



Transfers from older parents to their adult children in Taiwan and the Philippines

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Abstract. This study examines the extent to which older parents provide material resources and services to their children in the Philippines and Taiwan, and the influence of coresidence on reported transfers between parents and their adult children. The data used in the analyses are from two nationally representative household surveys of persons aged 60 and older in the Philippines and Taiwan. Results show that almost half of older parents in the Philippines provide resources to non-coresident children and only 4 percent of older Taiwanese parents currently make such transfers. When transfers with coresident children are included, older parents show much greater involvement in family support: 69 and 14 percent of older parents in the Philippines and Taiwan, respectively, say they make transfers to children. The difference between the two measures diminishes with age, however, as overall levels of giving decline. Results from multivariate models show that while both measures are associated in similar ways with key factors such as age, health, gender, and economic resources, the association between living arrangements and intergenerational transfers varies across measures. These results suggest that older adults' in these countries tend to exhibit a preference for transfers to the children with whom they live, and that coresidence with grandchildren may be an indirect transfer of services to non-coresident adult children.

Keywords: Coresidence, Intergenerational transfers, Philippines, Taiwan

Introduction

While family support is generally an important part of older persons' well-being, it is particularly crucial in countries where state and market sources of support are less common. In developed countries extra-familial resources such as pensions, social security, and paid-provision of home health services are widely available. Perhaps as a consequence, older adults tend to reside independently from their children (Schoeni 1998) and continue well into old age to give resources to adult children more often and in larger amounts than they receive (Schoeni 1997; Soldo & Hill 1993).

In contrast, in many developing and newly industrialized economies in Asia, broad public sources of support for the elderly, such as social security systems, tend to be limited to a small sub-group of the population (e.g., civil servants) or still in development (Kinsella & Gist 1995). Intergenerational support flows from children to parents in old age are strong throughout East and Southeast Asia (Anh et al. 1997; Hermalin, Ofstedal & Chang 1996; Natividad & Cruz 1997; Ofstedal, Knodel & Chayovan 1999) and levels of parent-child coresidence are relatively high: for example, 71 percent or more of older adults in the Philippines, Taiwan and Thailand and 63 percent of older adults in Indonesia with one or more adult children live with an adult child (Cameron 2000; Ofstedal, Knodel & Chayovan 1999).

Financial transfers from family members – primarily adult children – comprise the main source of income for the majority of older persons in a number of Asian countries, among them the Philippines, Taiwan, Singapore, South Korea, Thailand and Cambodia (Hermalin, Chang & Roan, forthcoming; Kato 2000; Yoon & Cha 1999). In addition, substantially more older people in the Philippines, Taiwan, Singapore and Thailand receive money and material goods, again mainly from their children, than provide these resources to others, including children (Biddlecom, Chayovan & Ofstedal 2003). Consequently, most studies on intergenerational transfers in Asia have focused on family support *to* the elderly, motivated in large part by questions about whether families can maintain these levels of support in the face of the declining fertility rates and longer life expectancies that characterize population aging (Lee & Mason 2000; Martin 1990; Silverman 1995).

While in Asia transfers may flow predominantly from children to parents, the role of older adults in actively *providing* resources to children should not be overlooked. There is evidence that the norms that encourage an upward flow of resources among generations in Asia may be changing. For example, in the mid-1970s in the Philippines, the majority of married women expected their children to support them in old age compared to about half of women in 1993 (Biddlecom & Domingo 1996; Chen & Jones 1989). Women's expectations of future support from their children also declined from the 1970s through the 1980s in Taiwan (Chang & Ofstedal 1991). Improvements in the economic resources available to successive generations may contribute to a shift in the pattern of family transfers in old age in Asia to one in which parents increasingly are contributors to their adult children and grandchildren. In this article, we add to the empirical record on family support in Asia by examining the oft-neglected role of older persons as providers to their adult children. Given the current high levels of coresidence in Asia and that coresidence is not easily defined as a uni-directional transfer, it becomes

imperative to examine intergenerational transfer patterns in conjunction with coresidence.

The aim of this study is to describe patterns of intergenerational transfers in relation to coresidence with children and examine what makes older persons more likely to provide resources to their adult children. We draw on nationally representative survey data from Taiwan and the Philippines. Taiwan and the Philippines provide excellent settings for the study of intergenerational transfers as both show strong adherence to norms of filial piety, generally high levels of intergenerational exchange, and, relative to most Western nations, limited state and market resources for old age support (Hermalin 2003). However, differences in the nature of filial obligations and level of development between the two countries introduce interesting contrasts in patterns of intergenerational exchange (Lee, Parish & Willis 1994; Lopez 1991; Ofstedal, Knodel & Chayovan 1999; Thornton & Lin 1994).

This study contributes to the existing literature on intergenerational transfers in two ways. First, we focus on the active contributions older parents make rather than only what older parents receive from their children. Second, we examine two measures of transfers – the first including only transfers to or from non-coresident children and the second expanded to include intra-household transfers as well. In the next section of the paper we review general research approaches to studying intergenerational transfers and prior research on intergenerational transfers in the Philippines and Taiwan. We then describe the survey data used in the analyses and discuss issues in the measurement of intergenerational transfers. Results are presented on the prevalence of transfers to children, the sensitivity of transfer measures to inclusion of coresident children, and factors associated with reports of transfers to all or to only non-coresident children. Comparable information from the United States is included for illustrative purposes. The article concludes with a discussion of the policy implications of the findings and directions for further research.

Background

Demographic research on intergenerational transfers initially focused on living arrangements as a form of intergenerational support, partly due to an initial paucity of data on kin outside the household. Although the household provides the main location in which money and services are transferred, the family economy extends across household boundaries. For example, a substantial proportion of older adults in Asia live in close proximity to a child, often performing what are normally considered household tasks with each other, such as shopping, cooking, cleaning, or child care (Johnson &

DaVanzo 1996; Ofstedal, Knodel & Chayovan 1999). In the United States, parent-child coresidence is low (about 14 percent of older adults lived with a child in 1990 according to Schoeni (1998)), but almost 50 percent of older Americans live within five miles of a child and 70 percent have at least one child living within 25 miles of their home (Lin & Rogerson 1995). The permeability of household boundaries therefore makes an examination of both intra- and inter-household transfers important for understanding family support in general.

In subsequent years, research on transfers has focused almost exclusively on transfers between older parents and non-coresident children (Schoeni 1997; Soldo & Hill 1993). Some studies have examined how characteristics of the children affect parent-child transfers in order to elucidate motivations behind intergenerational transfers (Altonji, Hayashi & Kotlikoff 1992; Cox & Rank 1992; McGarry & Schoeni 1997), but coresidence is generally excluded as a focus in such studies or modeled separately. The reasons for this are two-fold: First, it is not possible to determine with cross-sectional data whether co-residence preceded or was jointly determined with other transfers. Consequently, it is not possible to make any assumptions about the independent effects of coresidence on other transfers. Second, many surveys do not collect information about transfers within the household, and therefore cannot measure or examine the nature of parent-child exchanges within and/or across household boundaries. Though transfers may be somewhat more difficult to measure within than across households, in settings where parent-child coresidence is common, it is particularly important to examine intergenerational transfers with respect to the family household.

Qualitative studies in developing countries have shown that coresidence with children is not equivalent to a guarantee of support for older persons and that negotiations within the family often take place to ensure that an older person is taken care of (Goldstein, Schuler & Ross 1983; Ngin & DaVanzo 1999). Even in the United States, where coresidence is less common, Pezzin and Schone (1997) have shown that relative bargaining power can affect the amount of informal care coresident children provide to older parents. Similar effects may be expected with regard to parental contributions to the household, though research has not been done on this topic. If relations within the household involve some negotiation of responsibilities, then the productive contributions of older persons may be used to compensate the coresident children for their support and, therefore, may be more important in the household setting than outside. In fact, a wide variety of patterns in the giving and receiving of support between parents and children is likely even within equivalent household structures (Knodel & Saengtienchai 1999).

Intergenerational transfers in the Philippines and Taiwan

Both the Philippines and Taiwan are characterized by increasing population aging, declining fertility and limited sources of state and market support for the elderly. As of 1996, the proportion of the population aged 60 and older in Taiwan was 11 percent, more than twice that in the Philippines (5 percent), and is expected to rise to approximately 25 percent of the population by the year 2025 (U.S. Bureau of the Census 1999), the same level expected in the United States (U.S. Bureau of the Census 2001). By 2025 the proportion of the Philippine population over age 60 will have doubled with approximately 10 percent age 60 or older (U.S. Bureau of the Census 1999).

Declining fertility in each country has contributed to the increase in the relative size of the older population and decreases in the availability of children with whom to exchange resources. Fertility decline began in Taiwan in the late 1950s and fertility has consistently been below replacement level since the mid-1980s with an average of 1.8 children born per woman, which is even lower than the 2.1 total fertility rate in the United States (Thornton and Lin 1994; U.S. Bureau of the Census 2001). The fertility decline in the Philippines did not begin until the 1970s and women were still having 3.5 children on average as of 1998 (U.S. Bureau of the Census 1999). As would be expected from the differences in fertility between the two countries, the average completed family size is larger in the Philippines than in Taiwan, and the gap between the two countries remains even among younger cohorts with much lower fertility levels. These family size differences have clear implications for the number of children available with whom an older parent can exchange resources.

While state programs and market resources such as pension systems and health care can provide a supplement to or substitute for family support, the availability of such resources is limited but growing in each country. Universal health insurance has been provided in both the Philippines and Taiwan since the mid-1990s, but nursing homes and other forms of formal long-term care for the elderly are uncommon (Hermalin 2003). Another form of non-family support in old age is pension programs. Approximately 20 percent of persons age 60 or over in Taiwan in 1989 had any pension income. In the early and mid-1990s, several subsidy programs were initiated in Taiwan to provide income to special segments of the older population and the government is currently in the process of initiating a broad social security system (Hermalin 2003). In the Philippines, the social insurance system was amended in 1997, but the coverage of today's elderly remains relatively low: 20 percent of older men and 8 percent of older women either received pension income in the past, currently receive pension income or expect to receive pension income (Hermalin 2003).

The family systems in the Philippines and Taiwan are characterized by strong norms of filial support (Domingo & Asis 1995; Lopez 1991; Mason 1992; Thornton & Lin 1994), yet the rules by which this support is shared among children differ somewhat across the two countries. In Taiwan, responsibility for parental support has traditionally been placed on a married son, usually the eldest, while in the Philippines roles are more gender-neutral (Lee, Parish & Willis, 1994; Lopez 1991; Ofstedal, Knodel & Chayovan 1999; Thornton & Lin 1994). However, some studies show that daughters or daughters-in-law are important providers of support in Taiwan, depending on the type of support involved (Hermalin, Ofstedal & Chang 1996; Ofstedal, Knodel & Chayovan 1999). Studies in the Philippines show no consistent gender or birth order preferences in parent-child transfers such as coresidence, school investments, and both land and non-land transfers (such as a house) (Natividad & Cruz 1997; Quisumbing 1994).

One of the most basic and certainly the most frequently studied forms of intergenerational support is coresidence. The majority of older parents in both countries (71 percent or higher) live with at least one child (Hermalin, Ofstedal & Chang 1996; Natividad & Cruz 1997; Ofstedal, Knodel & Chayovan 1999), and the probability of coresiding with at least one child rises with the number of living children (Domingo, Medina & Domingo 1994; Natividad & Cruz 1997). Most older parents in the Philippines and Taiwan also view living with a child or near a child as the preferred living arrangement in old age (Cornman et al. 1996; Natividad & Cruz 1997).

Transfers of money, material goods, and services also play an important role in family exchange patterns in these countries. The majority of older persons in the Philippines in 1996 received monetary and material support in the past year from at least one non-coresident child (Natividad & Cruz 1997; Ofstedal, Knodel & Chayovan 1999). Another study in the Philippines in the 1980s found that over a third of all households in the sample received remittances from former household members and one in every eight households sent out money, most of which was sent to support children's education (Caces et al. 1985). Qualitative studies in the Philippines also confirm the use of family strategies whereby parents receive resources from older children and then use them for investment in younger children, especially for schooling expenses (Cicirelli 1994; Peterson 1990, 1993).

Studies in Taiwan indicate that older persons often receive money, material goods and help with daily activities from family and that provision of these forms of support to parents tends to be more evenly shared among all of the children than is the case with coresidence (Hermalin, Ofstedal & Chang 1996; Lee, Parish & Willis 1994; Ofstedal, Knodel & Chayovan 1999). Nearly half of all older persons in 1989 reported receiving both money and services in the

past year, and 34 percent received both money and material goods (Hermalin, Ofstedal & Chang 1996). Those who received support often were getting resources from several children.

From the few analyses of transfers that elderly parents make to their children in Asia, evidence suggests that older parents are actively involved in family support. A study using the same 1996 Philippines data we use here found that 29 percent of older parents reported giving money to a non-coresident child and 39 percent provided non-monetary support to a non-coresident child (Natividad & Cruz 1997: 29). An earlier study in the Philippines using 1984 data (not nationally-representative) showed that more than half of older Filipino adults with living children provided some form of support to their children (Domingo, Medina & Domingo 1994). Based on 1996 data from Taiwan, one in ten older persons provide money to others (almost exclusively to children and grandchildren) and 5 percent provide material goods to others (Biddlecom, Chayovan & Ofstedal 2003). One of the key forms of support that the elderly provide to children is caring for grandchildren. Of grandparents age 50 years and older with at least one coresident grandchild, 67 percent in the Philippines and 57 percent in Taiwan say they provide care for that grandchild (Hermalin, Roan & Perez 1998).

Living arrangements of the elderly also are likely to be related to exchange patterns, though the tendency to examine living arrangements patterns separately from other intergenerational transfers makes the research literature on the link between living arrangements and transfer behavior unclear. Multivariate analyses of the likelihood of *receiving* support in Taiwan show that older adults who live with married children are more likely to receive money, material support or assistance with day to day activities (transfers could be from either coresident or non-coresident people) compared to older adults in other types of living arrangements (Hermalin, Ofstedal & Chang 1996). However, an examination of transfers from non-coresident children using 1993 survey data from Indonesia showed no statistically significant association between coresidence with a child or the number of children living at home and the likelihood of receiving any transfers of money or assistance from adult children outside the household in that country (Frankenberg, Lillard & Willis, n.d.).

Coresidence may be part of a negotiated exchange, where the parent provides a financial or other contribution to coresident children in exchange for sharing a household. Additionally, coresidence with a child might free up resources (either financial or available time) that an older parent could then provide to other children outside the household. Both of these relationships imply a positive association between living with children and reported transfers to children both in and outside the household.

Gifts made to children earlier in life also can influence later life transfer patterns (e.g., Henretta et al. 1997). Hermalin, Chang and Roan (forthcoming) show for Taiwan in 1996 that two thirds or more of those who lived in a child's home reported that they had paid for all or part of that residence, implying that coresidence with children may be a form of reciprocity for gifts earlier in life. Although little is known about the influence of prior transfers on later life giving, Kan, Park and Chang (2001) found that about 23 percent of men and 32 percent of women in Taiwan in 1989 had divided property to children previously, and that this proportion is slightly higher among those living with children than living independently or with others. When looking at change over time, they found that property division reduced the likelihood of independent living (relative to living with children) by 3 percent for men and not at all for women.

If prior division of property to children is an indicator of the transition from supporter to dependent among older parents, then those who already divided their property to children might be less likely to give to children at the present time, and especially to those with whom they live. Past transfers may be expected to play a more substantial role in Taiwan, where parents have more resources to use to help children earlier in life, and where parents often divide property to children while they are alive.

We also expect that the direction of transfers between older parents and their children (the balance of giving and receiving) shifts as parents age and experience concomitant declines in health. Research on correlates of older parents' receipt of support from children shows that the percentage of older parents in the Philippines and Taiwan who receive support rises with their age (Hermalin, Ofstedal & Chang 1996; Natividad & Cruz 1999). Even in the United States, where money and services flow predominantly from parents to children, at very old ages older parents' involvement in transfers is greatly reduced (Soldo & Hill 1993). Where there are transfers, these are much more likely to flow *toward* the older parent (Soldo & Hill 1993). We expect, then, that in the Philippines and Taiwan, as age increases and as health declines, older adults will be less likely to make transfers to their children.

Although no notable gender differences have been observed in the percentage who coreside with children in the Philippines and Taiwan, a slightly higher percentage of older women report receiving transfers than older men (Natividad & Cruz 1997; Knodel & Ofstedal, forthcoming). The main explanation for potential gender differences in family transfer patterns is that women are more economically disadvantaged than men: disproportionately fewer women work in the formal labor market compared to men and women often do not have the same property and inheritance rights as do men (Li 1997; Mason 1992). The tangible benefits in old age of having

formal labor market experience and equitable property and inheritance rights (e.g., accumulated savings, pensions, assets, and so on) are thus not widely accessible to women in old age, and they are more reliant as a consequence on family members for support and care. The empirical record in the Philippines and Taiwan is not as definitive as theoretical arguments would suggest, thus we include gender in the multivariate models as a control variable.

Marital status has been associated with a higher probability of providing resources and a lower probability of receiving resources from other family members (apart from a spouse) in the Philippines and Taiwan (Biddlecom, Chayovan & Ofstedal 2003; Natividad & Cruz 1997). Needs in old age are often met by a spouse before other family members become involved, thus married people are less likely than their single counterparts to receive transfers from other people. Marriage also usually involves pooling resources, thus enabling married people to have more resources to give to others.

The extent to which an older parent can provide money or help to children also is likely to depend on the availability of economic resources. A lack of economic resources reduces the ability of individuals to make transfers, particularly financial ones, to other family members (Hogan, Eggebeen & Clogg 1993). Studies of older parents and adult children in the United States find a positive relationship between parental income and the likelihood of a transfer to a child (Schoeni 1997; Soldo & Hill 1993). Thus, we would expect that in both Taiwan and the Philippines an older parent's access to transferable wealth such as pension or wage income will be positively associated with making transfers to adult children.

Education is a key measure of socio-economic status and an important determinant of wealth. Older persons with greater education also may be less attached to traditional norms of family support. Higher levels of education have been associated with a greater desire for independence in old age in the Philippines (Biddlecom & Domingo 1996). We therefore expect that higher education will be associated with a greater probability of giving to children. Prior research on the association between education and the *receipt* of transfers in the Philippines and Taiwan is inconsistent. In the Philippines, older persons with a primary school education were more likely to receive money and material goods than those with either less or more education, while in Taiwan, there was a negative relationship between education and transfers – those with the most education were the least likely to receive money or material goods from children (Biddlecom, Chayovan & Ofstedal 2003: Table 6.3).

Data and methods

Data

Data are from two surveys that provide rich information on intergenerational transfers: the 1996 Philippine Survey of the Near Elderly and Elderly, conducted by the Population Institute of the University of the Philippines, and the 1989 Taiwan Survey of Health and Living Status of the Elderly, conducted by the Taiwan Provincial Institute of Family Planning. Both surveys were conducted as part of a larger project in conjunction with the University of Michigan to measure the social, economic and health characteristics of the older population (age 60 and above). The surveys were designed to provide comparable information on flows of support to and from the older person and characteristics of the respondents and their children. Both data sets constitute nationally representative samples of the older population in each country. The total initial sample for Taiwan was 4,049 persons age 60 and older, and for the Philippines 2,285 persons age 50 and over. For comparability, we restricted our analyses to persons 60 years of age or older, which excluded 974 persons age 50–59 in the Philippines. In order to examine transfers with adult children, it was necessary also to limit our analyses to those with one or more living children. This sample restriction excluded about 5 percent of the sample in the Philippines and 2 percent in Taiwan. The final analytic samples are 3,823 in Taiwan and 1,246 in the Philippines.

Conceptualization and measurement of inter- and intra-generational transfers is, by its nature, complex (see Hermalin 1999 and Soldo & Hill 1993 for a review of measurement issues). Measurement is particularly sensitive to the way that questions are asked (McGarry & Schoeni 1994) and which member of the family is selected as the respondent (Roan, Hermalin & Ofstedal 1996). Add to this the multi-directionality of flows, multiplicity of transfer currencies, and a dynamic perspective on measurement, and the number of dimensions to be accounted for increases rapidly.

For every type of transfer, quantifying the amount can be difficult. Often respondents will not know the fair market value of property or be willing to accurately report financial transfers. Services can be measured in terms of the frequency, periodicity, or intensity with which they are provided. Family members may share household tasks (like cooking or laundry) while living apart, or reside under the same roof and hardly interact. Moreover, the time frame for transfers can be measured in many different ways; for example, one week, one year, or over a lifetime.

The survey data used in this study contain information from the perspective of the older respondent about transfers made between parents and all of their children (see Appendix A for examples of the survey questions).

Both surveys were designed to collect symmetrical information about transfers between older persons and each of their children: that is, information on what was given by the parent to each child and what each child gave to the parent. Children were individually identified and a number of characteristics were gathered about them, including their current residence.

Intergenerational transfers are measured in this study as any flow of money (regardless of amount), material goods or services given or received between parents and children. In the Philippines, questions about money or material goods (e.g., food, clothing or personal belongings) transfers were with respect to transfers made “regularly or from time to time” within the past year (prior to the date of interview) and were asked about individual children and groups of other types of people (e.g., brothers or sisters). For example, the question about providing money to any person was “Outside of small gifts, did you give money to [PERSON(S)] either regularly or from time to time during the past year?”

In Taiwan, respondents were asked about transfers of money and material goods but without respect to a specific time period, and only questions about material goods transfers had the additional qualification of being a “regular” transfer. For example, the question about providing material goods was “Do you currently provide material support on a regular basis or through special gifts of food or clothing to anyone?” Questions about service transfers were measured in this analysis as to the provision of help with Activities of Daily Living (e.g., bathing), Instrumental Activities of Daily Living (e.g., meal preparation, shopping or household chores) or child care. Respondents were asked about help they provided to others and the help they received. Reports of child care in Taiwan may be underreported relative to the Philippines because child care is only one of many tasks listed in a question about IADLs, while in the Philippines instrument, there is a separate question specifically about child care for grandchildren. On the other hand, the Philippine instrument records ADL/IADL help *from* adult children to older parents but does not ask specifically about ADL/IADL help an older parent may have provided to adult children. Fortunately, underreporting of these services is likely to be minimal, because provision of ADL or IADL help from parents to children is likely to be uncommon given the younger generation’s good health relative to that of their older parents.

In sum, provision and receipt of money and material goods in the Philippines are assessed with respect to the past year (prior to the date of interview). All other questions in the Philippines (ADL, IADL and child care) and all transfers in Taiwan imply “current” transfers; that is, the questions do not contain specific time reference periods. An example of question wording about current transfers from the 1989 Taiwan survey is: “Are you giving

money to someone to help him or her?" The ambiguity of the time frame in the Taiwan survey may lead to a degree of underestimation of the level of exchange going on in Taiwan between parents and children, if respondents do not consider exchanges back as far as 12 months in time.

The questionnaire structure for obtaining transfer information also differed between the two surveys: Taiwan used an exchange-centered approach and the Philippines used a person-centered approach (Hermalin 1999). In the 1989 exchange-centered Taiwan survey, elderly respondents were asked whether they received (or, in a separate set of questions, whether they provided) certain types of resources to anyone and then to name the person involved, individual children being a sub-set of all possible persons involved in transfers with the older respondent. The 1996 Philippines survey was person-centered, and asked elderly respondents whether they had received a certain type of resource from a specific child or had provided a certain type of resource to a specific child. The questions were asked about every child, regardless of whether a transfer had taken place. Hermalin (1999) points out that respondents are less likely to miss identifying a transfer in the person-centered approach, but the time to administer this particular question structure is longer than the exchange-centered approach, perhaps leading to more respondent burden. The overall approach adopted by each survey in obtaining transfer information contributes to potentially different levels of measurement error in the indicators we use to measure transfer behavior. We do not explicitly account for this in the analysis that follows, but we interpret differences in the levels of transfer behavior between the countries cautiously.

Methods

We first examine the prevalence of transfers older parents make to non-coresident children (the most common measure of intergenerational exchange) for both countries. For comparative purposes, figures from the United States on transfers with non-coresident children are reproduced from a prior study (Hill, Morgan & Herzog 1993).¹ We next show how levels of participation in transfers in Taiwan and the Philippines differ by the way the coresidence status of children is considered. This illustrates that the extent to which older parents are considered to be involved in the family support network changes depending on how transfer behavior is measured. We then provide estimates of the balance of exchanges between parents and children, again distinguished by coresidence status to illustrate the parent's contribution in relation to the child(ren)'s transfer activity. Finally, we use logistic regression models to estimate the likelihood that elderly parents provide resources to their adult children. Separate models are estimated for transfers with all children versus only non-coresident children and by country (given

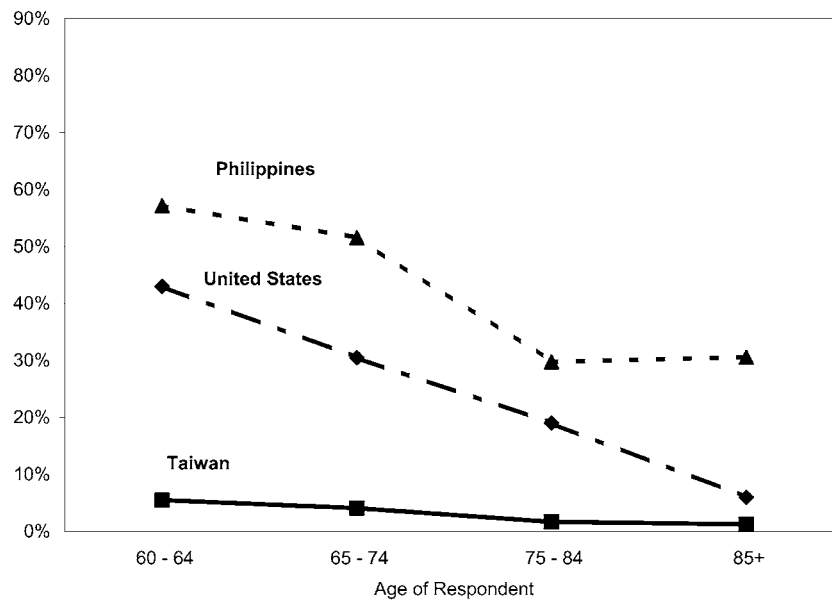


Figure 1. Proportion of adults age 60 and older giving money, goods, or services to non-co-resident children by age of parent.

the different measurement approaches to transfers in each country survey). Key independent variables in these models are age, health (operationalized as number of functional limitations), and availability of independent economic resources (operationalized as income from a pension, wages, or other non-family income such as rent, stock dividends or interest from savings). Gender, marital status and education also are included to control for established differences in transfers with children (Hermalin, Ofstedal & Chang 1996; Natividad & Cruz 1997). We also include a measure of the prior division of all or part of the older person's home or land to children to examine the influence of past transfers on current behavior. Finally, measures of coresidence with children and grandchildren are included (operationalized as living with one or more adult children (but no grandchildren); living with grandchildren (but no children), living with both adult children and grandchildren, or living with neither).

Results

Figure 1 shows the proportion of older adults who gave resources to their non-co-resident children (regardless of whether any of the children were giving any resources to them) by age of the respondent.

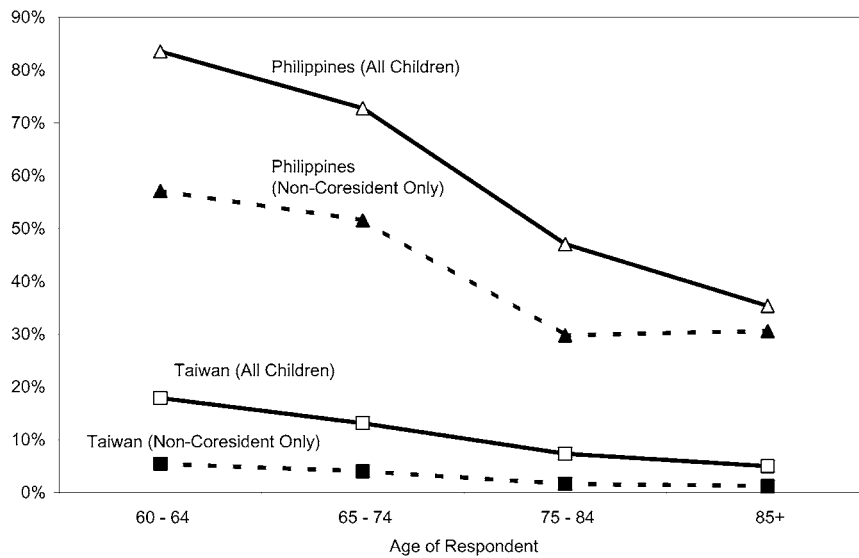


Figure 2. Proportion of adults age 60 and older giving money, goods, or services to children by age and coresidence status.

The percentages in Figure 1 indicate that in both the Philippines and United States older parents assume a relatively active role in providing resources to children. Almost 60 percent of older adults age 60 to 64 years old in the Philippines and 43 percent in the United States report having made transfers to non-coresident children. Fewer than 10 percent of older adults of any age in Taiwan are currently giving resources to children. The proportion of older parents giving to non-coresident children declines with age in all three countries. The prevalence in the United States drops dramatically by age, from 43 percent among those age 60 to 64 to only 6 percent among those age 85 years and older. A similar decline occurs in the Philippines although the levels remain high and the age difference appears to plateau at age 75: nearly one-third of those aged 75 or older still report making transfers to non-coresident children. In Taiwan, 6 percent at age 60–64 give resources to non-coresident children, declining to only 1 percent of parents age 85 years and older.

Figure 2 illustrates the differences in measuring transfers that older persons make to the family. This figure shows the percentage of older adults who said they made transfers to children for the Philippines and Taiwan by coresidence status and age of the parent. Comparable figures for the United States are not available because data are constrained to transfers with children who live outside the household.

Table 1. Percentage distribution of transfers with non-coresident children and all children: Philippines (1996) and Taiwan (1989)

Transfer pattern	Philippines (n = 1,246)		Taiwan (n = 3,823)			
	Non-coresident	All	Non-coresident	All	Non-coresident	All
None	12% (146)	2% (30)	41% (1,584)	20% (760)		
Giving only	4% (55)	5% (65)	1% (56)	4% (152)		
Receiving only	39% (488)	28% (347)	54% (2,081)	66% (2,537)		
Both giving and receiving	45% (557)	64% (804)	3% (102)	10% (374)		
Total	100%	100%	100%	100%		

Note: Sample sizes in parentheses.

Source: 1996 Philippine Survey of the Near Elderly and Elderly and the 1989 Survey of Health and Living Status of the Elderly in Taiwan.

For both the Philippines and Taiwan, the proportion of elderly parents who report giving resources to children increases across all age groups when transfers with coresident children are included. The proportion of Filipino parents age 60 to 64 years old who made transfers to their children rises from 57 percent with non-coresident children to 84 percent with all children. In Taiwan, the increase is from 6 to 18 percent for parents 60 to 64 years old. However, the rise in the proportion of parents making transfers to children is not uniform across all ages. The same decline in giving over the life course occurs in both the Philippines and Taiwan no matter how transfers are measured. By age 85 almost no parents in Taiwan report giving resources to children, regardless of coresidence with children. Fewer Filipino parents also make transfers to children as they age, but at age 85 over one-third (35 percent) are still doing so.

The contributions of older parents to their children take place within the context of transfers from children, and these patterns, too, differ across the two settings. Table 1 compares the balance of giving and receiving between older parents and their children, first for transfers with non-coresident children only (in the first column for each country) and then for transfers with all children (second column for each country). In Taiwan, only 4 percent of older parents are providing resources to non-coresident children (either 'giving only' or 'both giving and receiving'). About two-fifths are not involved in any transfers with non-coresident children and more than half are recipients of resources from their non-coresident children, but do not report giving anything in return. The expanded measure of transfers that includes all children, both coresident and non-coresident, indicates a greater involvement of older parents in exchanges. Though 41 percent of older parents in Taiwan

were not involved in transfers with non-coresident children, this proportion drops to only 20 percent when intra-household exchanges are included, showing that half of older persons who would be considered to be involved in no exchanges whatsoever, are exchanging resources with coresident children. The proportion of older parents giving resources to children more than triples to 14 percent, and the percent that only receive from children rises from 54 to 66 percent.

In the Philippines, most older parents are involved in some type of transfer with non-coresident children: 4 percent report only giving resources to non-coresident children, 39 percent only receive resources and 45 percent both give and receive resources with non-coresident children. Only 12 percent are not involved in any exchanges with non-coresident children. Once transfers with coresident children are included, the distribution shifts such that providing resources to children rises to 69 percent, much of this due to a large increase in the proportion both giving and receiving resources with children. Only 2 percent of older parents are not involved in any transfers with any of their children and 28 percent only receive resources from children. Thus, analyses that focus on transfers that parents make with non-coresident children alone will tend to miss a sizeable amount of transfer activity occurring between parents and children, especially support provided by older parents to their adult children even at advanced ages.

Table 2 shows the results of the logistic regression model of whether a parent makes transfers to children, measured first as transfers to non-coresident children only and then as transfers to any child, regardless of coresidence status. Comparison of these models within each country shows that, in general, the associations between key independent variables and the likelihood of giving resources to children are in the expected directions and consistent across the two transfer measures. Results for the Philippines are in the first two columns and for Taiwan are in the last two columns. The relationship of age to parent-child transfers persists regardless of the way the outcome is measured. With increasing age, the likelihood of giving resources to children declines, net of other factors. The pattern for transfers to non-coresident children appears to be quite similar across the two countries, with a plateau around age 75. However, the decline with age is steepest for transfers to all children in the Philippines and most moderate for transfers to all children in Taiwan. Similarly, each additional functional limitation that an older parent has reduces the odds of making transfers to children. For the Philippines, the reduction is slightly greater for transfers to all children, and in Taiwan, the reduction is greater for transfers to non-coresident children. The effects of gender and marital status are in the expected direction but significant only for transfers to all children in Taiwan, where women are more

Table 2. Odds ratios from the logistic regression of giving to children – non-coresident children and all children: Philippines (1996) and Taiwan (1989)

Variables	Philippines		Taiwan	
	Non-coresident only	All children	Non-coresident only	All children
Age (60–64 is omitted)				
Age 65–74	0.82	0.55***	0.75	0.87
Age 75–84	0.40***	0.25***	0.36**	0.64*
Age 85 +	0.43	0.16***	0.38	0.44
Number of functional limitations	0.90**	0.82***	0.74***	0.82***
Female	1.06	1.00	1.15	1.54***
Married	1.19	1.04	1.10	0.67***
Economic Resources				
Pension income	1.32	1.77*	2.10***	2.10***
Wages	1.52**	1.51**	0.98	1.53***
Other income	1.26	1.91*	1.72*	1.49*
Education (no education is omitted)				
Primary	1.22	1.27	0.72	0.85
Secondary plus	1.57*	1.46	0.83	0.88
Prior division of property	1.27	1.22	0.89	0.71**
Living arrangement (lives with neither is omitted)				
Lives with adult children	0.75	2.52***	0.51**	5.24***
Lives with grandchildren	3.02***	3.38***	3.06***	2.70**
Lives with Both	0.95	3.71***	0.54**	2.51***
–2 Log Likelihood	1593.2	1325.5	1218.9	2783.2

*** $p < 0.001$, ** $p < 0.01$, * $p < 0.05$, + $p < 0.10$.

Source: 1996 Philippine Survey of the Near Elderly and Elderly and the 1989 Survey of Health and Living Status of the Elderly in Taiwan.

likely to report giving to children and being married is associated with a lower odds of giving resources to children.

In line with prior studies in the United States, the model shows that independent (non-family) sources of income are all strongly and positively related to the probability of making transfers to children both within and outside the household. However, wage income appears to be unimportant and not

statistically significant in relation to transfers to non-coresident children only in Taiwan. Surprisingly, education is generally not significant, except that the most highly educated in the Philippines are more likely to be giving to non-coresident children. More consistent with expectations are the results for prior division of all or part of the older person's property, which is only significant in Taiwan and is associated with a lower likelihood of giving to all children.

Lastly, coresidence with children and grandchildren is strongly and significantly associated with a higher likelihood of giving resources to children compared to older parents who do not live with either a child or grandchild. However, the effect of living arrangements differs substantially depending on the outcome being estimated. In the models for transfers to children where both coresident and non-coresident children are included in the outcome, the likelihood of transferring resources to children is much higher when children are present in the household (with or without grandchildren). In the models of transfers to non-coresident children, older parents who coreside with children (whether or not grandchildren are present) are less likely than those who live with neither to report giving to adult children (although this association is not statistically significant in the Philippines). In contrast, older adults in both countries who live with grandchildren but *not* with children (i.e., a split-generation household) are about three times more likely to be making transfers to non-coresident children than those who live with neither children or grandchildren. The large positive association between living in a split generation household and giving resources to adult children is significant for both outcomes, though by definition in both cases it reflects only transfers to non-coresident children.

Discussion

This study used nationally representative, detailed survey data to examine intergenerational transfers between older parents and their adult children in two Asian countries with strong traditions of filial obligation. Examination of two alternative measures of intergenerational transfers between parents and children show that in both the Philippines and Taiwan the contributions of older persons are underestimated, as is their overall involvement in exchanges, if only exchanges with non-coresident children are considered.

The cross-national comparisons of the prevalence of transfers to non-coresident children shown in Figure 1 suggest that giving is not merely a function of economic development: both the Philippines and the U.S. exhibit high levels of giving from older parents to non-coresident children, while levels are much lower in Taiwan. These differences are not unexpected, given the strength of specific norms in Taiwan regarding the obligations of children,

particularly married sons, to provide for their parents in old age. However, norms about the appropriate direction of intergenerational flows of assistance also may influence the extent to which Taiwanese elders are willing to report the resources they provide to their adult children. This and the measurement issues mentioned earlier may contribute to underreporting of transfers to children in Taiwan.

One unique aspect of the Taiwan and Philippines survey data is that they contain information on transfers with all children regardless of whether the children live with the older parent. We therefore were able to examine the difference in the proportion in each age group reporting that they give to children when transfers to coresident children are included in the measure (Figure 2). Though levels of giving are higher for all age groups, the gap between the two measures is greatest at the youngest ages, showing that the contributions of younger parents are most likely to be excluded by a measure that ignores intra-household transfers. This may reflect a general shift in relations with children as age brings concomitant increases in physical, cognitive, and sensory impairments. If the resources provided by older persons to their coresident children consist mainly of services such as child care and cooking, then a greater proportion of the younger and healthier elders would be providing such care.

The general pattern of exchange relations with children (shown in Table 1) reveals that when coresident children are included, the distribution shifts such that the proportion involved in no exchanges drops dramatically, and the proportion giving (or giving and receiving) also rises substantially. Interestingly, the percent defined as receiving only is higher in Taiwan, but drops in the Philippines when the definition of transfers is expanded to include all children. This finding implies that the exclusion of coresident children is primarily missing additional support *from* children in Taiwan, but fails to capture a primary location of *giving* in the Philippines.

Results from a comparison of logistic regression models for the two measures of transfers from parents suggest that in general both measures are associated in similar ways with key factors such as age, health, gender, and economic resources. The importance of knowledge about coresidence for the measurement of transfer behavior also becomes apparent. In both countries, living with children is associated with greater giving by older parents, but mainly to the coresident children. This finding implies that the focus of older adults' contributions to family tends to be on the children with whom they live, and not on their other children (though most non-coresident children contribute material support to their older parents (Ofstedal, Knodel & Chayovan 1999)). While living with grandchildren does not appear to affect transfers when adult children live in the household, when older persons

live in a split-generation household, they have a much greater likelihood of giving to their non-coresident adult children. This is a relatively uncommon living arrangement (3 percent in Taiwan and 12 percent in the Philippines in 1996 (Hermalin 2003)), but not so rare as to be insignificant. The positive association of this living arrangement with transfers to adult children indicates that coresidence with grandchildren may actually be an indirect transfer of services to a non-coresident adult child who is away from their own children. It is not within the scope of the present study to determine the reasons for such arrangements, but it may represent seasonal migration for employment or other economic arrangements.

Conclusions

The evidence from this study lends credence to the idea that older persons play a more active role in the family economy than is assessed with traditional measures of parent child exchanges, especially within the family household. Many studies of intergenerational transfers ignore transfers within the household and concentrate solely on transfers across household boundaries. Despite potential ambiguities in reporting and measurement of intra-household transfers, the results from this study suggest that such research will underestimate the contributions of older parents to their families. One important caveat to interpretation of the effects of coresidence on intergenerational transfers is that the causality of the relationship between coresidence and other transfers cannot be determined since coresidence is itself a form of intergenerational transfer.

Developing countries are grappling with important questions about how social welfare policies for the aged will evolve and how to support a rapidly growing older population. One appealing goal for many countries is to rely more upon existing family support systems in the hopes of reducing dependence upon state provided benefits such as health care and universal old age pension systems. This perspective ignores the extent to which families already rely upon contributions that older persons make and the importance of pensions and other wages to the support provided by older family members. The findings from this study suggest that when older adults have pension or wage income of their own, they are more likely to provide resources to their adult children, whether coresident or not. Consequently, the contributions of older persons to their families would likely be fundamentally altered by an increase (or decrease) in public money transfers (see Case & Deaton 1998, for an example from South Africa). Moreover, the active role that older parents play in providing assistance to children is particularly relevant to Asia as industry shifts increasingly from family farming to wage labor: Older parents

may be increasingly important providers of child care and other services to their adult children who are working in non-farm jobs.

We should note that the cross-sectional relationships we observe for an older generation in Asia that is relatively poorly educated and with large gender differences in educational attainment (Christenson & Hermalin 1991) cannot necessarily translate into models of future trends. Those who turn age 60 in the year 2020 will predominantly be literate and the gender gap in educational attainment will have narrowed considerably. Capturing the implications of these and other changes that cohort succession will bring requires a more nuanced understanding of the transfers across generations both within and across household boundaries.

However, it is important also to remember that the provision of resources by older parents does not occur in isolation: Most older parents in the Philippines and Taiwan who provide resources to children (whether non-coresident children only or all children) also are receiving transfers from children. By focusing on both intra- and inter-household transfers and by extending measures to include multiple flows of resources between multiple people, we can better understand the degree to which older persons assume economically and socially active roles in the family. In short, a broader research approach to family exchange will help address how families adapt to social and economic change and the roles that older persons play in the distribution of family resources.

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Note

1. This study used the 1988 supplement to the Panel Study of Income Dynamics (PSID), possibly the only data source for the U.S. that contains parallel information on provision and receipt of transfers between parents and adult children. Unfortunately, the 1988 PSID contains information only for transfers between parents and non-coresident children and not for those within households. The PSID questions are about money and time transfers made during the calendar year prior to the survey.

Appendix A – survey questions about transfers

Taiwan

For each type of transfer (money, material goods or services), a series of questions was asked that identified the people involved. Parallel information was collected for both giving and receiving transfers with specific members of the family. In addition, characteristics of members of the family and household are documented in great detail. Children were individually identified and a number of characteristics were gathered about them (e.g., such as their place of residence, marital status, and so on). Somewhat more limited information was collected on other types of kin (parents, siblings, and grandchildren). While the direction of flows and the characteristics of the participants were documented, little information was collected about the quantity of support flows (e.g., hours of time or specific amounts of money). The exact survey questions on transfers in the 1989 Taiwan Survey of Health and Living Status of the Elderly are described below.

When the respondent gave support to any individual, for each main type of support (activities of daily living, instrumental activities of daily living, financial transfers and provision of material support) the respondent was asked:

“Do you currently (provide assistance to anyone in the form of _____/give money to someone to help him or her/ provide material support on a regular basis or through special gifts of food or clothing) to anyone?”

If the answer is yes, they were then asked the following two questions:

“To whom do you (provide this assistance/give this money)? Anyone else?” and “In the past year, who was helped most in this way?”

When any individual gave support to the respondent, for each main type of support (activities of daily living, instrumental activities of daily living and other services, financial, or material), the respondent was asked:

“Is there anyone who (helps you with bathing, etc./ gives you money to help you now/ gives you food or clothing or other goods to help you now)?” or “Do you currently receive any assistance from any of these sources with daily activities such as household chores, etc.?”

If the answer is yes, they were then asked the following two questions:

“Who provides this (assistance/support) to you? Anyone else?” and “In the past year, which person (or service) was most important in terms of (providing physical care assistance to you/ assisting you with your daily activities/ providing financial support to you/ providing material support to you)?”

Philippines

For each type of transfer (money, material goods or services), a series of questions was asked about transfers with specific people or groups of people (e.g., brothers or sisters). Parallel information was collected for both giving and receiving transfers with specific members of

the family. In addition, characteristics of members of the family and household are documented in great detail. Children were individually identified and a number of characteristics were gathered about them (e.g., such as their place of residence, marital status, and so on). Somewhat more limited information was collected on other types of kin (parents, siblings, and grandchildren). As in the Taiwan survey, little information was collected about the quantity of support flows (e.g., hours of time or specific amounts of money). The exact survey questions on transfers in the 1996 Philippine Survey of the Near Elderly and Elderly are described below. When there were several questions that differed only by the person or people referred to, we condensed the questions into one question below and used "[PERSON(S)]" to indicate that the question refers to specific people or types of people (e.g., father/mother or brother/sister).

When the respondent gave support to any individual, he or she was asked (by currency):

"Outside of small gifts, did you give money to [PERSON(S)] either regularly or from time to time during the past year?"

"Outside of small gifts, did you give any food, clothing, or any personal belonging to [PERSON(S)] either regularly or from time to time within the past year?"

"Do you take care of any of your grandchildren or any other young child?"

Note: Questions were not asked about ADL or IADL help that an older person may have given an adult child.

When any individual gave support to the respondent, the respondent was asked:

"Outside of small gifts, did [PERSON(S)] give money either regularly or from time to time within the past year?"

"Outside of small gifts, did [PERSON(S)] give any food, clothing, any personal belonging either regularly or from time to time within the past year?"

[If respondent reported having any difficulty with an ADL] "Do you use any instruments or does someone assist or do it for you, or both or neither?" [If yes] "Which people assist you with these activities?" [Up to 5 people recorded][If respondent reported having any difficulty with an IADL or reported being unable to do an IADL] "Which people assist you with these activities?" [Up to 5 people recorded]

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