How Intergenerational Coresidences Dissolve: Does the Difference at Their Origins Matters?

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Introduction

The pattern and determinants of the dissolution of intergenerational coresidence for older Americans has not received specific attention, leaving a blurred image of the last several years of life course. Using data from Health and Retirement Study (HRS), this study will address the question of whether variance in origins of intergenerational coresidence involving older parents (70+) and their adult children is related to the risk of their dissolution and what happens to the older parents thereafter. The different types of coresidence are defined as (1) older parents and children who always live together (2) coresidences to help older parents; (3) to help adult children; and (4) to help both. The differences among the types of coresidence have been recently noticed by Choi (2003), however, their impacts on dissolution of coresidence have not been closely studied.

Testing Hypothesis:

The risks of coresidence dissolution are different across different types of coresidence. Coresidence to help both generations is more stable as compared to coresidence for helping parents or coresidence for helping children.

Data

Analytical Sample

The basic eligibility for this study is the following: (1) Community dwelling at the baseline; (2) Aged 50 and over; (3) Having at least one child in contact; (4) Cognitively able to answer subjective questions and (5) ever living together with any adult children during the survey interval.

Up to now, two waves of AHEAD (1993, 1995) and six wave of HRS (1992, 1994, 1996, 1998, 2000, and 2002) are available to the public. These waves provide up to 10 years of longitudinal data. There was a major change in the coding of health variables in 1998, however, which potentially undermines the compatibility of several key indicators in the proposed study. I will look at how serious the problem is and how I can remedy the inconsistency. Tentatively, I propose to use three waves that were implemented in and after 1998, i.e. HRS 1998, HRS 2000 and HRS 2002 which provide a 4-year panel.

Outcome variables:

The outcome variable is defined as any event that terminates coresidence with own children.

Explanatory and Controlling Variables

Explanatory and controlling variables can be grouped into parental characteristics, family

characteristics, and child-specific characteristics, in view of different perspectives of the analysis.

Parental Factors

Health status is an important constraint on parents' resources. The measures we will use to reflect the gradient in health include Ability of Daily Living (ADL), Instrumental Ability of Daily Living (IADL), and Cognition function. In case of potential co-linearity problems among ADL and IADL, I will also summarize them into a new categorical variable.

Self-rated health is also included as a specific aspect of parental health. It is a categorical variable with five outcomes: excellent, very good, good, fair, and poor. This is a measure of subjective evaluation of current health.

To reduce the heterogeneity in reporting self-rated health and anticipation of survival across subjects with different mental ability, their performance in cognition function will also be included as a controlling variable.

Social Economic Status (SES) such as highest achieved education, occupation before retirement, social security status, personal income, net value of non-housing financial wealth, home ownership, housing equity, duration of residence and etc will be examined. It is noteworthy that "housing equity" is a special financial wealth that is a structural factor related to many facets of living and care arrangements and their transitions. An additional feature related to it is that great adjustment cost is involves when people make changes in housing equity.

Earlier intergenerational financial support. This variable will be constructed based on the baseline survey questions:

> "In the last 10 years, did you (or your (husband/wife/partner)) give a child (or grandchild) a deed to a house? ……Which child (or children) was that?"
>
> "Not counting any shared housing or shared food, have you (and your (husband / wife / partner)) given financial help or gifts including help with education, of $5,000 or more to any child (or grandchild)? ……Which child (or children) was that?"

Financial help is defined as giving money, helping pay bills, or covering specific types of costs such as those for medical care or insurance, schooling, down payment for a home, rent, etc.

Intergenerational financial support between the baseline and follow-up. This variable will be constructed based on the survey questions asked in the follow-ups about financial helps happened during the interval.

Health insurance. Medicare, Medicaid and private health insurance status will be employed as a reflection of the choices from outside the family.

Geographic region. There will be two variables to control for the geographic difference: Census Division and metropolitan status. Census Division of respondent residence includes 1) New England; 2) Middle Atlantic; 3) East North Central; 4) West North

Central; 5) South Atlantic; 6) East South Central; 7) West South Central; Mountain; and 9) Pacific. Metropolitan status is defined as 0= non-metropolitan; 1 = metropolitan.

Parent's demographics such as age, gender, marital status, ethnicity, and religion are important factors that shape the preference for intergenerational interactions.

Family Characteristics:

Family characteristics include 1) Children's group characteristics such as number of adult daughters/sons in contact, number of married daughters/sons in contact, number of living children who have children, and number of grandchildren, 2) Older parents' marital status, 3) Number of older parents' living siblings and parents, 4) Number of living children who are financially better off than their parents, 5) Number of living children who are homeowners, and 6) average income and education of children

Child-specific Characteristics:

The array of child-specific characteristics is relatively limited as compared to available parents' attributes in AHEAD and HRS. Among those available are specific child's age, gender, marital status, number of own children, education, occupation, income and home ownership.

Method: Cox Proportional Hazard Model (PHM)

The sample for the Cox Proportional Hazard Model (PHM) (Cox, 1975) will be older parents who are coresiding with adult children at baseline. The outcome at risk includes 1) "living with the same child as before", 2) "living with a different child", 3) "not living with any child any more", 4) "living in institutions", 5) "death", and 6) "other attritions". The major explanatory variable will be the type of coresidence which is defined over 0) parent and children always lived together, 1) lived primarily to help the child, 2) lived together primarily to help the parent, and 3) lived together to help each other.

To facilitate the analysis, we will first reorganize the data and create new variables. We need to go from the simple data set, with one row of data per person, to another data set in which each person contributes Ti rows, where Ti is the number of episodes individual i was at risk of the dissolution. We also have to generate a unique identifier variable for each subject, plus a spell identifier variable for each subject. A dichotomous variable δ also needs to be created to identify the censor status. δ equals 1 if subject i's survival time[1] is right censored, and 0 if otherwise, with realizations on δ is assumed to be independent of the survival time and is functionally independent of the survival distribution.

[1] By survival time I mean the time the individual remains in certain origin state.

In PHM, covariates are allowed to affect the hazard in a rather restrictive fashion, that is

$$\lambda(t \mid X_i) = \lambda_0(t)\exp(\gamma' X_i)$$

where

$\gamma' X_i = \gamma_0 + \gamma_1 C_i + \gamma'_2 F_i + \gamma'_3 \Delta F_i$

$\lambda_0(t)$ is the baseline hazard

C_i represents the type of coresidence

F_i represents the baseline status parental and family attributes

ΔF_i represents the change in time-dependent variables

The basic construct and specification of covariates and their functional forms are similar to the previous estimating equation I setup in topic one.

The Cox (1975) estimator of the PHM avoids distributional assumptions about the baseline hazard by maximizing the partial likelihood function. The resulting estimates of the covariate effects are still consistent and asymptotically normal.

In the biennial survey data, the time when the episode of coresidence is captured is often different from the time the episode begins. Hence, left-censoring[2] problem arises. Thanks to the retrospective question about the year and month when the current coresidence formed in AHEAD and HRS survey, the duration that has been occupied in coresiding state before the beginning of the observation can be constructed for each wave of the survey. Hence, the bias resulted from the left censoring can be effectively minimized in the study.

Significance of this study:

After properly answer the proposed research questions, this study will improve the understanding about intergenerational interactions between older Americans and their adult children in terms of their living arrangements and spatial relations, which are closely related to the wellbeing of the older segments of the population.

The pattern (timing and consequences) and the determinants of the dissolution of intergenerational coresidence for the older Americans will be one of the major themes in the study. It is relevant to policies regarding resource allocation among older parents and their adult children who are dwelling in the same household. Unfortunately, this issue has not received enough attention. HRS and AHEAD surveys provide a chance to study this important issue. By using multi-state life table technique, expected years of coresidence for certain hypothetical episode of joint living can be obtained for the older parents. This, in turn, can provide useful information for policy-making regarding household with older individuals.

[2] Left censoring problem arises when the durations and states that have been occupied before the beginning of the observation is unknown.