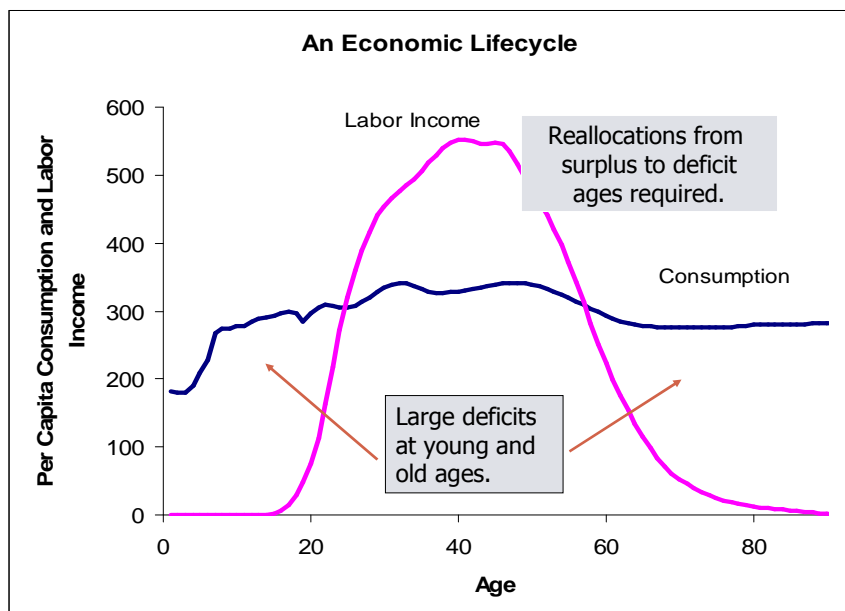


Introduction to National Transfer Accounts

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University of Hawaii at Manoa
East-West Center

Seminar and Training Workshop on NTA
Organized by NUPRI and TDRI
December 16-25, 2010, Thailand

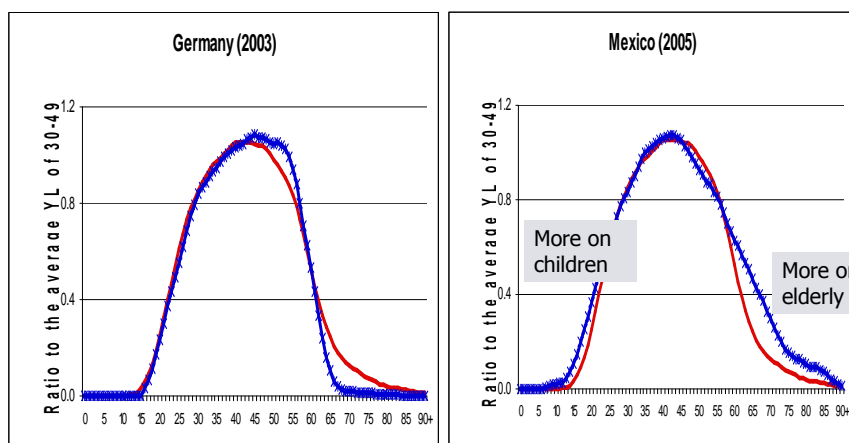


What Determines the Economic Lifecycle?

- Labor income patterns
 - Age at entry – education system
 - Age at retirement – tax and pension policy
 - Age profile of wages – seniority-wage system
 - Female labor force participation – gender bias
- Consumption patterns
 - Private preferences
 - Lifecycle budget constraint
 - Public policy (social welfare, social service)
- Macroeconomic conditions
 - Age structure
 - Non-labor income: asset income, remittances
 - Saving rates

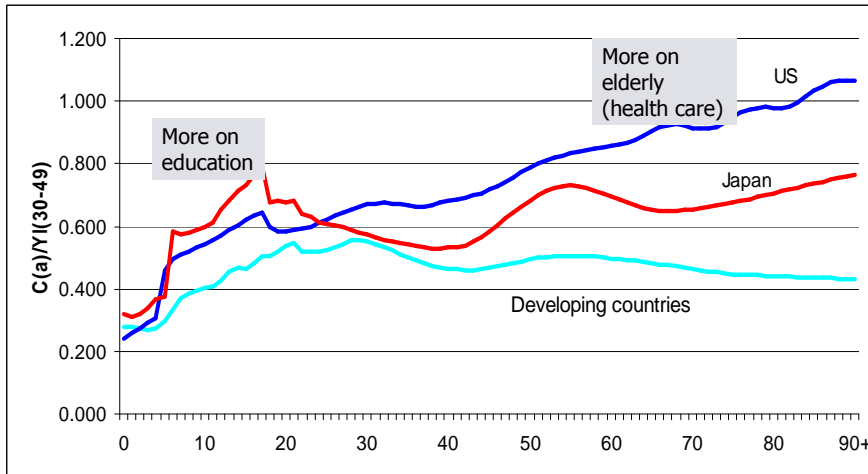
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Labor Income: Industrialized vs. Developing Countries



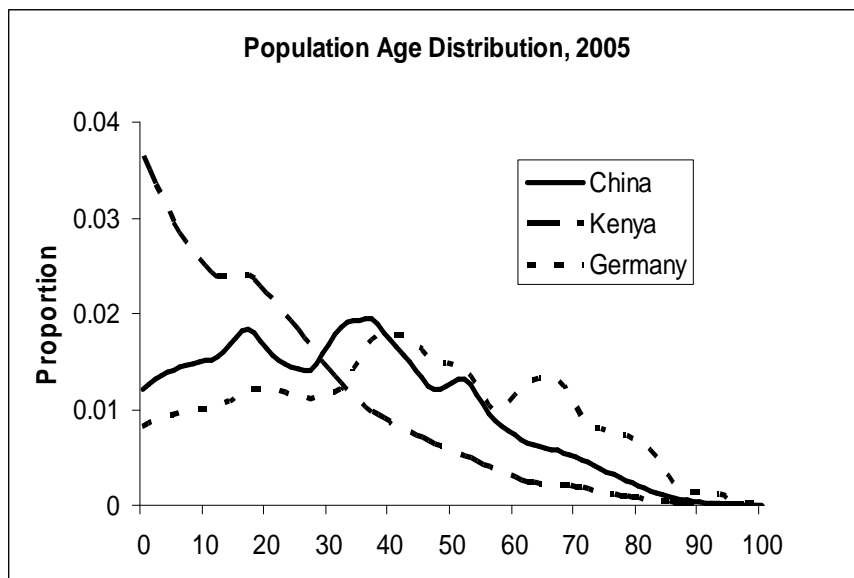
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Consumption: Industrialized vs. Developing Countries.



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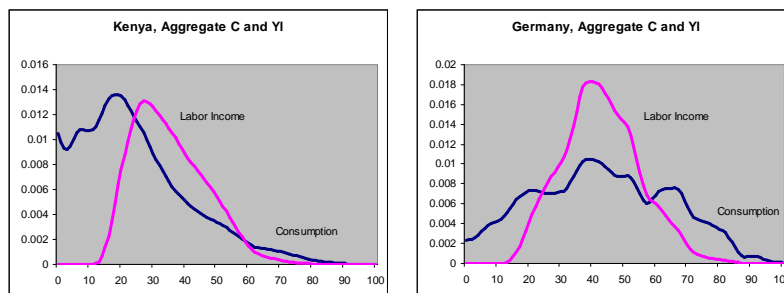
Population Age Distribution, 2005



national transfer accounts

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Aggregate Lifecycle



- Based on per capita profile for developing countries weighted by UN estimates of 2005 age structure.
- Two features are of interest
 - Overall dependency: Total difference between labor income and consumption.
 - Direction of IG flows: Do flows to children or the elderly dominate?

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Questions about the Economic Lifecycle

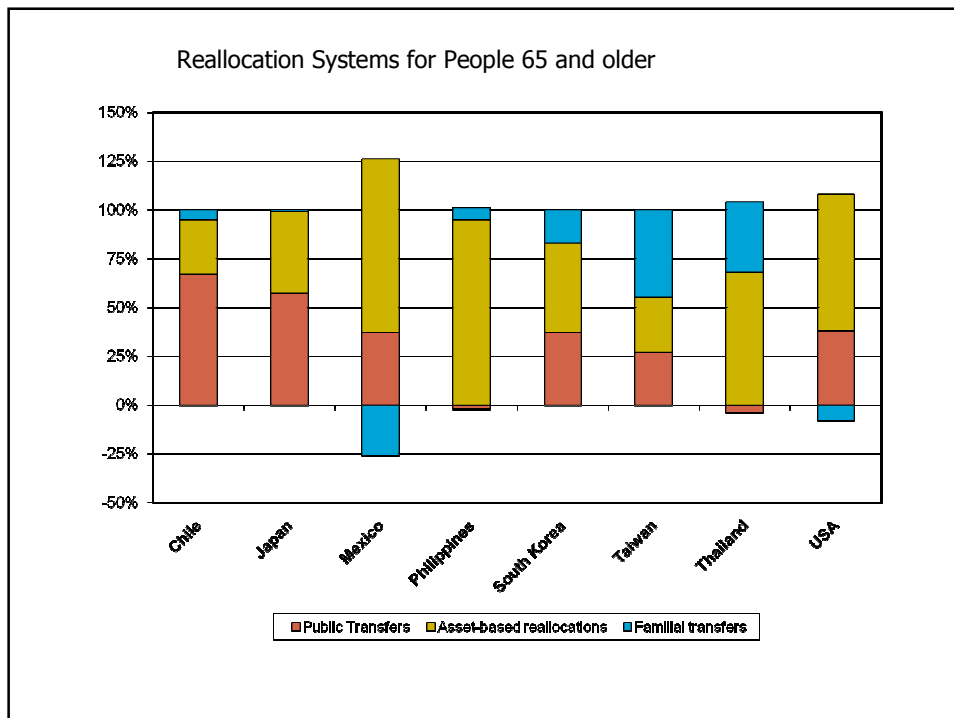
- Will change in age structure lead to demographic dividend?
 - Are the dividends sustainable?
 - What policies are needed?
- Will fertility decline lead to a decline in spending on children and, in particular, their human capital?
 - Quantity-quality tradeoff: Becker
 - Political economy arguments: Preston
- Can the finance of health care and long term care be improved?
- Can policies raise the labor income by the elderly?
 - Age at retirement: Gruber and Wise
 - Productivity of older workers

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Source of Funding the LCD (Reallocation Systems)

- Family, relatives, or friends (Familial Transfers)
- Personal savings (Asset-based reallocations)
 - Interest, dividends, rent from personal assets
 - Home and other consumer durables
 - Dis-saving
- Government (Public Transfers)
 - Social Security System
 - Employment based pensions

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Questions about the Reallocation Systems

- How do reallocation systems vary across countries and over time?
- What is the impact of policies that expand or contract public transfers to the elderly?
 - Crowd out private transfers? If so, does this effect fertility?
 - Crowd out saving and thereby reduce economic growth?
- Can we “stress test” (policy simulation) reallocation systems?

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The NTA Projects...

- Develop a system of economic accounts that can be used to study the macroeconomic implications of aging.
- Measure economic flows across age groups in a systematic and comprehensive way.
- Analyze and explain
 - variation in the economic lifecycle and the reallocation systems,
 - macroeconomic effects of population aging,
 - economic implications of pension, health care, education, child subsidies, and other policy.
- Led by Ron Lee and Andrew Mason.
 - Currently 36 country teams are participating.

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Important Features of the NTA

- Comprehensive approach:
 - All mechanisms for shifting resources from one age group to another are incorporated into the accounts.
 - Both public and private institutions are incorporated. The role of the family is emphasized.
- NTA is consistent with and complementary to National Income and Product Accounts.

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How to Construct NTA? A General Rule

- Labor income from household survey– estimated in the following way
 - Calculate per capita
 - Use population data to multiply by age
- Labor income (NIPA) : 5,581 billions NT\$
- Labor income (Survey): 4,419 billions NT\$
- Coefficient of adjustment 1.26

Policy Goals

- Develop socioeconomic systems that will
 - Provide economic security (material needs)
 - Sustain strong economic growth
 - But they are in conflict each other (no free lunch)
- Goals must be long-term
 - Sustainable systems
 - Involves three competing goals
 - Efficiency
 - Equity (generational)
 - Risk-sharing (generational)

What Policies are required?

- Policies that encourage
 - Saving
 - Investments in health and education to improve productivity
 - Well-functioning financial and labor markets.

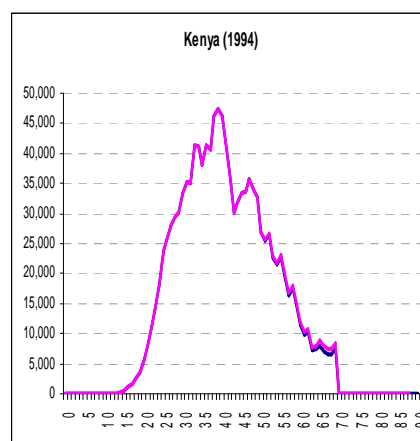
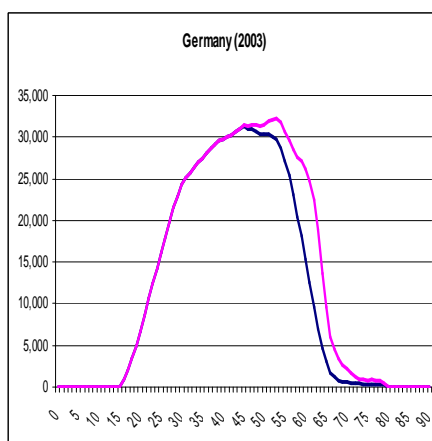
Why do We Need National Transfer Accounts?

- Various social institutions - families, governments, markets – mediate these inter-age flows.
- How these systems function has important implications for
 - Economic development
 - Generational equity
 - Human resource development
 - Poverty reduction
 - And other important macroeconomic goals

national transfer accounts

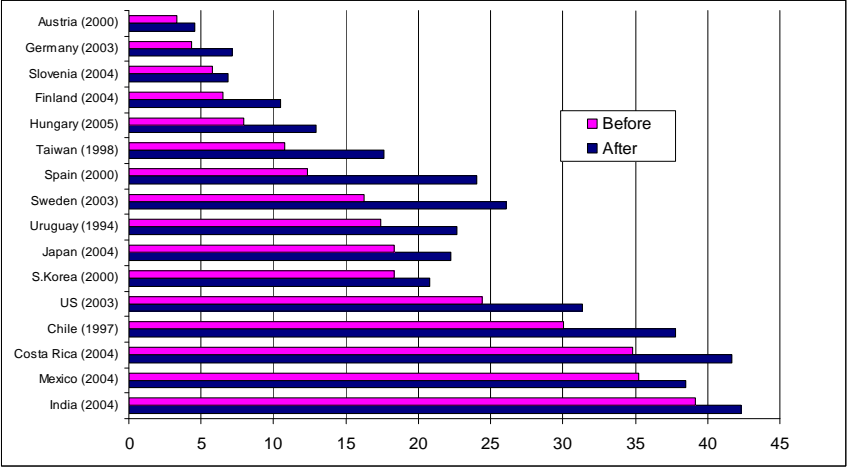
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Good, Bad, and Ugly Policies

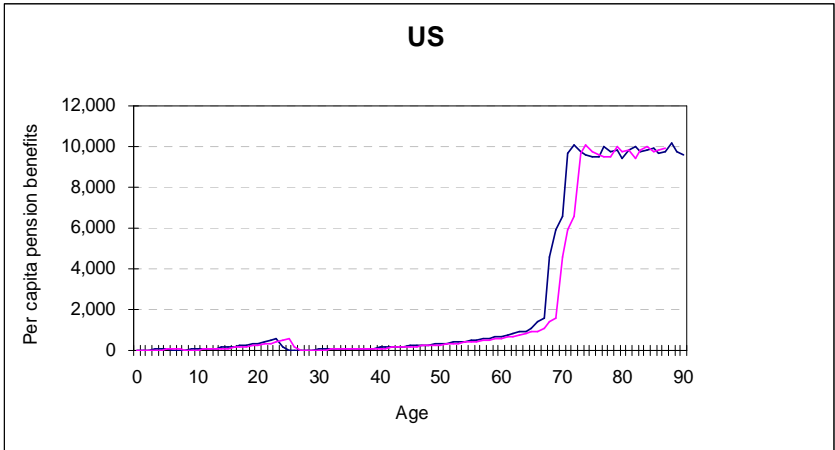


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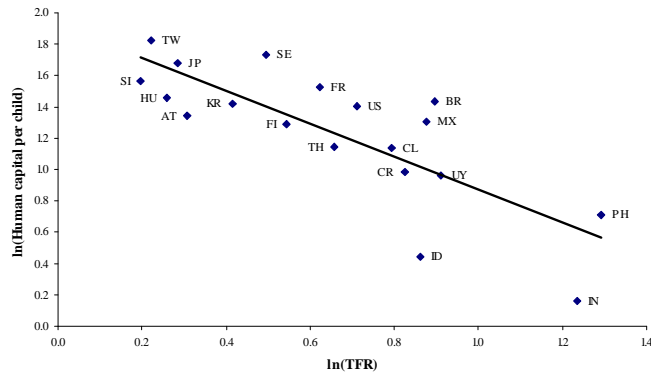
Labor Income to Consumption after Delaying Retirement by 2 Years (for 65-74)



Increase in Normal Retirement Age by 2 Years



Tradeoff between HK and TFR: International Cross-Section



Source: Lee and Mason, 2010, European Journal of Population.

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The Flow Account Identity

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

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

$$\underbrace{C(a) - Y^l(a)}_{\text{Lifecycle Deficit}} = \underbrace{Y^a(a) - S(a)}_{\text{Asset-based Reallocations}} + \underbrace{\tau^+(a) - \tau^-(a)}_{\text{Net Transfers}}$$

Age Reallocations

national transfer accounts

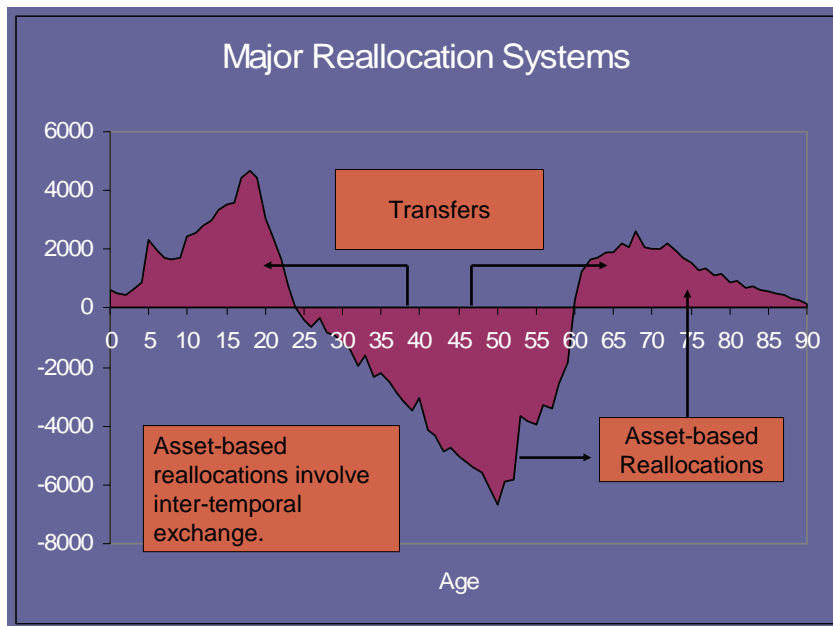
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**NT Flow Account, Aggregate. Taiwan, 1998 (NT\$ billion),
nominal**

	Total	Age				
		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.

Major Reallocation Systems



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

	Total	Age				
		0-19	20-29	30-49	50-64	65+
Reallocations	832	1,704	7	-1,329	25	424
Asset-based reallocations	861	-5	-26	499	181	213
Income on Assets	2,456	4	175	1,539	528	211
Less: Saving	1,595	9	201	1,040	347	-2
Transfers	-29	1,710	33	-1,828	-155	211
Public	2	611	51	-673	-103	116
Private	-31	1,099	-18	-1,155	-52	95

Note. Some columns do not total because of rounding.

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

Asset-based Reallocations

- Estimates do not depend on any particular behavioral theory, but will reflect whatever motives or exogenous shocks are operating
- Possibilities: lifecycle saving, intentional bequests, accidental bequests, dowries and other capital transfers at time of marriage, other capital transfers from elderly to adult children, buffer-stock model, etc.
- Further discussion below.

Transfers

- Transfers are defined as flows that involve no explicit *quid pro quo*.
- Many transfers may involve some implicit obligation, e.g., transfers between children and parents.
- Transfers must balance, i.e., inflows = outflows in total. Account on previous page doesn't include transfers to and from ROW.
- Retirement benefits paid to public workers as part of their employment contract are not transfers.

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

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Conclusion

- Constructing NTA is.....

Conclusion

- Important.

Conclusion

- Very important.

The End