An Overview of National Transfer Accounts

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Outline

1. Introductory Remarks
2. National Transfer Flow Account
3. Wealth and Wealth Revaluation Account briefly described

Objectives

- Develop a system of accounts that measures the economic lifecycle and the flow of economic resources across age groups.
- Comprehensive approach that includes all reallocations: investment, credit, and public and familial transfers
- Consistent with and complementary to National Income and Product Accounts

Objectives

- International in scope to allow analysis of institutions and policies in countries at different levels of development and with different cultures.
- Historical depth to improve understanding about evolution of labor, consumption, saving, and public and private support systems
- Projections to support policy analysis

Importance

- Interage flows are large – about half of GDP.
- Profound effect on economic growth and generational equity (demographic dividends)
- Central to human capital investment
- Systems are strained by changes in age structure

Organization

- Lead institutions
  - East-West Center
  - Center for the Economics and Demography of Aging, University of California – Berkeley
- Funding
  - National Institute on Aging
  - United Nations Population Fund
  - IDRC
  - MacArthur Foundation
  - Others
- Website: www.ntaccounts.org

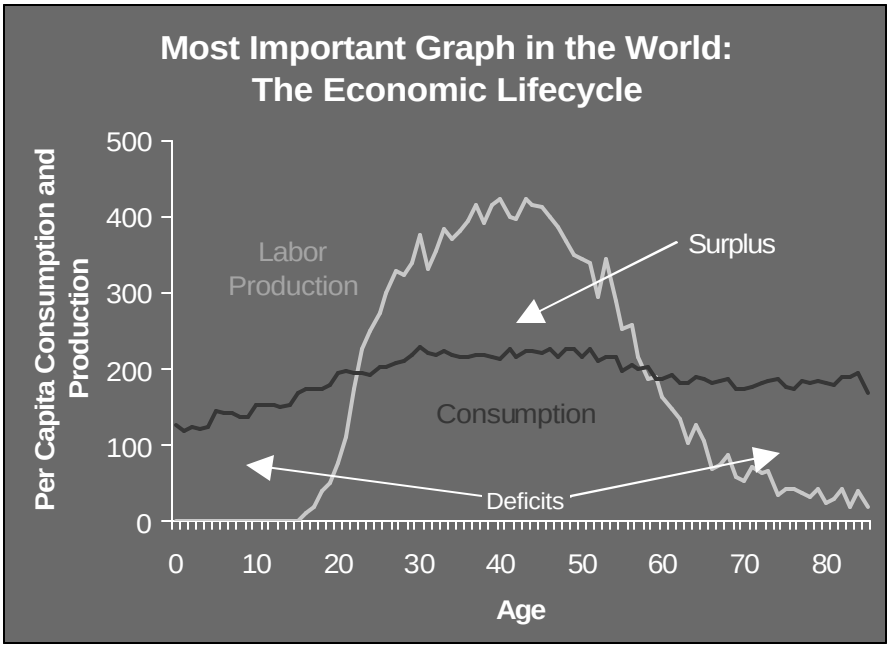
Participating Countries

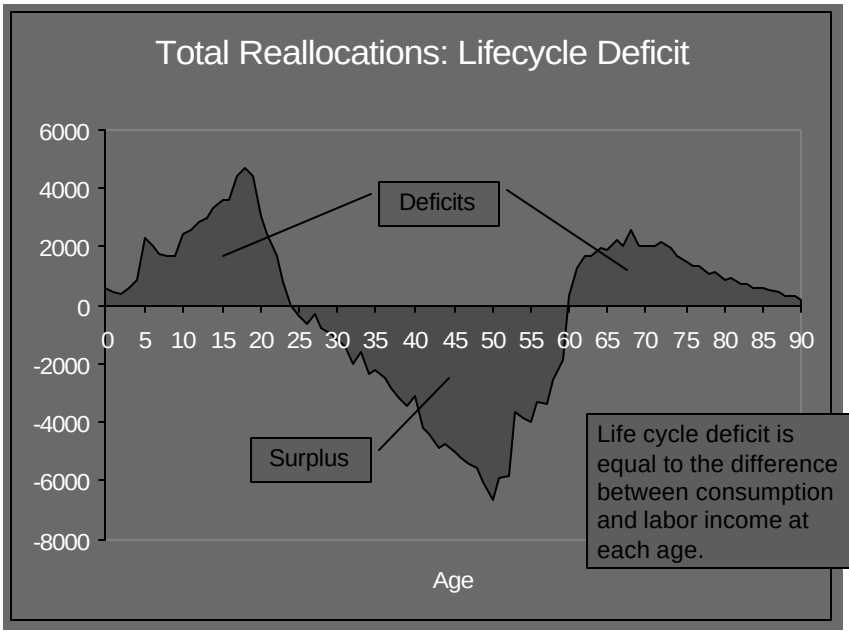
ASIA	EUROPE	LATIN AMERICA
China	Austria	Brazil
India	Finland	Chile
Indonesia	France	Costa Rica
Japan	Hungary	Mexico
Korea, S.	Slovenia	Uruguay
Philippines	Sweden	
Taiwan	NORTH AMERICA	OCEANIA
Thailand	United States	Australia

Conceptual Foundations

- Lee (1994), Samuelson (1958), Diamond (1965), and Willis (1988).
- Mason, Lee, Tung, Lai, Miller (forthcoming); Lee, Lee, Mason (forthcoming).

II. National Transfer Accounts

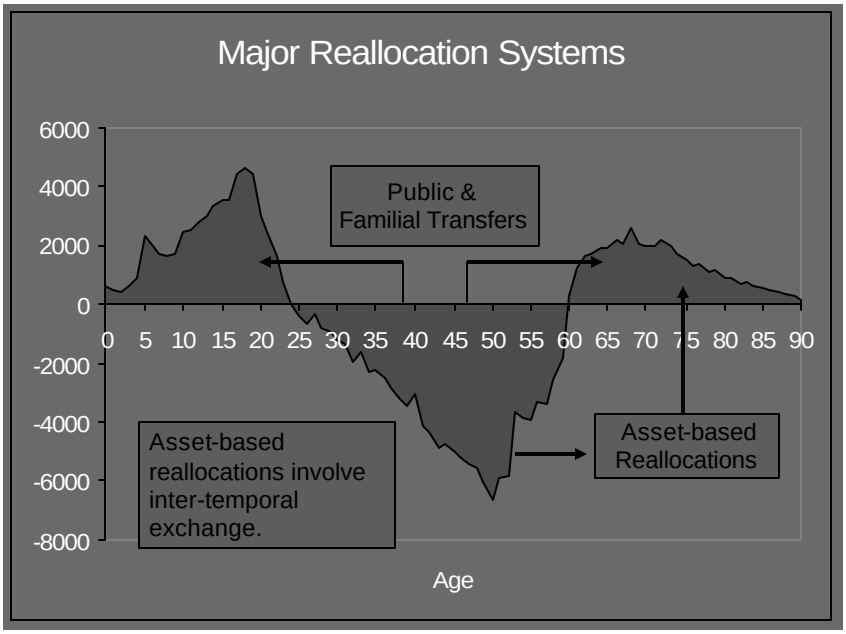




NT Flow Account, Aggregate. Taiwan, *1998 (NT$ billion), nominal*

		Age				
	Total	0-19	20-29	30-49	50-64	65+
Lifecycle Deficit	832	1,704	7	-1,329	25	424
Consumption	6,570	1,775	1,163	2,376	757	499
Private	5,290	1,244	951	2,040	640	414
Public	1,280	531	212	335	117	85
Less: Labor income	5,738	70	1,156	3,704	732	75

Lifecycle deficit is the difference between production and consumption over the lifecycle. All values are totals for the age group. Per capita values are also estimated.



The Flow Account Identity

- Inflows
  - Labor Income
  - Asset Income
  - Transfer Received
- Outflows
  - Consumption
  - Saving
  - Transfers Paid

$$\underbrace{Y^l(a) + Y^a(a) + t^+(a)}_{\text{Inflows}} = \underbrace{C(a) + S(a) + t^-(a)}_{\text{Outflows}}$$

$$\underbrace{C(a) - Y^l(a)}_{\text{LifecycleDeficit}} = \underbrace{\underbrace{Y^a(a) - S(a)}_{\text{Asset-based Reallocations}} + \underbrace{t^+(a) - t^-(a)}_{\text{NetTransfers}}}_{\text{AgeReallocations}}$$

Classification of Flows

- Mediating institution
  - Public flows are mediated by the government
  - Private flows are mediated by households, families, NGOs, private individuals, etc.
- Economic form
  - Asset-based
  - Transfers

Public Sector

- Serves as an intermediary
- Transfer function
  - Takes resources from one age group (taxes)
  - Gives those resources to another age group
    - In-kind transfers, e.g., health, education, national defense, etc.
    - Cash transfers, e.g., public pension programs, unemployment benefits, welfare programs, etc.
- Asset-related function
  - Invests on behalf of the population (age groups)
  - Borrows from investors (age groups) on behalf of taxpayers (age groups)

Private Sector

- Intermediaries: households, families, NGOs, private individuals
- Transfer function: individuals give and received transfers
  - Inter-household transfers
  - Intra-household transfers
  - Capital transfers, e.g., bequest
- Asset related function
  - Accumulate and dis-accumulate assets
    - Capital
    - Public and private debt
  - Earn asset income

Table 1. A Classification of NTA Reallocations.

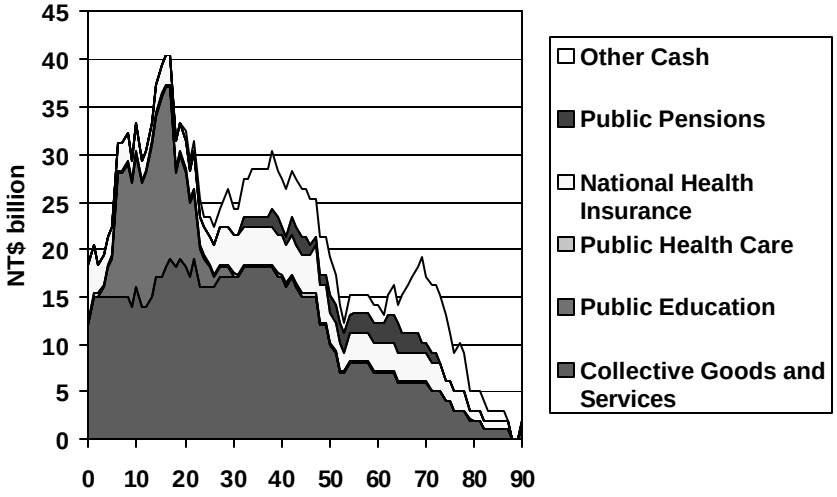
	Asset –based Reallocations		
	Capital	**Credit**	**Transfers**
Public	Public infrastructure	Public debt Student loans Money	Public education Public health care Unfunded pension plans
Private	Housing Consumer durables Factories Farms Inventories	Consumer credit	Familial support of children and parents Bequests Charitable contributions

Source: Adapted from Lee 1994.

Households vs. Individuals

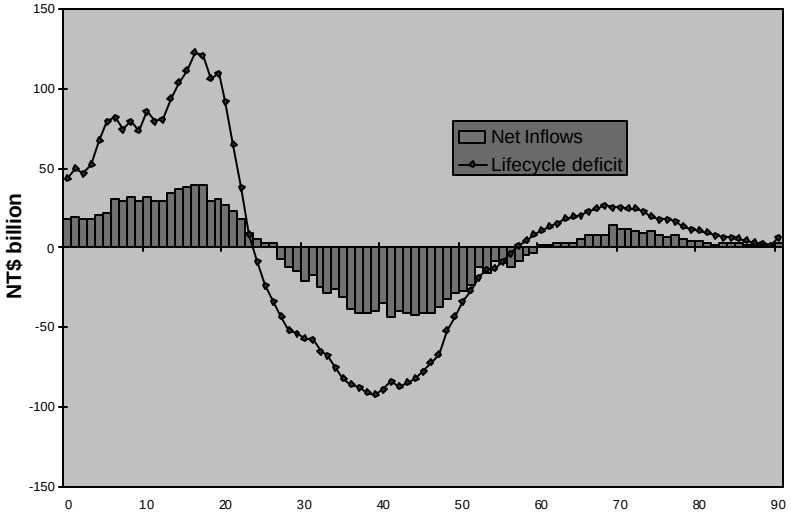
- Consumption, labor income, public transfers, and intra-household private transfers are allocated to individuals;
- Inter-household private transfers are between household heads;
- Assets are held by the household head; saving is by household heads; capital transfers, e.g., bequests, are between household heads.

Public Transfer Inflows, Taiwan, 1998

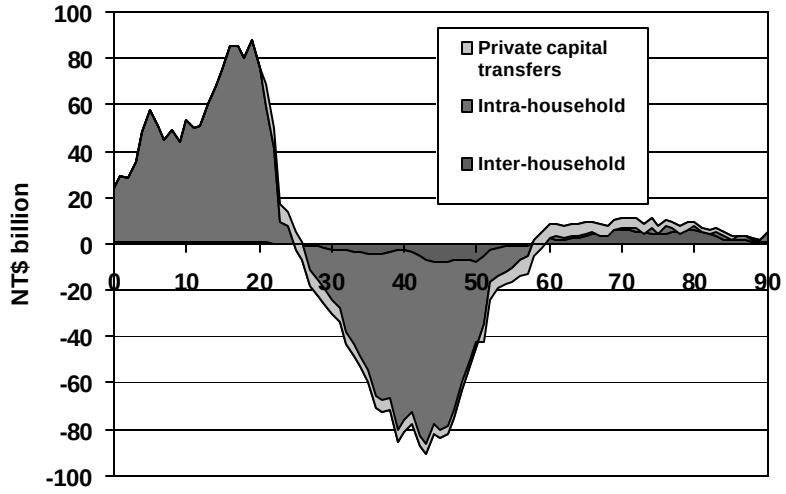


Public Transfer Inflows and Outflows, Taiwan, 1998

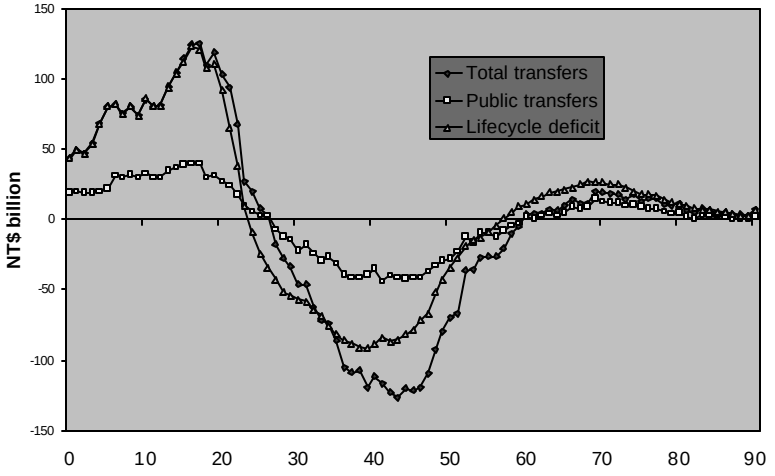
Net Public Transfers and the Lifecycle Deficit, Taiwan 1998



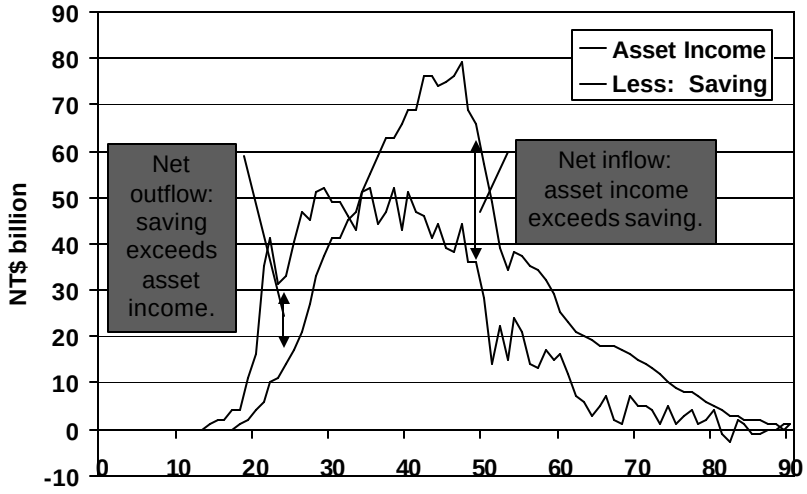
Net Private Transfer, Taiwan, 1998



Transfers and the Lifecycle Deficit



Asset-based Reallocations, Taiwan, 1998



NT Flow Account, Aggregate. Taiwan, *1998 (NT$ billion), nominal*

		Age				
	Total	0-19	20-29	30-49	50-64	65+
Reallocations	832	1,704	7	-1,329	25	424
Asset-based reallocations	861	-5	-101	414	271	282
Income on Assets	2,456	4	175	1,539	528	211
Less: Saving	1,595	9	276	1,126	256	-72
Transfers	-29	1,710	108	-1,742	-246	141
Public	2	611	51	-673	-103	116
Private	-31	1,099	-18	-1,155	-52	95
Bequests	0	0	75	86	-91	-70

Lower panel measures the reallocation systems employed to satisfy the lifecycle deficits and surpluses at each age.

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Asset-based reallocations are equal to asset income (profits, interest income and rent) less saving. Age groups with negative asset reallocations are saving in excess of their asset income.

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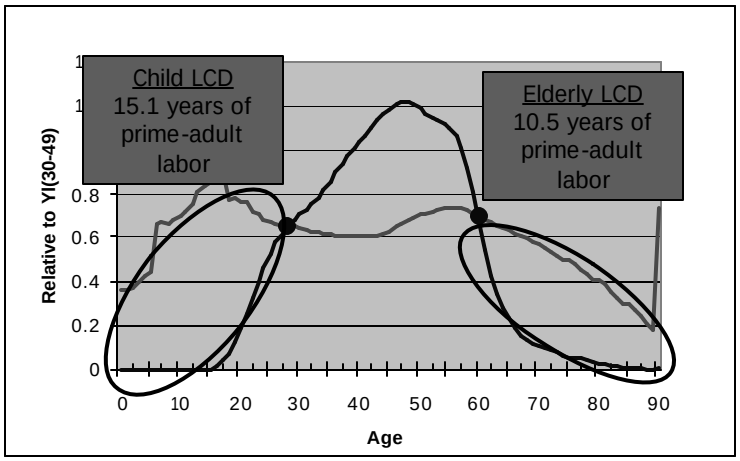
Net transfers consist of public transfers (cash transfers + in-kind transfers less taxes) and private transfers (mostly familial transfers). Positive values imply that inflows exceed outflows.

Issue 1: Lifecycle Deficit, Children

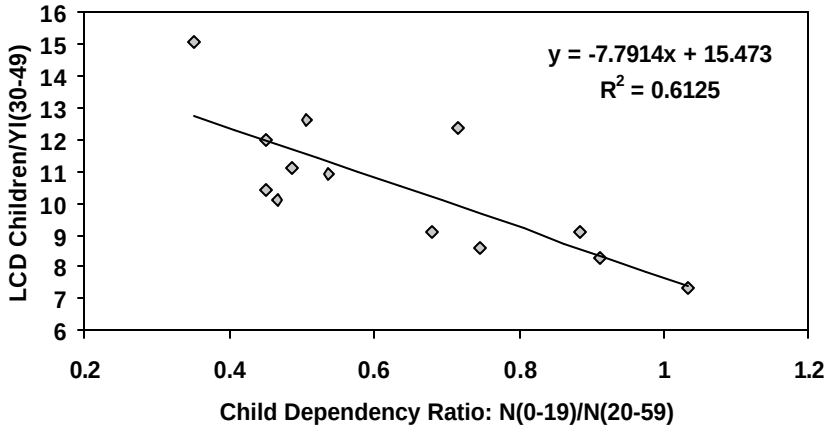
- Does the lifecycle deficit per child increase as the number of children declines?
  - Becker quality-quantity tradeoff
  - If so, the decline in fertility will have a smaller effect on capital accumulation.
  - However, if consumption is higher because parents are spending more on education, then human capital will increase as the number of children declines.

Per Capita Lifecycle Deficit, Japan 2004, Survival Weighted

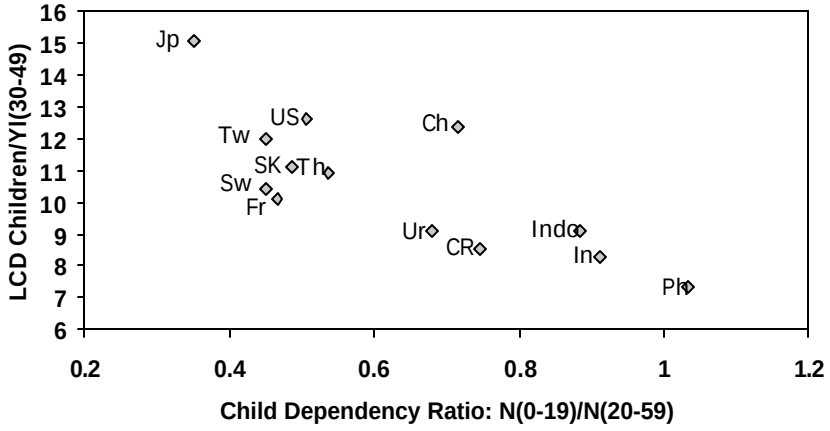


Note. US 1985-89 life table used for all countries.

Tradeoff: Spending per Child and Number of Children, 13 Countries



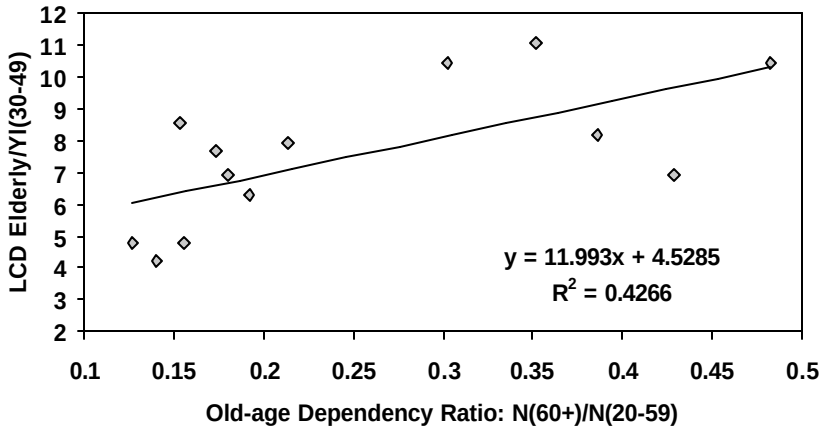
Tradeoff: Spending per Child and Number of Children, 13 Countries



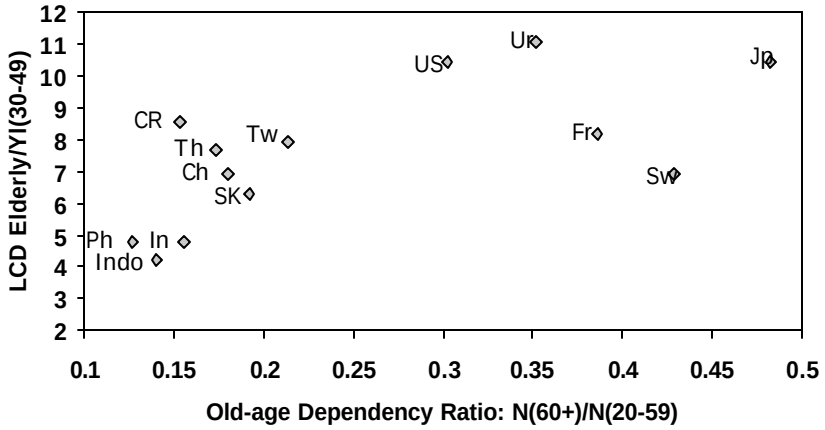
Issue 2: Lifecycle Deficit, Elderly

- Does the lifecycle deficit per elderly decline as the number of elderly rises?
  - Preston and others argue yes – political power.
  - If so, the rise in the old-age population will have a larger effect on capital accumulation.

Tradeoff: Spending per Elderly and Number of Elderly, 13 Countries

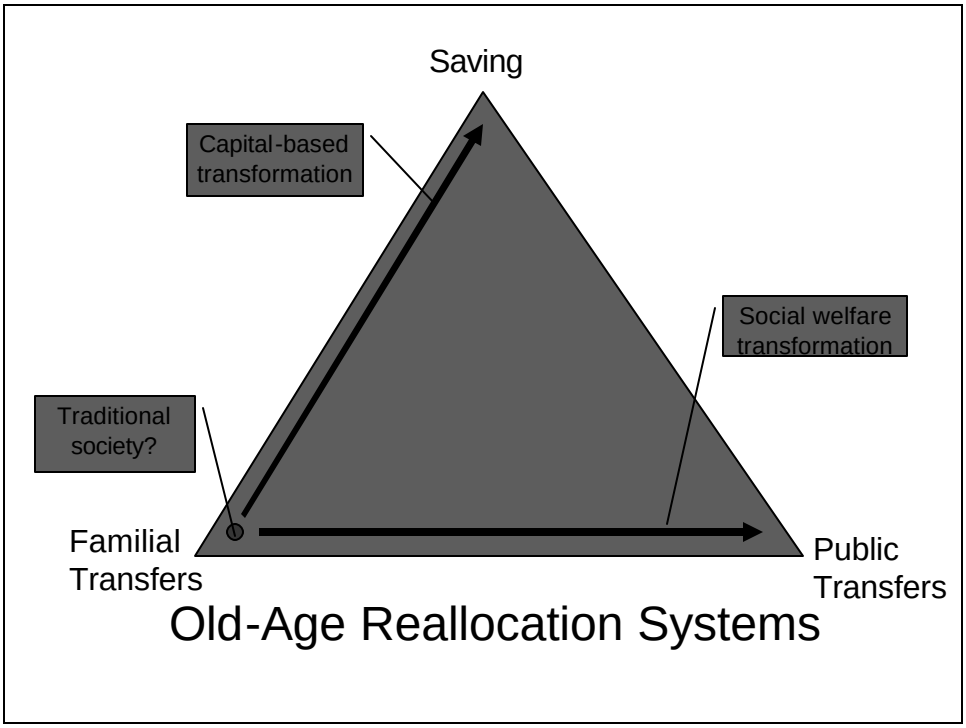


Tradeoff: Spending per Elderly and Number of Elderly, 13 Countries

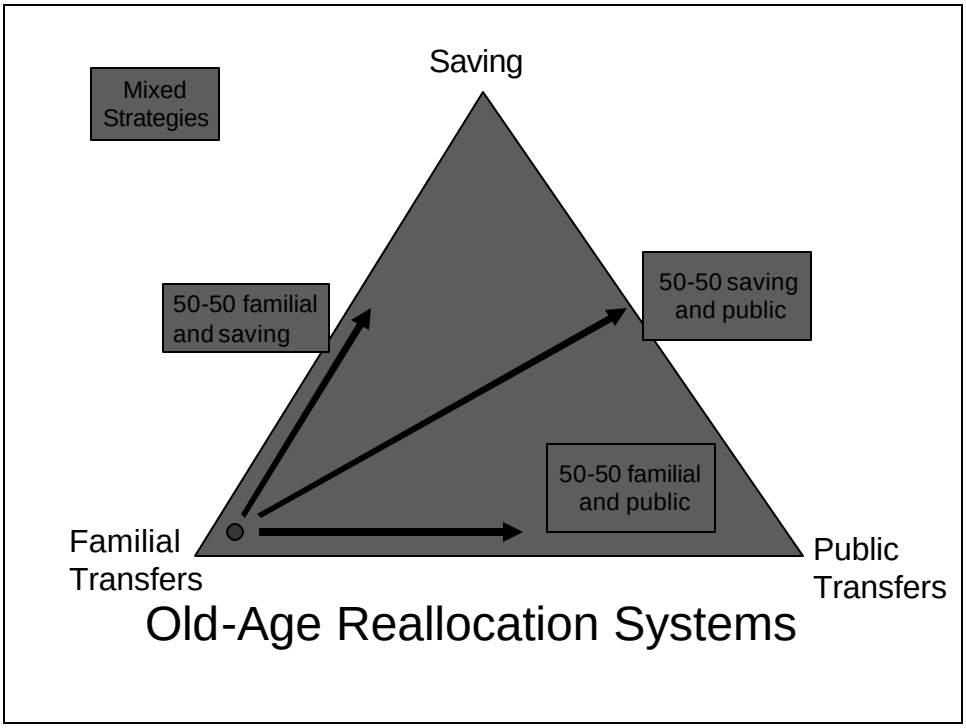


Issue 3. Support Systems for the Elderly.

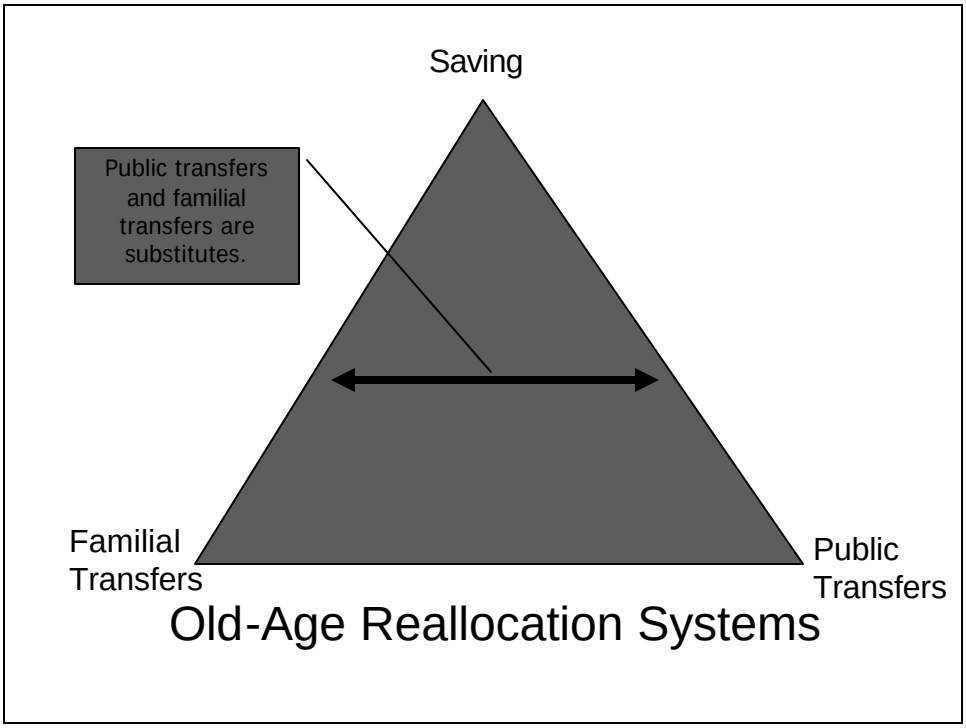
- How do they differ across countries?
- Do Asian countries rely more on familial transfers and Western countries more on public transfers?
- Does the expansion of public systems crowd saving as hypothesized by Feldstein?
- Or familial transfers?



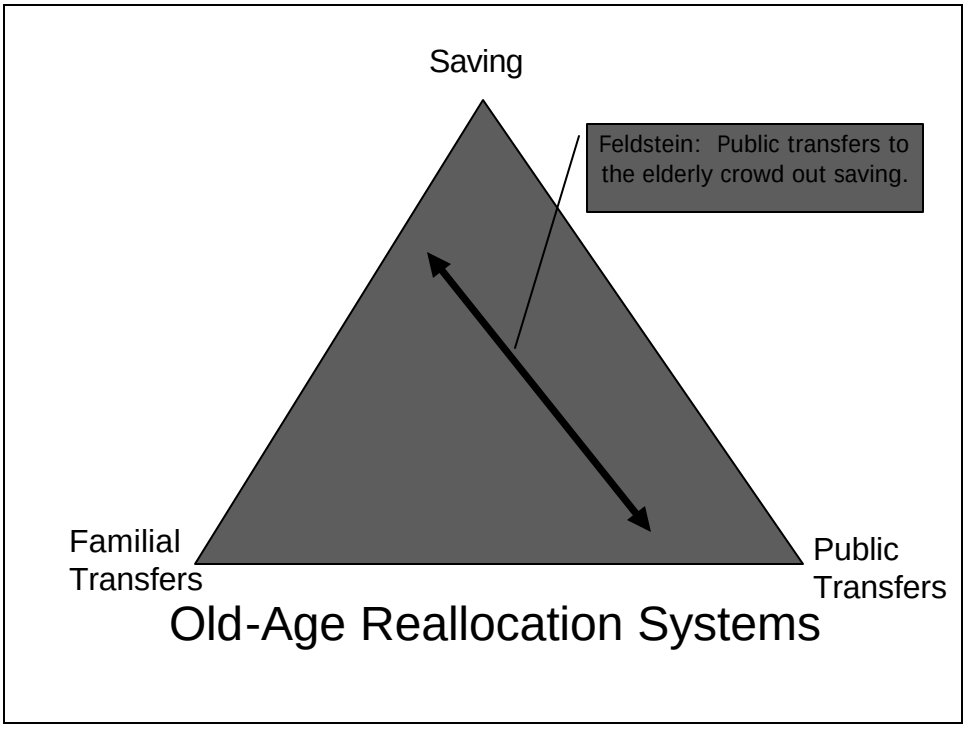
Old-Age Reallocation Systems



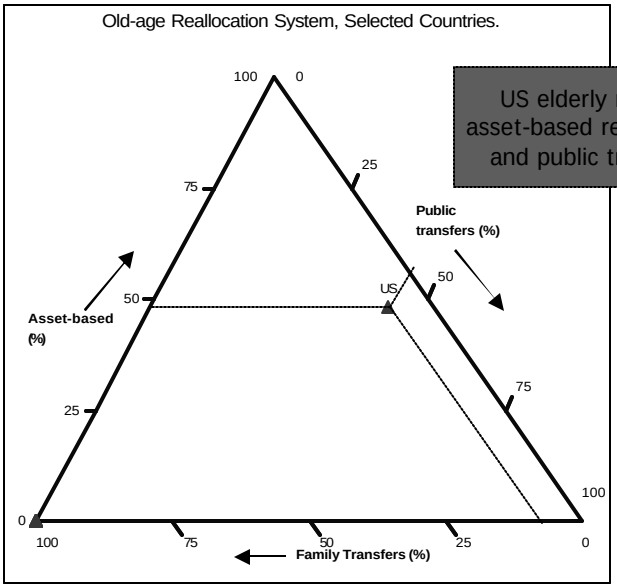
Old-Age Reallocation Systems

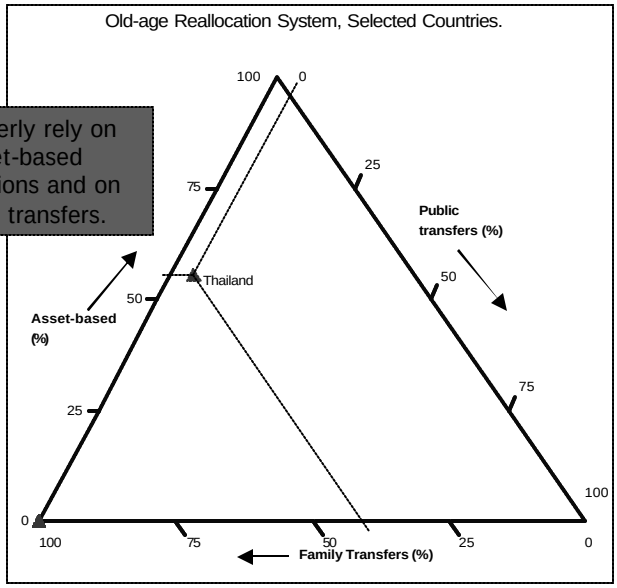


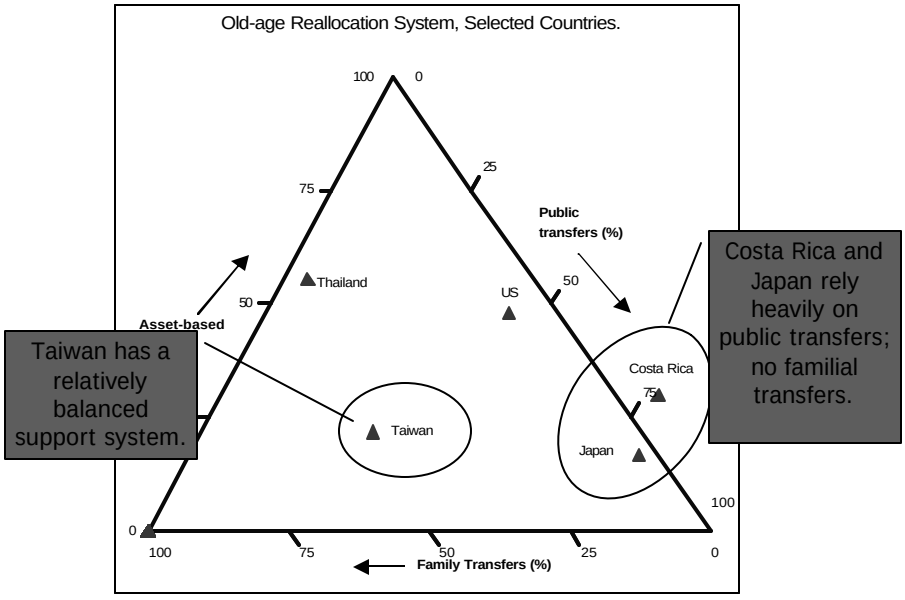
Old-Age Reallocation Systems



Old-Age Reallocation Systems


Old-age Reallocation System, Selected Countries.
US elderly rely on asset-based reallocations and public transfers.
100
0
25
75
Public transfers (%)
50
US
50
Asset-based (%)
75
25
100
0
100
75
50
25
0
Family Transfers (%)


Old-age Reallocation System, Selected Countries.
Thai elderly rely on asset-based reallocations and on familial transfers.
100
0
25
75
Public transfers (%)
Thailand
50
50
Asset-based (%)
75
25
100
0
100
75
50
25
0
Family Transfers (%)



Conclusions

- Decline in fertility may
  - Lead to more consumption by children reducing the effect on saving
  - Lead to more spending on education for children leading to second demographic dividend due to human capital investment.
  - Influence familial support systems in ways that have not yet been explored.

Conclusions

- Aging may lead to
  - Larger per capita lifecycle deficit reinforcing the effects of aging
  - The economic effect will be some unknown combination of the three:
    - Increase saving and economic growth
    - Increase the size of public programs and budget deficits; or
    - Increase the burden on families which support the elderly.

Conclusions

- The support systems for the elderly are varied and do not conform to simple regional classifications.
- The elderly in Costa Rica and Japan are relying on saving and public transfers. Have public programs crowded out familial transfers?
- In Taiwan and Thailand, the familial support system is still important.

The National Transfer Accounts project is a collaborative effort of East-West Center, Honolulu and Center for the Economics and Demography of Aging, University of California - Berkeley

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