

INEQUALITY AND BEQUESTS

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Purpose of This Presentation

To answer the following 3 questions:

- (1) Do people leave bequests (and other intergenerational transfers)?
- (2) If so, why do people leave bequests? Is it for altruistic, selfish, dynastic, or other reasons?
- (3) Does it matter whether and why people leave bequests? What are the policy implications, especially for the intergenerational transmission of wealth disparities?

**PART I:
(TO WHAT EXTENT) DO
PEOPLE LEAVE BEQUESTS?**

A. WEALTH DECOMPOSITION STUDIES

Wealth Decomposition: Methodology

Household wealth arises primarily from:

(1) life-cycle saving (saving out of one's own earnings)

(2) bequests and other intergenerational transfers

Thus, the shares of wealth from these two sources is a good measure of the relative importance of intergenerational transfers.

Wealth Decomposition: Estimates for the U.S. (1)

Kotlikoff and Summers (1981) find in their seminal paper that the share of transfer wealth is 46-81% of total household wealth, but Modigliani (1988) estimates that this share is only 17-20%.

See Kotlikoff, L. J., and L. H. Summers (1981), “The Role of Intergenerational Transfers in Aggregate Capital Accumulation,” *Journal of Political Economy* 89(4): 706–732.

Wealth Decomposition: International Comparison

US: Davies and Shorrocks (1999) conclude that the best estimate of the share of transfer wealth is 35-45%.

Canada: Roughly comparable to the US

France: Somewhat higher than in the US

Japan: Somewhat lower than in the US

Wealth Decomposition: Estimates for Japan

Hayashi (1986): At least 9.6%

Dekle (1989): 3-48.7%

Barthold and Ito (1992): 25-40%

Campbell (1997): At most 23.4-28.1%

Horioka (2009): 15.2-17.9%

Horioka, Charles Yuji (2009), “Do Bequests Increase or Decrease Wealth Inequalities?” *Economics Letters*, vol. 103, issue 1 (April 2009), pp. 23-25. (Analyzes data from a household survey conducted by the Institute for Research on Household Economics.)

Wealth Decomposition: Conclusions

1. The share of transfer wealth is non-negligible in all developed countries (on the order of 35-45% in the US and Canada).
2. It appears to be even higher in France and lower in Japan.
3. Thus, people *do* leave considerable bequests and other intergenerational transfers in all countries, but the prevalence of such transfers varies considerably from country to country.

B. SURVEY DATA ON BEQUEST PLANS

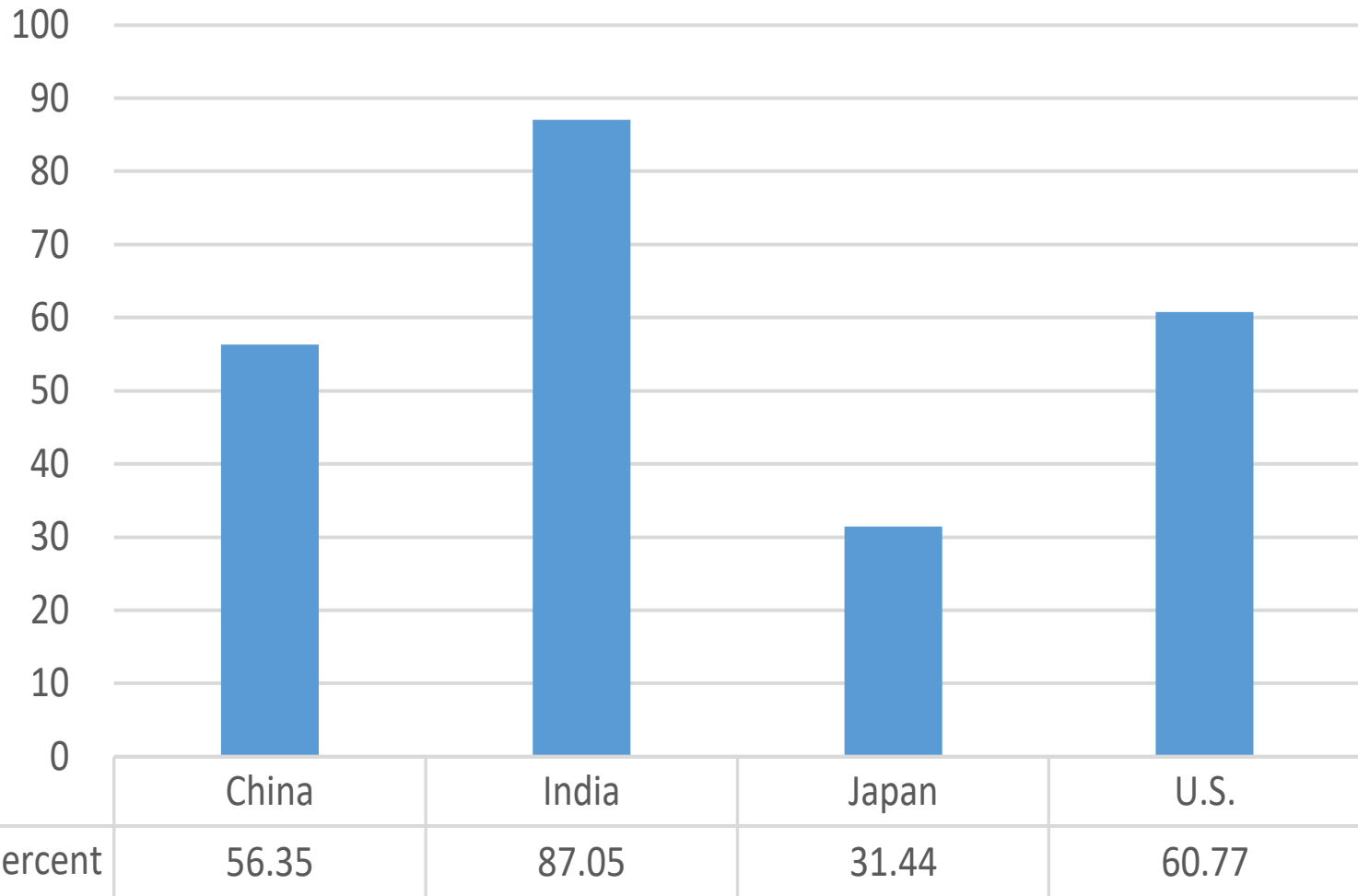
Survey Data on Bequest Plans: Data Source

- The Preference Parameters Study of Osaka University
- A cross-country panel survey of households conducted during the 2003-2013 period in 4 countries: Japan, the US, China, and India.

Survey Data on Bequest Plans: Results

- The results are broadly consistent with the results from wealth decomposition studies.
- The proportion of households planning to leave bequests is high in all countries but varies considerably from country to country, being higher in India and the US than in Japan and China.

An International Comparison of Bequest Plans



**PART II:
WHY DO PEOPLE LEAVE
BEQUESTS (AND OTHER
INTERGENERATIONAL
TRANSFERS)?**

A. THEORETICAL CONSIDERATIONS

Three Theoretical Models

- (1) Selfish life-cycle model
- (2) Altruism model
- (3) Dynasty model

(1) Selfish Life-Cycle Model

Assumes that households are selfish (i.e., they care only about themselves; they derive utility only from their own consumption)

For example, the utility of parents is

$$U_p = f(C_p)$$

where U_p = parents' utility

C_p = parents' consumption

(1) Selfish Life-cycle Model (cont'd)

The simplest version of the selfish life-cycle model assumes that households are selfish and derive utility only from their own consumption.

The model predicts that individuals will not leave bequests to their children under any circumstances.

However, the selfish life-cycle model can be extended in a number of ways to explain the existence of bequests. For example, ...

Longevity Risk and Accidental Bequests

Even a selfish parent may leave a bequest to his/her children if lifespans are uncertain and the market for lifetime annuities is not perfect, meaning that parents cannot fully insure against longevity risk.

Under such circumstances, parents will leave unintended or accidental bequests to their children if they die relatively early even if they are selfish and don't care about their children.

Strategic Bequest (Exchange) Motive

Even a selfish parent may leave a bequest to his/her children if he/she gets something in return (*quid pro quo*) from his/her children, such as:

- (1) Care and attention during old age (the strategic bequest motive or exchange motive of Bernheim, Shleifer, and Summers, 1988)
- (2) An implicit intra-family annuity contract à la Kotlikoff and Spivak (1981)

(2) Altruism Model

Assumes that households are altruistic (i.e., they care not only about themselves but also about others—for example, about their children; they derive utility not only from their own consumption but also from the consumption of their children; they harbor intergenerational altruism toward their children)

$$U_p = f(C_p, C_k)$$

where C_k = children's consumption

(2) Altruism Model (cont'd)

The altruism model assumes that households derives utility not only from their own consumption but also from their children's consumption.

The model predicts that individuals may or may not leave bequests to their children depending on their own endowment, their children's endowments, and their degree of altruism.

(3) Dynasty Model

Assumes that individuals care about the perpetuation of the family line and/or the family business and that they leave bequests to their children in order to induce them to carry on the family line or the family business (Chu, 1991).

Implications of Each Model for Bequest Motives and Bequest Division

Each of these models of household behavior has different implications for bequest motives and bequest division.

(1) The Selfish Life-Cycle Model

Bequest motive: Leave no bequests, leave only unintended or accidental bequests arising from lifespan uncertainty, and/or leave bequests only if one's children provide care, attention, and/or financial support during old age.

Bequest division: Leave more or all of their bequest to the child who provides more care, attention, and/or financial support during old age.

(2) The Altruism Model

Bequest motive: Leave a bequest to one's children even if they do not provide anything in return.

Bequest division: Leave more or all of their bequest to the child who has greater needs and/or less earnings capacity. Divide their bequest equally if children derive disutility from receiving less than their siblings (“relative deprivation”) (Stark, 1998)

(3) The Dynasty Model

Bequest motive: Leave a bequest to one's children only if they carry on the family line and/or the family business.

Bequest division: Leave more or all of their bequest to the child who carries on the family line and/or the family business.

Summary re Theory

Thus, each theoretical model of household behavior has very difficult implications for bequest motives and bequest division, and thus we can shed light on which theoretical model of household behavior applies in the real world by looking at individuals' bequest motives and bequest division.

B. SURVEY DATA ON BEQUEST MOTIVES AND BEQUEST DIVISION

Evidence from Survey Data

The aforementioned Preference Parameters Study of Osaka University collects detailed data on bequest motives and bequest division and can therefore shed light on why people leave bequests and which model of household behavior applies in the real world.

Evidence from Survey Data (cont'd)

For more details on these data, see Horioka, Charles Yuji, “Are Americans and Indians More Altruistic than the Japanese and Chinese? Evidence from a New International Survey of Bequest Plans,” *Review of Economics of the Household*, vol. 12, no. 3 (September 2014), pp. 411-437.

Question re Bequest Motives

(Altruism Model)

1. I plan to leave an inheritance to my child(ren) no matter what.
2. I do not plan to leave an inheritance to my child(ren) under any circumstances because doing so may reduce their will to work

(Selfish Life-Cycle Model)

3. I plan to leave an inheritance to my child(ren) only if they provide care (including nursing care) during old age
4. I plan to leave an inheritance to my child(ren) only if they provide financial assistance during old age.
5. I do not plan to make special efforts to leave an inheritance to my child(ren) but will leave whatever is left over
6. I do not plan to leave an inheritance to my child(ren) under any circumstances because I want to use my wealth myself

(Dynasty Model)

7. I plan to leave an inheritance to my child(ren) only if they carry on the family business.

(Other)

8. I want to leave an inheritance to my child(ren) but I won't because I don't have the financial capacity to do so

Table 4: An International Comparison of Bequest Motives

The proportion of respondents holding each view (%)	China	India	Japan	U.S.
I plan to leave an inheritance to my child(ren) no matter what	35.25	75.66	32.58	66.41
I do not plan to leave an inheritance to my child(ren) under any circumstances because doing so may reduce their will to work	2.15	0.14	1.41	0.56
Altruism model	37.40	75.80	33.98	66.97
I plan to leave an inheritance to my child(ren) only if they provide care (including nursing care) during old age	10.10	11.49	4.06	2.08
I plan to leave an inheritance to my child(ren) only if they provide financial assistance during old age	5.17	5.95	0.70	0.63
I do not plan to make special efforts to leave an inheritance to my child(ren) but will leave whatever is left over	37.03	3.84	58.58	28.54
I do not plan to leave an inheritance to my child(ren) under any circumstances because I want to use my wealth myself	2.80	0.54	1.62	1.52
Selfish life-cycle model	55.10	21.82	64.96	32.76
I plan to leave an inheritance to my child(ren) only if they carry on the family business	7.50	2.38	1.06	0.26
Dynasty model	7.50	2.38	1.06	0.26
Total	100.00	100.00	100.00	100.00
Number of observations	2071	1866	3696	3034

Summary re Bequest Motives

- Bequest motives are the most altruistic (least selfish) in India, the second most altruistic in the United States, the third most altruistic in China, and the least altruistic (the most selfish) in Japan .
- Dynastic bequest motives are not very important anywhere but most important in China.

Question re Bequest Division

(Altruism Model)

1. I plan to divide my inheritance equally among my children.
2. I plan to leave more or all to the child (children) who has less earning capacity.
3. I plan to leave more or all to the child (children) who has greater needs.
4. I plan to leave more or all to the child (children) whom I like more.

(Selfish Life-Cycle Model)

5. I plan to leave more or all to the child (children) who lives with me.
6. I plan to leave more or all to the child (children) who lives near me.
7. I plan to leave more or all to the child (children) who helps me with housework.
8. I plan to leave more or all to the child (children) who provides nursing care.
9. I plan to leave more or all to the child (children) who provides financial assistance.

(Dynasty Model)

10. I plan to leave more or all to the child (children) who carries on the family business.
11. I plan to leave more or all to my eldest son or daughter even if he/she does not live with me, does not live near me, does not help me with housework, does not provide nursing care, does not provide financial assistance, and does not carry on the family business.

Table 5: An International Comparison of Bequest Division

The proportion of respondents holding each view (%)	China	India	Japan	U.S.
I plan to divide my inheritance equally among my children.	70.28	84.17	72.67	92.55
I plan to leave more or all to the child (ren) who has less earning capacity.	6.42	0.04	4.39	1.38
I plan to leave more or all to the child (ren) who has greater needs.	1.95	0.13	3.90	3.06
I plan to leave more or all to the child (ren) whom I like more.	0.90	0.00	0.75	1.43
Altruism model	78.79	84.35	80.12	97.58
I plan to leave more or all to the child (ren) who lives with me.	4.11	6.99	14.38	0.94
I plan to leave more or all to the child (ren) who lives near me.	1.84	4.63	4.07	0.74
I plan to leave more or all to the child (ren) who helps me with housework.	2.09	1.96	4.49	0.69
I plan to leave more or all to the child (ren) who provides nursing care.	11.60	5.63	12.82	0.54
I plan to leave more or all to the child (ren) who provides financial assistance.	2.56	1.25	4.85	0.59
Selfish life-cycle model	19.28	15.63	20.46	2.52
I plan to leave more or all to the child (ren) who carries on the family business.	4.25	0.41	5.04	0.10
I plan to leave more or all to my eldest son or daughter even if he/she does not live with me, does not live near me, does not help me with housework, does not provide nursing care, does not provide financial assistance, and does not carry on the family business.	3.82	0.07	2.83	0.74
Dynasty model	7.85	0.48	7.51	0.84
Total	105.92	100.46	108.08	100.94
Number of observations	733	1780	3118	2457

Summary re Bequest Division

- Bequest division is the most altruistic (least selfish) in the United States, the second most altruistic in India, the third most altruistic in China, and the least altruistic (most selfish) in Japan.
- Dynastic bequest division is not very important anywhere but most important in China and Japan.

Overall Summary of Survey Data

- There is considerable variation among countries in bequest motives and bequest division.
- The bequest behavior of Americans and Indians is far more altruistic (far less selfish) than that of the Japanese and Chinese.
- Dynastic bequest behavior is not of dominant importance in any country but is of some importance in Japan and China.

C. ECONOMETRIC STUDIES OF BEQUEST MOTIVES

1. Tests of the Altruistic Bequest Motive

- If parents are altruistic, bequests should be compensatory, being allocated among one's children so as to compensate for earnings differences between parents and children and among one's children.
- Tomes (1981, 1988), Cox (1987), Cox and Rank (1992), Wilhelm (1996).
- The evidence from this type of test is somewhat mixed.

2. Tests of the Strategic Bequest Motive

- Dependent variable: Children's behavior (whether they take care of their parents, live with or near their parents, frequency of phone calls and visits)
- Explanatory variable: Parents' wealth (used as a proxy for parents' planned bequest)

Tests Using US Data

- Bernheim, Shleifer, and Summers (1985):
The frequency of parent-child contact (phone calls, visits) increases with bequeathable wealth but not with non-bequeathable wealth → supports SBM
- Perozek (1998): Replicates Bernheim et al. (1985) using a richer data set and finds that bequeathable wealth no longer has a significant impact on attention from children. → rejects SBM

Tests Using US Data (cont'd)

- Altonji, Hayashi, and Kotlikoff (2000): Parental income and wealth do not have a significant impact on time transfers from children to parents. → rejects SBM
- Ioannides and Kan (2000): Two-directional inter vivos transfers of time and money between parents and children are motivated by mutual altruism, not by selfish exchange motives. → rejects SBM

Summary re US and France

- LaFerrere and Wolff (2006) conduct a comprehensive survey of the literature on the US and conclude that about 2/3 of the 20 studies they survey support the altruism model and reject the selfish exchange model.
- However, they find that the majority of the studies for France support the selfish exchange model or reject the altruism model.

Tests Using Data for Japan

- Ohtake and Horioka (1994): The amount of financial assistance from children to parents and the probability of co-residence increase with parents' asset holdings.
→ supports SBM
- Horioka, et al. (2002): Co-residence rates are higher for parents intending to leave a bequest. → supports SBM

Tests Using Data for Japan (cont'd)

- Yamada, Ken (2006), “Intra-family Transfers in Japan: Intergenerational Co-Residence, Distance, and Contact,” *Applied Economics*, vol. 38, no. 16, pp. 1839-1861.
- The probability of co-residence and the frequency of contact are higher and distance between residences is lower for children expecting to receive a bequest. → supports SBM

Tests Using Data for Japan (cont'd)

- Horioka, Charles Yuji; Gahramanov, Emin; Hayat, Aziz; and Tang, Xueli (2018), “Why Do Children Take Care of Their Elderly Parents? Are the Japanese Any Different?” *International Economic Review*, vol. 59, no. 1 (Feb. 2018), pp. 113-136.
- My co-authors and I conduct a theoretical and empirical analysis of why children live with (or near) their parents and provide care and assistance to them using micro data on Japan from the Osaka University survey.

Tests Using Data for Japan (cont'd)

- We find that the Japanese are more likely to live with (or near) their elderly parents and/or to provide care and attention to them if they expect to receive a bequest from them → supports SBM
- Thus, virtually all of the studies for Japan find strong support for the strategic bequest motive.

Conclusion from Econometric Studies

Econometric studies confirm our findings from survey data that:

1. Bequests are motivated by altruistic as well as selfish considerations.
2. Bequest motives differ considerably from country to country.
3. Bequests are motivated by selfish considerations (i.e., the strategic bequest motive or exchange motive) to a much greater extent in France and Japan than in the US.

**PART III:
DOES IT MATTER
WHETHER (AND WHY)
PEOPLE LEAVE
BEQUESTS? (POLICY
IMPLICATIONS)**

A. IMPLICATIONS FOR THE INTERGENERATIONAL TRANSMISSION OF WEALTH DISPARITIES

Implications for Wealth Disparities

The implications of bequests and other intergenerational transfers for the persistence of wealth disparities both within and among households will depend on a number of factors including whether or not bequests are unrequited (i.e., whether or not there is a *quid pro quo*).

Implications for Wealth Disparities (cont'd)

If bequests and other intergenerational transfers are selfishly motivated and are offset by transfers in the opposite direction such as care, attention, and financial support from children to their elderly parents, net transfers from parents to children will be zero and will not cause wealth disparities to be passed on from generation to generation.

Implications for Wealth Disparities (cont'd)

By contrast, if bequests and other intergenerational transfers are altruistically motivated and there is no *quid pro quo* (transfers in the opposite direction from children to parents), they are likely to affect the persistence of wealth disparities both within and among households.

In what follows, I will assume that bequests and other intergenerational transfers are unrequited.

Wealth Disparities *within* Households

Bequests and other intergenerational transfers will alleviate wealth disparities *within* households if parents are altruistic and distribute their bequests equally or leave more to the child with less resources of their own (i.e., bequests are compensatory).

Wealth Disparities *within* Households (cont'd)

By contrast, bequests and other inter-generational transfers will exacerbate wealth disparities *within* households if parents are selfish or dynastic and distribute their bequests unequally, leaving more to the eldest son, the child who provides care, attention, and financial support during old age, the child who carries on the family line or the family business, etc.

Wealth Disparities *across* Households

Bequests and other intergenerational transfers may alleviate or exacerbate wealth disparities *across* households.

Most but not all simulation studies such as Davies (1982), Gokhale et al. (2001), and De Nardi (2004) find that intergenerational transfers have a disequalizing impact on the distribution of household wealth.

Wealth Disparities *across* Households (cont'd)

Turning to empirical studies, most such studies such as Wolff (2002), Klevmarcken (2004), Karagiannaki (2015), and Elinder, Erixson, and Waldenstrom (2016) find that bequests increase absolute wealth inequality but reduce relative wealth inequality because even though less wealthy people receive smaller bequests in terms of absolute amounts, they mean relatively more to them.

Wealth Disparities *across* Households: Studies for Japan

Hamaaki, Hori, and Murata (2014) find that those with higher age-adjusted labor earnings and life cycle wealth receive more intergenerational transfers, which suggests that intergenerational transfers have a disequalizing effect on the distribution of household wealth although the correlations are relatively small.

Wealth Disparities *across* Households: Studies for Japan (cont'd)

Niimi, Yoko, and Horioka, Charles Yuji, “The Impact of Intergenerational Transfers on Household Wealth Inequality in Japan and the United States,” *World Economy*, vol. 41, no. 8 (August 2018), pp. 2042-2066.

We find, using micro data from the Osaka University survey for the Japan and the US, that, in both countries,...

Wealth Disparities *across* Households: Studies for Japan (cont'd)

...more affluent individuals are more likely to leave bequests and other intergenerational transfers to their children and to invest in their children's human capital and that those who receive bequests from their parents are more likely to leave bequests to their children. These results also imply that bequests and other intergenerational transfers have a disequalizing effect on the distribution of household wealth.

Conclusion re Wealth Disparities

Most simulation and empirical studies find that bequests and other intergenerational transfers have a disequalizing effect on the distribution of household wealth.

Moreover, Piketty (2014) and others have shown that wealth disparities have been increasing over time in most countries.

Conclusion re Wealth Disparities (cont'd)

Thus, it may be desirable to raise bequest and gift taxes, close bequest tax loopholes, introduce wealth taxes, etc., as a way of alleviating the disequalizing effect of intergenerational transfers on the distribution of household wealth.

B. IMPLICATIONS FOR FISCAL POLICY

Implications for Fiscal Policy

- If households are selfish and don't leave bequests, tax cuts financed by the issuance of government bonds *will* be effective as an economic stimulus because households will not care about the increased tax burden that their children and subsequent generations will have to bear when the government bonds have to be redeemed and will therefore spend much of the tax cut.

Implications for Fiscal Policy (cont'd)

- By contrast, if households are altruistic and leave bequests, Ricardian equivalence *will* hold and the aforementioned tax cut policy will *not* be effective as an economic stimulus because households will save the entire tax cut so that they can increase their bequest to their children to compensate them for the increased tax burden they will have to bear when the government bonds have to be redeemed.

Implications for Fiscal Policy (cont'd)

- Thus, our finding that Americans and Indians are altruistic implies that Ricardian equivalence *does* hold in these countries and that tax cuts financed by the issuance of government bonds will *not* be effective as an economic stimulus in these countries.

Implications for Income Redistribution Programs for the Elderly

- If households are selfish, income redistribution programs for the elderly will benefit them, but....
- If households are altruistic, such programs will not benefit them because they will offset public redistributions from their children to them with private redistributions in the opposite direction.

CONCLUSION

(1) Do People Leave Bequests?

1. Yes, people leave substantial bequests and other intergenerational transfers to their children in all countries but...
2. The quantitative importance of bequests and other intergenerational transfers differ considerably from country to country.

(2) Why Do People Leave Bequests?

1. The reasons why people leave bequests and other intergenerational transfers to their children are heterogeneous, ranging from altruistic motives, selfish motives (e.g., the strategic bequest or exchange motive), dynastic motives, social norms, warm glow motives, etc., but...
2. The first two motives appear to be the most important in most countries and...
3. The reasons why people leave transfers vary considerably from country to country.

(3) Does It Matter?

1. Yes, whether and why people leave bequests and other intergenerational transfers to their children has important implications for:
 - a. The intergenerational transmission of wealth disparities
 - b. The effectiveness of fiscal policy (e.g., tax cuts and income redistribution programs)
2. Thus, studying people's bequest behavior is important not only because it is an interesting intellectual exercise but also because it has wide-ranging policy implications.