provides summary statistics of the explanatory variables.

The characteristics of parents include shock variables, health status variables, and socio-economic variables. Shock variables are dummy variables constructed as a change between two consecutive waves and are assumed to be exogenous to living arrangement decisions. All explanatory variables except the shock variables are defined in terms of base years. The shock variables include the loss of a spouse, deterioration in physical ability, deterioration in the ability to perform the daily life activities (ADL), the development of dementia, deterioration in the ability to care for others, and deterioration in spousal ability to care for others.[10]

For parental health measures in the base year, we consider the ability to perform a series of activities. We construct two indices, one for physical ability and another for the ability to perform ADL. Each index is constructed as an average of values between 0 and 10 that are assigned to individual tasks, based on the level of difficulty. Each index is valued at 0 if all tasks can be performed without difficulty and at 10 if all tasks are impossible.[11] We also include two

[10] The physical and ADL ability dummies take the value of unity if there is a major deterioration in the ability to perform any of the interviewed activities.

[11] Physical activities used to construct the index are: (1) walking 200 or 300 meters; (2) climbing 10 stairs without resting; (3) standing for 2 hours; (4) continuing to sit for 2 hours; (5) squatting and kneeling; (6) raising hands above head; (7) extending arms out in front; (8) grasping with fingers or using fingers easily; and (9) lifting a heavy load of 10kg. ADL include: (1) taking a

dummy variables for existing dementia and cancer conditions, and two index variables for subjective health and happiness.[12] The happiness index is constructed from the responses to 11 questions about feelings and attitudes regarding the respondent's life (PGC Morale Scale). The index takes a value between 0 and 10, with 10 indicating the greatest degree of happiness.

Parental demographic and economic characteristics may be relevant because they indicate the degree of economic independence and support available from non-children sources. With regard to demographics, one of the most relevant variables is the presence of a spouse. Of the sample, 73.6% lived with a spouse and 5.5% lost a spouse by the following wave. The eldest-son status of the father is another family structure variable of particular interest to test the significance of primogenital customs in modern Japan. For economic variables, we include not only working status but also whether the employment is full-time or part-time, because this affects the availability of disposable time for domestic tasks or grandparenting in a shared household. As a measure of wealth, we consider ownership of the house in which the parent lives

bath/shower; (2) dressing; (3) eating; (4) standing up from a bed or chair and sitting down; (5) walking around the house; (6) going outside; and (7) going to the bathroom.

[12] Other existing conditions, such as heart attack and fracture, and other specifications regarding the health variables were tried but do not provide significant results, indicating that our results are fairly robust.

and the availability of other real estate assets.[13]

The NUJLSOA offers child information regardless of whether the child lives with the parent. We include the number of sons and daughters, the ratio of children with a university degree, and the presence of at least one child that lives in the same town. We also control for the presence of money transfers between parents and children before coresidence.

The next set of variables includes the self-reported experience, views, and future plans on inter-generational transfers. First, the elderly parents were asked whether they or their siblings had received any form of inheritance from their parents. Affirmative responses were followed up with, "Among which siblings was the property divided? Please do not include your mother or any other relatives in the response". The following choices were given: (A) Eldest brother (or eldest sister, in the event that there is no eldest brother) was the only beneficiary; (B) All siblings were beneficiaries; (C) Only the individuals that provided care for the parents were the beneficiaries; and (D) Other. We create three dummy variables for (A), (B), and (C), so the reference group includes (D), missing responses, and those who had no such experience.

Second, the parents were asked, "How would you like to use your assets, such as savings

[13] The NUJLSOA has several questions about the assets of the respondents, such as whether they have any bank deposits, bonds, and/or stocks. However, a precise measure of wealth is difficult to construct.

or real-estate?" The choices were: (A) Use them to support me (and my spouse) [29%]; (B) Leave them to my eldest son (or eldest daughter in the event that there is no eldest son) [13%]; (C) Leave them to all of my children [17%]; (D) Leave them to the individual who looked after me (and my wife/husband or parents) [10%]; (E) Leave them to the volunteer or medical facility who looked after or cared for me [0.4%]; (F) Other [1.6%]; and (G) I have no possessions to leave [9.5%]. We created five dummy variables for answers (A) or (E), (B), (D), (G), and (F) or missing answers. Thus, the reference category is the egalitarian group, (C).

The next three variables relate to parental values based on the following three statements: (1) "A child should be expected to support and take care of his or her aged parents, as the child should feel a sense of gratitude to the parents for raising him/her"; (2) "It is acceptable for children who looked after their parents to inherit larger portions of their estate when they pass away"; and (3) "Men should work to support the family, and women should stay home and take care of the household." For each of the responses, we create an index, assigning a value of 5 for "Agree", 4 for "Somewhat agree", 3 for "Not sure" and missing answer, 2 for "Somewhat disagree", and 1 for "Disagree." The NUJLSOA asked about parental intentions to rely on children in the future, and we create a dummy variable for "planning to rely on children."

The final set of variables captures the parental experience of informal care. They were asked, "Are you currently, or in the past have you been, the primary care provider for family members, and if so, for whom?" There was also a question about the impact of caregiving on their lifestyle. The definitions of the dummy variables for these questions are provided in Table 5.

Table 5: Definitions of Explanatory Variables

Explanatory variables: shock between the base and following periods	
Lostspouse	=1 if spouse departure; 0 otherwise. Divorce and separation are included, but are quite rare.
HS_physical	=1 if health shock in physical ability; 0 otherwise
HS_ADL	=1 if significant health shock in ADL; 0 otherwise
HS_dementia	=1 if development of dementia; 0 otherwise
HS_careable	=1 if deterioration in caring ability; 0 otherwise
SpHS_careable	=1 if deterioration in the caring ability of a spouse living together; 0 otherwise
Explanatory variables: characteristics of the elderly parent	
Age	Age of elderly parent
1stchild	=1 if first child; 0 otherwise
1stson, 1stdtr	=1 if eldest son/daughter; 0 otherwise
Educ[a]	Ordered categorical variable for education (1 for junior high, 2 for high school, 3 for vocational school, 4 for junior college and technical institutes, 5 for university, and 6 for post graduate degree)
Rural	=1 if living in a rural area; 0 otherwise
Wspouse	=1 if living with spouse; 0 otherwise
Physical	Index 0-10 of 9 physical activities (the larger the weaker)
ADL	Index 0-10 of 7 ADL disability (the larger the weaker)
EC_[...]	Dummy variables for existing conditions: dementia and cancer
Subhealth	=0 if very healthy / healthy; 1 if average; 2 if unhealthy / very unhealthy
Happy	Index 0-10 of happiness scale (the larger, the happier)
Income[a]	Household income quintiles, constructed from 13 categories defined by NUJLSOA (include spousal income; approximate quintiles from 1 to 5, the larger the richer))
Work	=1 if working; 0 otherwise
Employee	=1 if full-time employed; 0 otherwise
Sp_Work	=1 if spouse working; 0 otherwise
Sp_Employee	=1 if spouse full-time employed; 0 otherwise
RAsset	=1 if owns real estate assets other than own house; 0 otherwise
OwnHouse[b]	=1 if living in a house self-owned or owned by a spouse; 0 otherwise
FamilyHouse[b]	=1 if living in a family-owned house owned by someone else; 0 otherwise
HouseRent	=1 if living on the renting basis. (Reference group)
HouseInh	=1 if living in a family-owned house inherited from a parent / parent-in-law
Explanatory variables: characteristics of the children[c]	
C_Onechild	=1 if parent has only one surviving child; 0 otherwise
C_Onechildf	=1 if the only surviving child is a daughter; 0 otherwise
C_Nson, C_Ndtr	The numbers of surviving sons and daughters
C_Educ	The ratio of surviving children having a university degree
C_UnmarSon, C_UnmarDtr	=1 if there is an unmarried son / daughter; 0 otherwise
C_Near	=1 if at least one child lives in the same municipality
C_Ngchild	The number of grandchildren
C_NgchildSmall	The number of grandchildren of preschool age
C_Birth	=1 if an additional grandchild of preschool age between survey waves; 0 otherwise
C_MoneyFrom	=1 if financial support from a child or a child-in-law; 0 otherwise
C_MoneyTo	=1 if financial support to a child or a child-in-law; 0 otherwise

Explanatory variables: values and views of the parents	
BqExp_1stson	=1 if experienced inheritance from a parent that went to the eldest brother; 0 otherwise
BqExp_all	=1 if experienced inheritance from a parent divided by all siblings; 0 otherwise
BqExp_carer	=1 if experienced inheritance from a parent to only the siblings who provided care; 0 otherwise
BqExp_other	=1 if other type of experience or no experience (Reference group); 0 otherwise
BqIntentSelf	=1 if bequest intention "to support me and my spouse" and "to leave to volunteer medical facility who look after/care for me."; 0 otherwise
BqIntentPrimo	=1 if bequest intention "Leave to my eldest son"; 0 otherwise
BqIntentExc	=1 if bequest intention "Leave to the one who looked after me"; 0 otherwise
BqIntentNo	=1 if bequest intention "No possession to leave"; 0 otherwise
BqIntentOth	=1 if bequest intention "Other" and missing answers; 0 otherwise
BqIntentAll	=1 if bequest intension "Leave to all children" (Reference group)
ViewCare	"A child should support and take care of aged parents out of gratitude." 5 for agree, 4 somewhat agree, 3 not sure, 2 somewhat disagree, and 1 for disagree.
ViewExchange	"Children who looked after their parents may inherit larger inheritance" 5 for agree, 4 somewhat agree, 3 not sure, 2 somewhat disagree, and 1 for disagree
ViewGender	"Men should work and women should stay home and take care of the household" 5 for agree, 4 somewhat agree, 3 not sure, 2 somewhat disagree, and 1 for disagree
PlanDepend	=1 if "Plan to rely on a child"; 0 otherwise
Explanatory variables: caring experience of parents	
CareExp	=1 if have experience of providing care for a family member as a primary caregiver; 0 otherwise
CareExpParent	=1 if experience of providing care for a parent or grandparent of their own or an in-law; 0 otherwise
CareProblem	=1 if any difficulties were encountered in the experience; 0 otherwise

Note: Two dummy variables are also used for periods 2001-2003 and 2003-2006, with the 1999-2001 period being the reference group. [a]: Accompanied by missing-value dummy variables, taking mean values for observations with a missing value. [b]: *OwnHouse* and *FamilyHouse* include condominiums and townhouses. Joint ownership with someone else is included. The difference between these two is whether the parent has ownership. For those living in a family-owned house but with missing owner information, a missing value dummy variable is constructed and used. [c]: Children include step and foster children but not children-in-law.

4. Empirical Strategy

4.1. Simple Cross-Sectional Analysis of Transition

New coresidence begins when a family reaches the decision as a consequence of latent family bargaining. Suppose we have cross-sectional data in which we observe each family's decision on the transition to coresidence, so each observation appears in the data only once. This revealed decision can then be modeled as a standard binary choice problem. We observe $y_i \in (0,1)$,

$i = 1,\ldots,N$, which is an indicator variable for the transition to parent-child coresidence of family i during a certain period. y_i is assumed to be generated by the latent construct, y_i^*, specified as

(1) $$y_i^* = X_i\beta + \varepsilon_i,$$

where X_i is a vector of covariates. The logit model arises when ε_i, conditional on X_i, is assumed to independently follow a logistic distribution. The probability that family i begins coresidence is given by:

(2) $$\Pr(y_i = 1 \mid X_i) = \Lambda(X_i\beta) = \frac{e^{X_i\beta}}{1+e^{X_i\beta}},$$

where $\Lambda(\cdot)$ is the cumulative distribution function of logistic distribution. When other standard assumptions are met, we can estimate this model consistently using the standard maximum likelihood procedure. For a panel data set in which we observe consecutive coresidence decisions of each family, we can still legitimately apply the same framework by regarding it as a repeated cross-section, which is called a stacked logit framework and is a discrete representation of an exponential duration model.[14]

4.2. Irregular Intervals

[14] An exponential duration model imposes a constant hazard. We do not investigate more flexible duration dependence, because most of the elderly parents have been separated from their children for many years and the duration dependence is neither sharply identified nor of much interest. Furthermore, we do not have information on when the children left their parents.

The NJULSOA surveys were conducted in 1999, 2001, 2003, and 2006, with a longer interval between the last two waves. Applying wave-specific dummy variables is inappropriate because the effects of *all* covariates differ across waves. We resolve this problem by modifying the likelihood function. Let us redefine $y_{it} \in (0,1)$, $i = 1,\dots,N$, as an indicator variable of the transition to coresidence of family i during the period between wave years t and t+1. Let I_t denote the number of years between wave t and the next wave. Regarding $\Lambda(X_i\beta) = \frac{e^{X_i\beta}}{1+e^{X_i\beta}}$ as a *one-year* transition probability, the likelihood of family i in the period between the two waves can be written as:

$$(3) \qquad l_{it}(\beta \mid y_{it}, X_{it}) = \left[1 - (1 - \Lambda(X_{it}\beta))^{I_t}\right]^{y_{it}} \cdot \left[1 - \Lambda(X_{it}\beta)\right]^{I_t \cdot (1-y_{it})}.$$

The first square bracket term represents the probability that coresidence begins in *any* year between the two waves. Note that when I_t equals 1, this likelihood becomes the likelihood of a standard logit model with annual panel data. The estimates of β are interpreted as the effect of the covariates on the one-year transition probability.

4.3. Unobserved Heterogeneity

The fact that the NUJLSOA is a panel raises concerns about the consistency of estimates when there is unobserved heterogeneity. In particular, unlike in the standard cross-sectional linear model setting, unobserved family-specific heterogeneity may cause biased estimates, even when the unobserved heterogeneity is assumed to be uncorrelated with any regressors and there are no substantial omitted variables. This potential bias is due to the non-linearity of the model and the sample selection that arises from the stopping-problem nature of our framework. To illustrate the second point, consider families with unobserved lower tendencies of coresidence. In our framework, these families appear in the data more often in later periods than do families with higher coresidence tendencies because the latter are more likely to begin coresidence and thus drop out of the sample in early periods. In a fairly general setting, the neglect of unobserved heterogeneity may lead to underestimation of the coefficients even if the unobserved heterogeneity is uncorrelated with the included covariates (Cameron and Trivedi, 2005; pp. 617-618).

The use of random effects and fixed effects models is the standard approach used to overcome this bias. This approach, however, is not feasible in our framework, because it requires the removal of a large share of observations that appear only once, which creates another source of selection bias because the vast majority of such observations are those that began coresidence. Using one cross section would be another solution, but leads to a substantial loss of information.

We use the finite mixture model as a solution, following Heckman and Singer (1984). We model unobserved family-specific heterogeneity non-parametrically. Specifically, we introduce a small number of unobserved "types", or latent classes, across which β may vary. Suppose that there are k latent "types" of families. For simplicity, assume that these types affect only the intercept term, so that the types affect the probability of the transition to coresidence as an additive random shock, $(\nu_1, \nu_2, ..., \nu_k) \in \Re^k$. Let π_j be the probability associated with type j (mixing probability), satisfying $0 < \pi_j < 1$ and $\sum_{j=1}^{k} \pi_j = 1$. Then, the likelihood of individual i in type j at time t is defined as:

(4) $$l_{itj}(\beta, \nu_j \mid y_{it}, X_{it}) = \left[1 - (1 - \Lambda(X_{it}\beta + \nu_j))^{I_t}\right]^{y_{it}} \cdot \left[1 - \Lambda(X_{it}\beta + \nu_j)\right]^{I_t \cdot (1-y_{it})}$$

The individual likelihood contribution of a k component finite mixture model is:

(5) $$l_i(y_{i1}, ..., y_{iT_i} \mid X_{i1}, ..., X_{iT_i}; \beta, \nu_1, ..., \nu_k, \pi_1, ..., \pi_k) = \sum_{j=1}^{k} \pi_j \prod_{t=1}^{T_i} l_{itj}(\beta, \nu_j \mid y_{it}, X_{it}),$$

where T_i is the last period for family i. Because the constant term in $X_{it}\beta$ is not identified, it is normalized to 0. This model can be estimated by solving $\max_{\{\beta,\nu,\pi\}} \ln L = \sum_{i-1}^{N} \ln l_i$. Introducing heterogeneity in other coefficient terms is a straightforward extension. This finite mixture model suits our framework, allowing us to utilize the panel structure of the data to reduce potential bias. We do not need to discard observations that appear only once. Unlike fixed effects models, we can estimate the impact of time-constant variables on transition. Furthermore, the non-parametric nature of the model affords greater flexibility.

5. Results

5.1. Main Findings

We estimate a two-component mixture model separately by gender. Given the large number of covariates, the results are reported in Tables 6-9 by groups of covariates. Each table shows the results in terms of odds ratios so that the effects can be compared directly across gender. The full results, including the standard errors and all results from the simple logit model, are available from the authors.

Table 6 reports the estimated coefficients of the shock variables. Columns [1] and [2] report the results from the standard logit specification and columns [3] and [4] the results from the mixture logit. These two specifications use the same set of covariates. The estimated effects and the significance levels of the shock variables from the mixture model are generally larger than those from the standard logit model. This indicates downward bias under the simple logit specification. This is the case for all other significantly estimated coefficients.

Table 6: The Effect of the Shock Variables on the Coresidence Transition

	Logit				Two-Component Mixture			
Dependent Var:	[1]		[2]		[3]		[4]	
Transition to	Fathers		Mothers		Fathers		Mothers	
coresidence	Odds ratio	p-value	Odds ratio	p-value	Odds ratio	p-value	Odds ratio	p-value
Common Components:								
Shocks								
Lostspouse	1.843	0.413	4.099	0.000 ***	3.335	0.137	26.467	0.001 ***
HS_physical	1.709	0.232	1.703	0.189	2.839	0.055 *	1.590	0.573
HS_ADL	2.242	0.146	4.790	0.006 ***	2.777	0.249	42.221	0.006 ***
HS_dementia	1.232	0.712	5.057	0.001 ***	1.381	0.693	116.04	0.000 ***
HS_careable	0.910	0.733	0.708	0.221	0.909	0.785	0.584	0.239
SpHS_careable	2.720	0.001 ***	1.306	0.514	2.885	0.006 ***	1.101	0.879
Log-L	-346.002		-434.609		-332.774		-421.531	
N	1,944		1,902		1,944		1,902	
Chi-sq stat	176.29		180.32		106.72		75.83	
P-value	0.0000		0.0000		0.0002		0.0816	
Pseudo R2	0.2077		0.1721					

Note: *, **, and *** indicate statistical significance at the 10%, 5% and 1% levels, respectively.

As expected, the estimates show that most shock variables trigger coresidence. The effect of *Lostspouse* is positive and significant for mothers, but the effect is not significant for fathers. For health shocks, the effect of deterioration in physical capability is significant for fathers, and deterioration in ADL and the development of dementia are strong determinants of coresidence for mothers. The loss of caring capability has little effect on initiating coresidence, but deterioration in spousal caring ability has a positive and significant effect for fathers.

The effects of parental characteristics are reported in Table 7. From this table onwards, we report only the mixture model results, because the logit specification produces a largely similar story with a potential bias. The upper panel reports the estimated coefficients of the variables for which we introduce two-component family-specific heterogeneity. The selection of variables for which we introduce heterogeneity is based on interest and estimation tractability.[15]

[15] We find that dummy variables tend to exhibit poor convergence behavior and that continuous variables with sufficient variance tend to aid convergence. Several three-component specifications are also attempted, but they rarely converge to sensible results.

Table 7: Estimates on Parental Characteristics and Mixture Components

Dependent Variable:	Two-Component Mixture					
Transition to	[3] Fathers			[4] Mothers		
coresidence	Coefficient	Odds ratio	p-value	Coefficient	Odds ratio	p-value
Finite mixture components:						
Type 1 (%)	14.2%			20.4%		
Age	-0.059	0.943	0.452	-0.052	0.949	0.287
Happy	-0.407	0.665	0.005 ***	-0.013	0.987	0.863
Subhealth	0.211	1.235	0.683	-0.527	0.591	0.096 *
RAsset	1.845	6.325	0.012 **	1.160	3.190	0.022 **
Constant	-0.235	0.790	0.969	0.683	1.980	0.870
Type 2 (%)	85.8%			79.6%		
Age	0.102	1.108	0.006 ***	-0.072	0.930	0.267
Happy	0.297	1.346	0.006 ***	0.049	1.051	0.728
Subhealth	0.135	1.144	0.704	-1.165	0.312	0.025 **
RAsset	-1.007	0.365	0.089 *	-0.392	0.676	0.647
Constant	-18.20	0.000	0.000 ***	-4.212	0.015	0.408
Common Components:						
Parent						
1stchild		1.153	0.681		6.079	0.018 **
1stson		2.555	0.031 **			
1stdtr					0.568	0.439
Educ		0.857	0.250		0.709	0.285
Rural		1.992	0.056 *		1.466	0.458
Wspouse		0.348	0.021 **		0.104	0.001 ***
Physical		0.840	0.406		1.117	0.613
ADL		1.619	0.083 *		0.795	0.514
EC_dementia		0.771	0.838		426.74	0.000 ***
EC_cancer		1.380	0.682		14.194	0.001 ***
Income		1.146	0.319		0.869	0.422
Work		1.643	0.212		0.757	0.598
Employee		0.967	0.951		3.089	0.343
Sp_Work		0.924	0.871		2.514	0.163
Sp_Employee		5.266	0.044 **		0.022	0.018 **
OwnHouse		5.809	0.003 ***		10.194	0.001 ***
FamilyHouse		15.071	0.001 ***		191.94	0.000 ***
HouseInh		0.477	0.030 **		0.447	0.072 *

Note: *, **, and *** indicate statistical significance at the 10%, 5% and 1% levels, respectively.

The probabilities that fathers and mothers belong to Type 1 families are 14.2% and 20.4%, respectively, and 85.8% and 79.6% for Type 2, respectively. The estimated difference between the types indicates considerable heterogeneity in coresidence decisions of Japanese families. Evaluated at mean values for both fathers and mothers, Type 2 has much smaller probability of transition to coresidence than their Type 1 counterparts. Based on this result, we call Type 1 the "traditional" type and Type 2 the "modern" type.[16] Traditional fathers are more likely to begin coresidence when they own real estate assets other than house and when they are unhappy. Modern fathers tend to begin coresidence when they are older, have no other assets, and are happy. Like traditional fathers, traditional mothers with real estate assets are more likely to begin coresidence. The effect of real estate assets is insignificant for modern mothers. Regardless of type, mothers are more likely to begin coresidence when they are healthy.

Summarizing the common component results in Table 7, an elderly father is more likely to begin coresidence when he is the eldest son, lives in a rural area, lives either without a spouse or with a spouse who is employed, has limitations in ADL, and lives in a self-owned or family-owned house. Whether he has an older sister does not affect the eldest-son effect. Overall, the health variables have weak or no effects. An elderly mother is more likely to begin coresidence when she is the first-born child, lives without a spouse, has developed dementia or cancer, is

[16] This is because the coresidence rate is declining rapidly in Japan. In 1986, among households with elderly individuals, 31% consist of only one elderly individual or of only an elderly couple. This number steadily increased to 52% in 2007 (Ministry of Health, Labour and Welfare, 2008).

employed, does not live with an employed spouse, and lives in a self-owned or family-owned house. There is no "eldest-daughter" effect for mothers. For both fathers and mothers, living in a house that is owned rather than rented increases the possibility of transition considerably. Moreover, this effect is larger when living in a family-owned house. The majority of these cases (60%) occur when the house is owned by a child. Finally, these house effects are smaller if an owned house is inherited from the parents.

Table 8: The Effect of Child Variables

Dependent Variable:	Two-Component Mixture			
Transition to	[3] Fathers		[4] Mothers	
coresidence	Odds ratio	p-value	Odds ratio	p-value
Common Components: Children				
C_1child	0.495	0.285	0.418	0.258
C_1childf	0.544	0.511	0.226	0.129
C_NSon	0.996	0.988	0.494	0.038 **
C_NDtr	1.098	0.734	1.122	0.753
C_Educ	1.422	0.331	0.927	0.905
C_UnmarSon	2.738	0.007 ***	3.647	0.014 **
C_UnmarDtr	3.848	0.002 ***	3.753	0.017 **
C_Near	4.148	0.000 ***	4.120	0.002 ***
C_NGchild	0.748	0.001 ***	0.802	0.050 **
C_NGchildS	1.355	0.031 **	1.833	0.010 ***
C_Birth	2.577	0.027 **	0.674	0.623
C_MoneyFrom	0.812	0.698	0.686	0.500
C_MoneyTo	1.693	0.243	0.972	0.960

Note: *, **, and *** indicate statistical significance at the 10%, 5% and 1% levels, respectively.

Table 8 reports the effect of child characteristics. Overall, the number and composition of sons and daughters have weak effects. For both fathers and mothers, the presence of an unmarried child and the presence of a child living in the same town have positive and significant effects. The effect of grandchildren depends on age; additional school-age grandchildren lower the transition probability for fathers and mothers, but additional preschool-age grandchildren increase the probability of transition for mothers and the birth of a grandchild increases the transition probability of fathers. Money transfers between parents and children show no significant impact on transition.

Table 9: The Effect of Value and Care Experience Variables

Dependent Var:	Two-Component Mixture			
Transition to	[3] Fathers		[4] Mothers	
Coresidence	Odds ratio	p-value	Odds ratio	p-value
Common Components: Values				
BqExp_1stson	1.525	0.222	0.745	0.549
BqExp_all	0.700	0.469	0.876	0.835
BqExp_carer	2.777	0.065 *	1.462	0.627
BqIntentSelf	1.074	0.849	0.736	0.517
BqIntentPrimo	1.916	0.232	0.995	0.995
BqIntentExc	1.941	0.192	0.581	0.450
BqIntentNo	1.907	0.263	2.611	0.185
BqIntentOth	0.419	0.124	3.141	0.043 **
ViewCare	1.160	0.137	0.883	0.289
ViewExchange	0.946	0.647	1.046	0.774
ViewGender	1.146	0.196	1.477	0.003 ***
PlanDepend	2.920	0.001 ***	0.635	0.259
Common Components: Care Experience				
CareExp	0.757	0.597	3.868	0.052 *
CareExpOwnP	1.967	0.248	0.880	0.807
CareProblem	0.632	0.458	0.154	0.005 ***

Note: *, **, and *** indicate statistical significance at the 10%, 5%, and 1% levels, respectively.

The estimated effects of the parental values and attitudes regarding inheritance and inter-generational transfer are shown in Table 9. The first three dummy variables concern parental bequest *experience* with answers of "other" and "no experience" comprising the reference group. Only one coefficient is statistically significant, but all directions are consistent with the strategic bequest motive. The experience of inheritance to the eldest son increases the transition probability of fathers but reduces the transition probability for mothers. Fathers and mothers who experienced an inheritance shared equally among siblings are less likely to begin coresidence, whereas those with an inheritance experience that was contingent on care provision are more likely to begin coresidence. These results not only support the presence of the strategic bequest motive but also point to significant inertia over generations in inter-generational transfer behavior.

The next five variables concern self-reported bequest intention with the egalitarian answer being the reference group. Again, only one coefficient is significant. Still, the directions of the estimates appear to be largely consistent with theoretical predictions. The positive effect of an intention to bequeath to the eldest son on the transition probability of fathers follows Japanese primogenital customs and the dynasty model. The positive effect of the "exchange" intention for fathers is consistent with the strategic bequest motive. On the other hand, lacking any possessions to bequeath has a positive effect, indicating filial altruism. The "other" answer of mothers is significant and positive. We posit that this answer includes "I follow my husband's will", which typically represents traditional households with a patriarchal family culture. The next three variables concern parental values. A positive view of informal filial care and traditional gender roles marginally increases the transition probability of fathers. The gender view variable is positive and significant for mothers. The expectation of future dependence on a child has a positive and significant effect for fathers, but is negative and insignificant for mothers.

With regard to the care experience variables, experience as a primary caregiver increases the transition probability for mothers. This is consistent with the findings of Jellal and Wolff (2002). We also find that this effect turns negative when elderly mothers had previous difficult experiences with informal care.

5.2. Discussion

5.2.1. Parental Needs

What benefits does coresidence offer to parents? We have found that the transition to coresidence is often associated with a higher transition rate to death (Table 3), negative health shocks, and poorer health status. The survey question for parental reasons for new coresidence reported in Table 1 also tells us that filial care provision is an important factor. Thus, our results strongly indicate that parents perceive informal care as a merit of coresidence with a child. On the other hand, parental needs for economic support are generally insignificant. Although a certain share of parents begin coresidence to receive financial support from children (Table 3), income and money transfer variables are never significant.[17]

[17] Table 3 also suggests that coresidence directly affects the parents' utility (in particular, Reasons 7 and 9). However, our regression model cannot test this possibility because the (non-

5.2.2. The Bequest Motive and the House Effect

Why do children provide informal care for parents? The strategic bequest motive is the classical explanation. Unlike the existing literature on Japan supporting for the hypothesis (Horioka, 2002; Yamada, 2006; Kureishi and Wakabayashi, 2009), we find only weak evidence. The result from the two component model shows that although there is a group of families whose transition probability responds positively to parental real estate assets, this group is in the minority. The majority of families are less likely to begin coresidence than this minority group, but they begin coresidence regardless of parental assets when parental care needs exist, which contradicts the bequest motive. The results of bequest experience and bequest intent variables show some consistency with the bequest motive, but at low significance levels. The parental view on intergenerational exchange has no effect. The inheritance experience variables are also insignificant. Although the signs of these variables are consistent with the bequest motive, it is possible that what appears to be the bequest motive is actually an unobservable family culture that has been transmitted over generations.

The result best supporting the strategic bequest hypothesis is house ownership. We find that living in an owned house has a significant impact on transition probability compared to

altruistic) utility gain of parents cannot be separated from utility gain regarding children's utility (altruistic satisfaction) or from the utility gain attached to following social norms and traditions.

living in a rental property. Furthermore, newly-purchased or newly-built houses have a larger effect than inherited, old houses. All of these findings appear consistent with the bequest motive. Our results, however, show that living in a family-owned house has an even larger effect on transition than does living in a self-owned house. This contradicts the strategic bequest theory because it predicts that parents retain bequeathable assets until the end of their lives. Given the weak evidence of the bequest motive from other variables, this large house effect may capture something other than the bequest motive, such as an explicit contract between parents and children. Our data shows 60% of family-owned houses are owned by a child. In Japan, houses are typically purchased with substantial financial assistance from parents or gifted from parents before they die.[18]

5.2.3. Other Motives for Coresidence

We have found that the number of preschool grandchildren has a positive effect on coresidence, but that the number of older grandchildren has a negative effect. This finding supports another exchange motive – grandparenting.[19] Children begin living with their parents with the expectation of receiving childcare from their elderly parents, providing needed care in exchange. At the same time, this finding rejects the demonstration motive, which suggests that children

[18] This intergenerational transfer through a house is in accordance with Tabuchi (2008).

[19] Another explanation is that the presence of small grandchildren increases parental utility.