIME equals one if the adult child and/or the adult child's 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 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.

TABLE 1 ABOUT HERE

The third variable, EMPLOY, equals one if the adult child is currently employed. While incorporating some measurement error, EMPLOY is the best available measure of the caregiver's loss of long-term financial resources. The zero category of this variable includes persons who have left the labor market for reasons other than caregiving and thus overestimates the persons who stopped working due to caregiving. In contrast, the best alternative measure, retired or not, does not provide a way to account for persons who have temporarily left the labor force due to caregiving responsibilities or who are not working because caregiving responsibilities absorb so much time that they can not search extensively for employment.

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 index of general well-being measures physical, emotional, and social health (Brook et al., 1979). It is an objective measure, based on responses to the following questions: 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 along" (V10), I did not feel like eating (V11), I had a lot of energy

(V12), I felt tired (V13), and I felt really rested when I woke up in the morning (V14). Respondents' answers to these questions 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. The following is the formula for the index of general well-being (GWB):

$$GWB= 0.3196*V1+0.2602*V2+0.2585*V3+0.2932*V4+0.2748*V5+0.2077*V6+0.2705*V7+0.3052*V8+0.2065*V9+0.2820*V10+0.2263*V11+0.2820*V12+0.2839*V13+0.2426*V14.$$

The index ranges from 4.13 to 14.85. Higher values of the index reflect higher levels of this multidimensional measure of well-being.

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 or neutral, two if somewhat satisfied, and three if very satisfied. Ordered logistic regressions of well-being incorporate these measures.

B. Model Specification

Each of the three equations in the simultaneous system of giving includes variables reflecting bequest motives, altruism motives, 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 give to care for a parent (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.

Measures of the caregiving environment and caregiver characteristics vary in each equation. In this way, the system of simultaneous equations is overidentified. Each equation of the simultaneous system includes unique variable measures.

The EMPLOY 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, experience (age-education-6) and its square, region, and disability. 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 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 adult parents who live in poverty are more likely to have children who contribute financial resources.

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)). In each giving equation, we included variables to measure these aspects of the caregiving environment--the total number of parents' disabilities (ADL or cognitive) and an interaction term of the ADL status and cognitive status.

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. 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 at some previous time) captures an incentive of the adult child to give care to a disabled parent as an effort to return a favor to a parent who has earlier provided a financial or in-kind compensation to the adult child. 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, reflects 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 giving up labor force employment. 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 both ADL limitations and cognition problems 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 whose parents have both ADL and cognitive disabilities spend significantly more hours in support care for their parents. 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.

TABLE 2 ABOUT HERE

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, giving long term financial resources (not working in the labor market) and giving time appear complementary. On the other hand, giving long term financial resources (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 ABOUT HERE

Table 3 reports descriptive statistics for model variables, according to the parents' disability status. Since the data in Table 2 suggests that the demands on adult children are more extensive when parents are limited in ADLs or have ADLs and cognitive limitations, we stratify the empirical models to reflect these differences in care environments. In Table 3 and all remaining tables, the data are stratified according to whether parents are limited in ADLs (with ADLs only or ADLs and cognitive impairments) or face cognitive limitations (with cognitive limitations only or ADLs and cognitive impairments).

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

model of giving.[1] 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.

<div align="center">TABLES 4 AND 5 ABOUT HERE</div>

When parents face ADL limitations, giving care time and giving up jobs in the labor market are complements. Employed caregivers will provide less care time for disabled parents. The relationship also exists with parents who have cognitive limitations. See Table 5. Additionally, the higher the probability that adult children give money to their disabled parents, the more likely they are to work in the labor market.

There is only weak support for an economically motivated altruism incentive. When parents have ADL limitations (Table 4), adult children who have their own children involved in non-Catholic Christian religions, are more likely to give money to their disabled parents.

In both Tables 4 and 5, there is evidence that sibling rivalry motivates efforts to give time and money to parents who are disabled with ADLs or with cognitive limitations. If siblings transfer money, adult childrens' time and money transfers are greater to parents who have ADL or cognitive limitations. If siblings transfer time, adult children's time transfers are greater. Bequest motives also seem to influence the employment decisions of adult children who care for parents with cognitive limitations; money transfers by siblings reduce the likelihood that an adult child is employed in the labor market. In both tables, we also note that when adult childrens' savings are larger, the probability of employment increases. 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 cognitive limitations influences the giving decisions of adult children (Table 4). In contrast, when parents have cognitive limitations (Table 5), the number of parents with these limitations or both cognitive and ADL disabilities influence giving. The more parents with cognitive problems, the less likely an adult child is employed in the labor market, gives time or gives money. In essence, the adult child gives future resources (employment opportunities) rather than current resources. With both greater numbers of parents who have ADL limitations and cognitive disabilities, 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 cognitive disabilities and to reduce labor force participation when parents have cognitive limitations. If adult children plan to leave a bequest to their children, they are more likely to make money transfers to parents with ADL limitations.

Opportunity cost also affect giving decisions. Given other sources of income, adult children

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[1] First stage results are available from authors upon request.

are less likely to work in the labor market. They also give more time and money to parents with ADL limitations. Post-retirement health insurance increases the opportunity cost of adult children leaving labor market jobs and is associated with a greater likelihood of employment. Adult children with greater levels of health (sometimes associated with greater productivity) are more likely to participate in the labor market.

TABLES 6 AND 7 ABOUT HERE

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 with cognitive limitations, employment in the labor market (not giving long-term economic resources) enhances general well-being. Employment is associated with lower levels of financial satisfaction for adult children whose parents have ADL limitations or cognitive disabilities. 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 have cognitive disabilities.

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? We find that bequest incentives, noneconomicllly motivated altruism and considerations of opportunity cost are key factors. They 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 employment are complements. Thus, an adult child who shares current financial resources with their parent is less likely to give up long term financial resources and leave 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 and leaving the labor market.

In the decision to give care to an older disabled parent, the care environment is important. 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 with cognitive disabilities.

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 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. In this effort, 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 or reducing employment, they will face lower 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 foe 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	an index (see page for details)
Financial satisfaction	1 if somewhat/very dissatisfied/even, 2 if somewhat/very satisfied
Family life satisfaction	1 if somewhat/very dissatisfied/even, 2 if somewhat/very satisfied
Overall life satisfaction	1 if somewhat /very dissatisfied/even, 2 if somewhat/very satisfied
Independent Variables:	
Ehat	predicted probability of employment
Mhat	predicted $ value of money transfer
That	predicted amount of time transfer
Altruism	
# children	number of children younger than 18
Religion	1 if Christian, 2 if catholic, 3 otherwise
# hours volunteered	# hours volunteered in the past 12 mon.
Race	1 if white, 0 if African-American
Bequest	
# houses owned by parents	total # of houses owned by parents
Savings ($)	$ value of savings
Money transferred by siblings	1 if $ was transferred to parent by sibling(s) in the past 12 month, 0 otherwise
Time transferred by siblings	1 if time was transferred to parent by sibling(s) in the past 12 month, 0 otherwise
Caregiving Environment	
#ADL	total number of parents with ADLs.
#Not alone	total number of parents can not be left alone for more than one hour.
Not alone	1 if there is a parent(s) can not be left alone more than one hour, 0 otherwise
# poor parents	total number of parents who are poor
Region	1 live in Northeast, 2 if live in Midwest, 3 if live in West, and 4 if live in South

Caregiver Characteristics	
Inherited	1 if received an inheritance/given substantial assets in the form of a trust, 0 otherwise
Plan to leave bequest	1 if yes definitely/probably, 2 if yes possible/probably not, 3 if no, definitely.
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 and 0 if female
Education	1 if married and 0 otherwise
	number of completed years in formal education
Health status	1 if excellent, 2 if very good/good, and 3 if fair or poor

Table 2

Differences in Characteristics of Adult Children by Presence of Parents with ADLs and Cognitive Needs, Giving Time, and Giving Money

Variables	With ADLs, Need, and Both				GIVETIME		GIVEMONEY	
	ADL (N=682)	NEED (N=323)	ADL & Need (N=669)	None (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
[a] significantly different at .05 or better between ADL and. Nneed
[b] significantly different at .05 or better between ADL and Both.
c significantly different at .05 or better between Nneed and Both.
[d-f] significantly different at .05 or better between none and (ADL, Nneed, or both, respectively).
[g] significantly different at .05 or better between those give time and those who did not.
[h] significantly different at .05 or better between those give money and those who did not.

Table 3: Descriptive Statistics

Variables:	ADL	NEED	ADL+ NEED
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/ yes, probably	365 (30.9)	253 (30.5)	469 (31.4)
yes, possibly/ probably	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 Employment, Time Transfers and Money Transfers to Disabled Parents with ADLS (N=1162)

Variables	Employment	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:			
# house 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		0.00482 (0.2896)	
(South)			
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	1.5553 (0.1805)***	0.2875 (0.2603)	0.2714 (0.4405)
(Fair/Poor)			
Intercept	4.0654 (1.1399)***	1.0242 (2.4326)	-1.8689 (2.5272)
-2logliklihood	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 Employment, Time Transfers and Money
Transfers to Disabled Parents With Cognitive Problems (N=815)

Variables	Employment	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		-0.4441 (0.4204)	
(South)			
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	1.7279 (0.227)***	-0.3081 (0.3783)	0.4875 (0.4875)
(Fair/Poor)			
Intercept	4.4356 (1.4149)***	3.7260 (3.4167)	-0.8757 (3.3259)
-2logliklihood	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 With Cognitive Limitations (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