

“The first question each of us must ask isn’t what’s good for me, but what’s good for the country our children inherit”

Barack Obama
Generational Economy Speech
George Mason University
January 8, 2009

because we believe in generations beyond our own
knowing now that so many of us
have grown past what used to be
we can stand here today
filled with all the hope people have

Shane Koyczan

We Are More

Opening Ceremony of the
Vancouver 2010 Winter Olympics

February 12, 2010

Key Findings from Population Aging and the Generational Economy

Andrew Mason
7th Global NTA Meeting
East-West Center
June 11, 2010
Honolulu, HI

Acknowledgments

- ? Draws on Lee and Mason forthcoming Introduction to *Population Aging and the Generational Economy*.
- ? Indebted to researchers from 23 countries who contributed to the volume.
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Global Age Transition

- ? The global age transition is universal:
 1. Increase in share of children
 2. Increase in the working-age share
 3. Increase in the share of elderly
- ? Rapid for many middle- and low-income countries
- ? Countries are at different points of the global age transition.

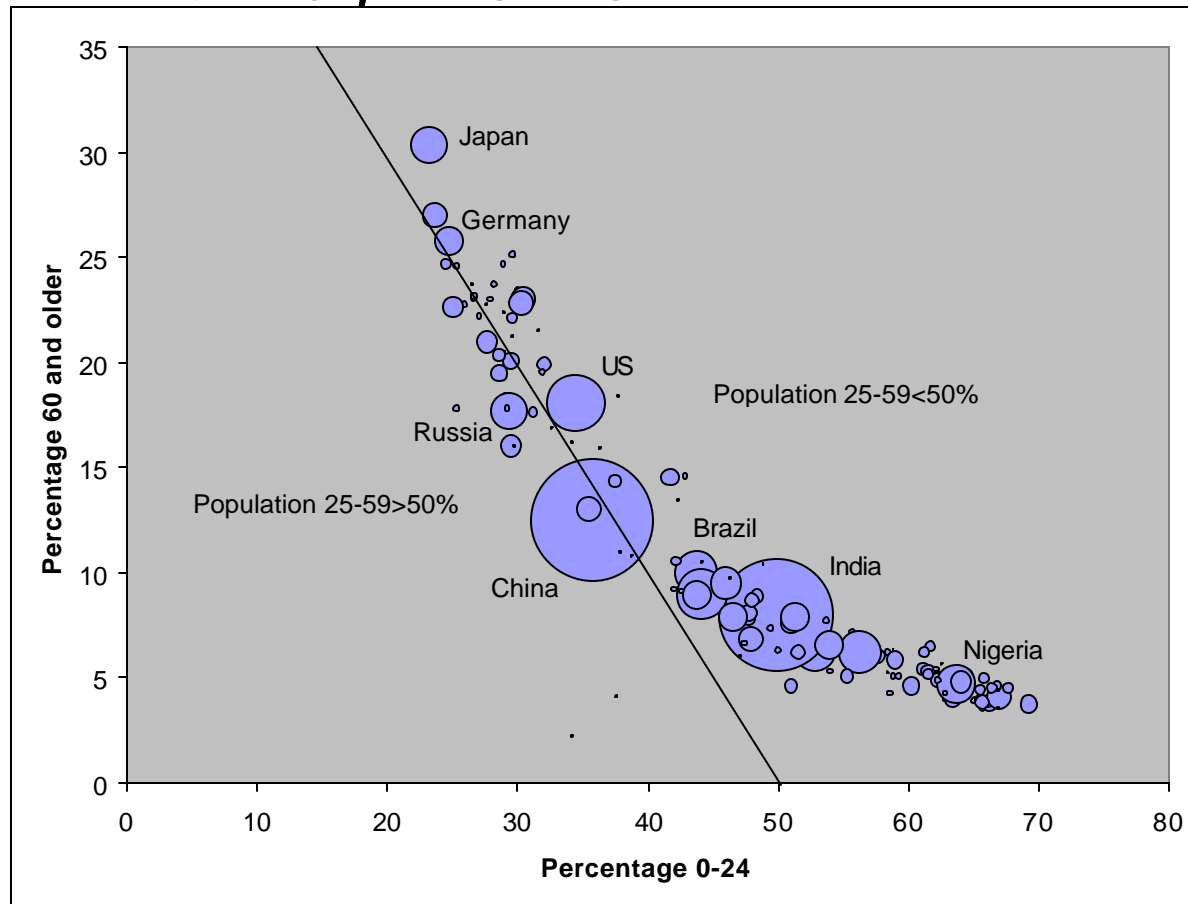
Phases of Global Age Transition

Countries classified by age group (<25, 25-59, or 60+) with the largest absolute increase in population size.



Source: Based on UN Population Prospects 2008.

Population Age Structure, Countries of the World, 2010



Source: UN Population Division.

Age Structure and the Economy

- ? How are the world's economies adjusting?
- ? What are the implications for
 - economic growth,
 - generational equity, and
 - sustainability of long-term commitments?
- ? What policies should be implemented?

The Presentation

- ? Understand how generational economies are adapting to changing age structure.
- ? Based on cross-sectional estimates for 23 NTA countries.
- ? Emphasis is on previously undocumented features of the generational economy.
- ? Emphasis is on description and not causal interpretations.
- ? Relies heavily on chapters from *Population Aging and the Generational Economy*.

Generational Economy Defined

Generational economy n (1) the social institutions and economic mechanisms used by each generation or age group to produce, consume, share, and save resources; (2) the economic flows across generations or age groups that characterize the generational economy; (3) explicit and implicit contracts that govern intergenerational flows.

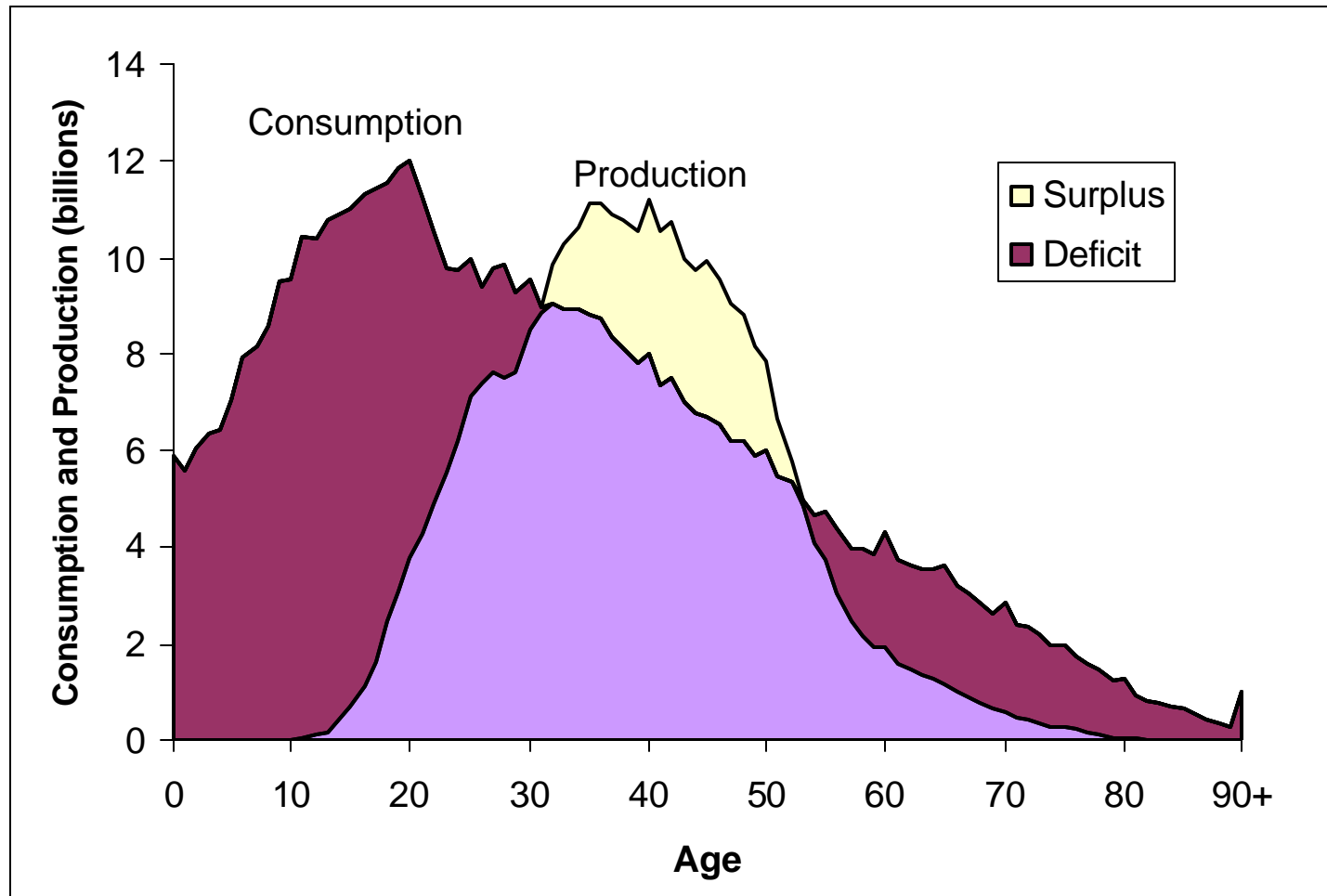
Produce and consume: The Economic Lifecycle

- ? Fundamental feature of generational economy.
- ? Measure by comparing what people at each age consume to what they produce through their labor.
- ? Three distinct periods in all contemporary societies:
 - Beginning: Lifecycle deficit.
 - Middle: lifecycle surplus.
 - End: Lifecycle deficit.
- ? Size and age pattern of deficits and surplus depend on many factors

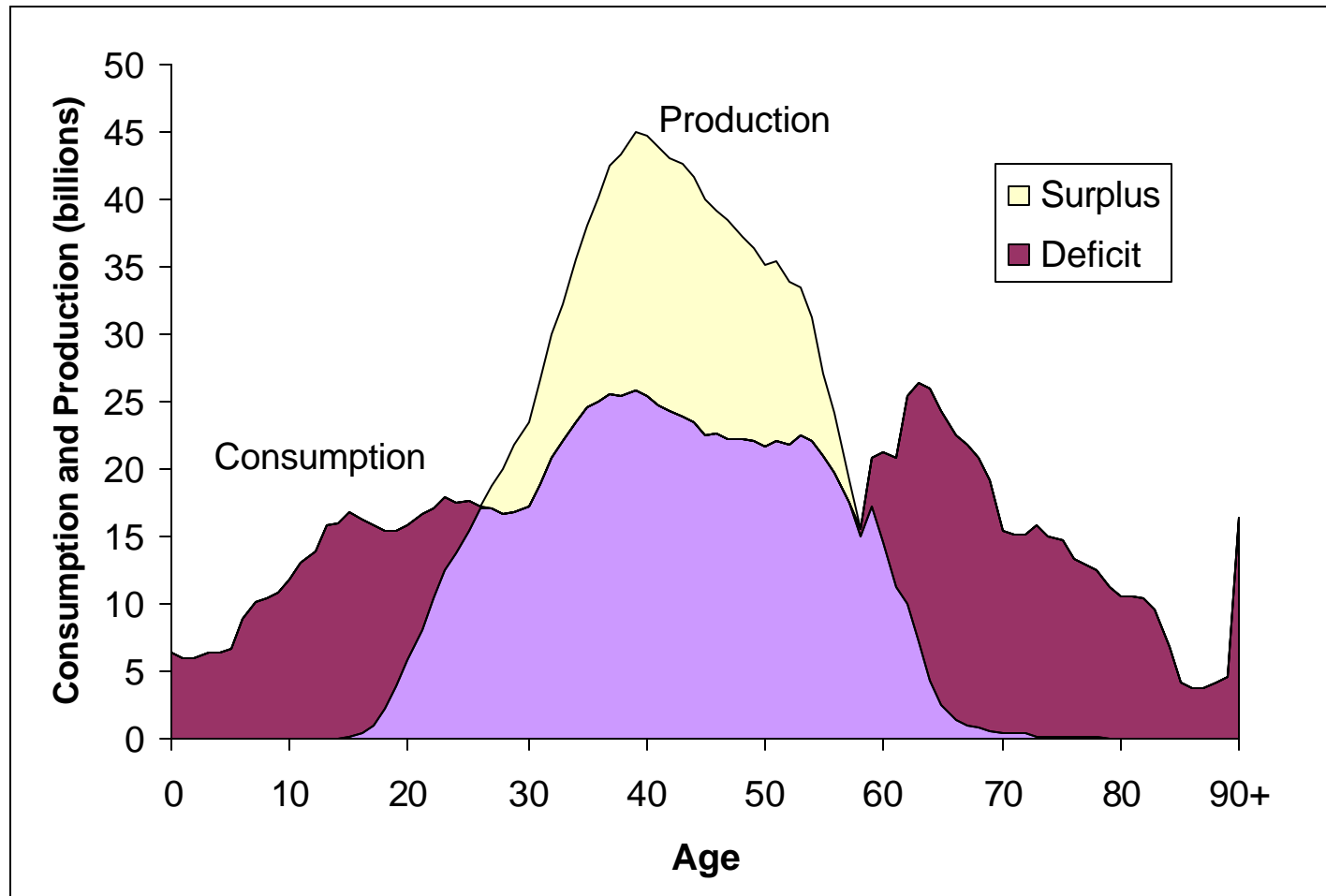
Factors that influence lifecycle

- ? Income and wealth
- ? Labor markets and availability of jobs
- ? Prices, interest rates, financial institutions
- ? Public policies
- ? Behavioral responses
- ? Population age structure.

Aggregate Economic Lifecycle Brazil 1996



Aggregate Economic Lifecycle Germany 2003



Lifecycle deficits and surplus

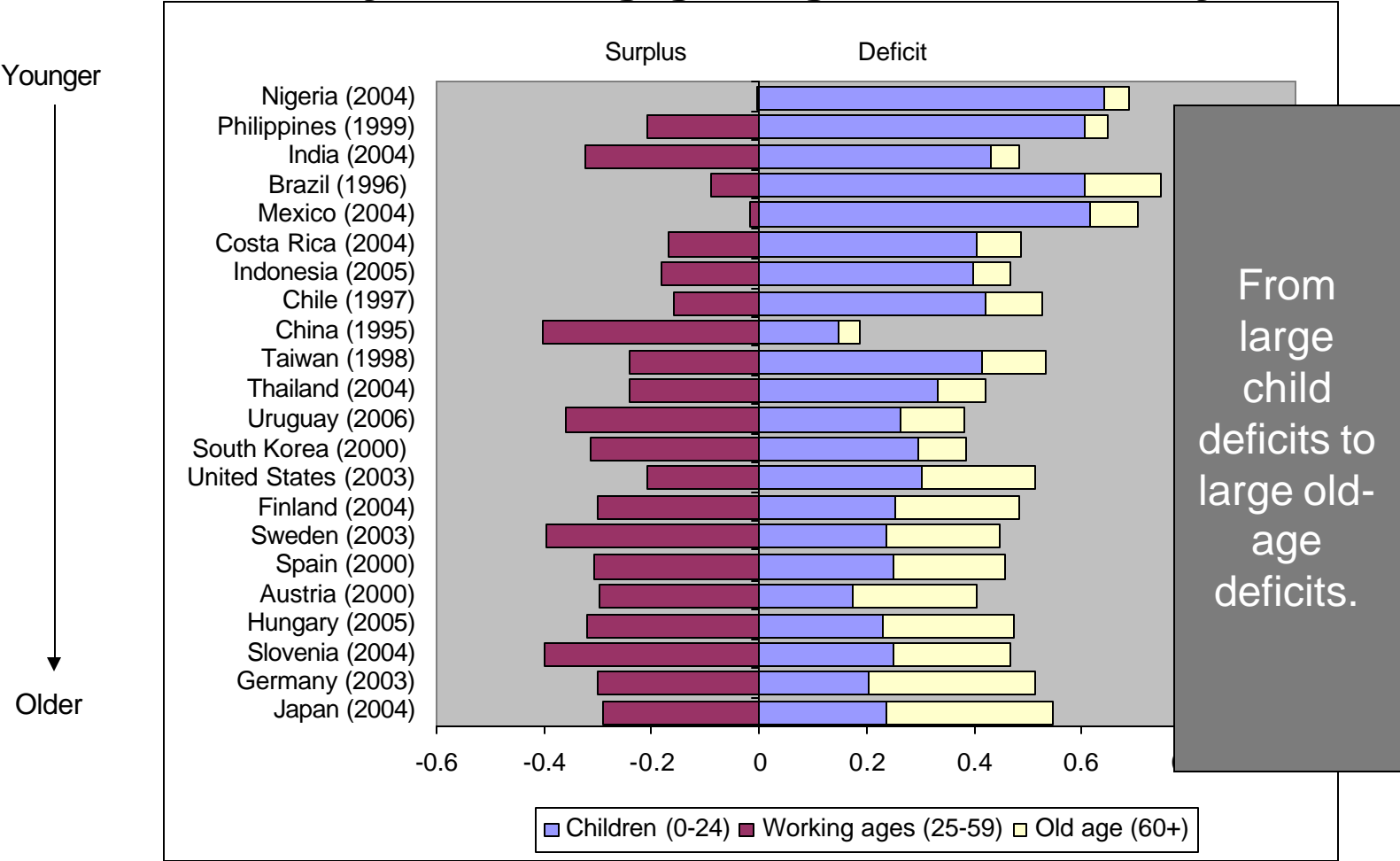
3 countries

	Child deficit	Old-age deficit	Total deficit	Surplus
Brazil	64.2	12.7	76.9	11.1
US	28.9	20.6	49.5	18.6
Germany	18.8	30.7	49.5	27.2

Note: All values expressed as a percentage of total labor income.
National Transfer Accounts

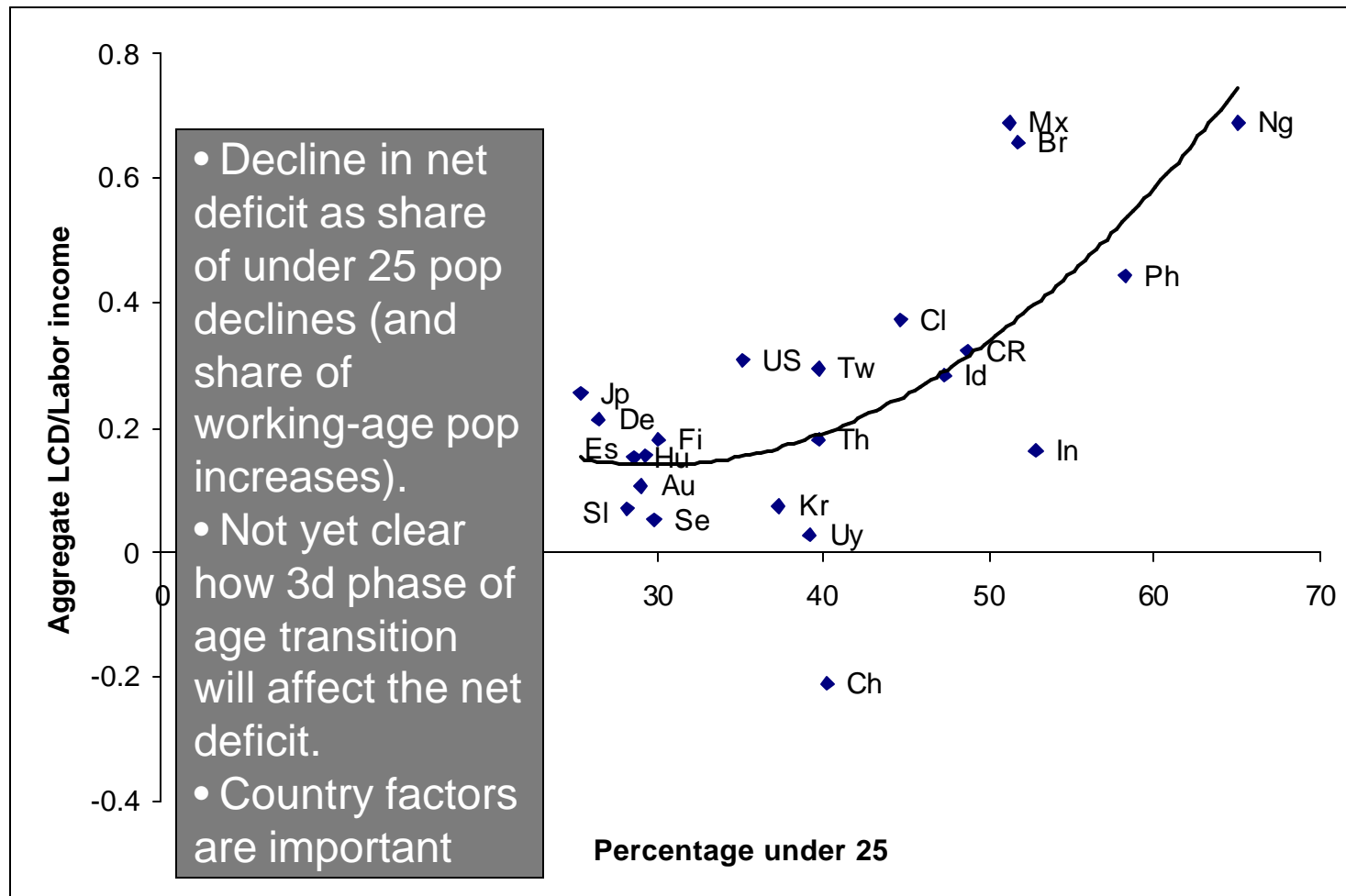
Andrew Mason 2010

Summary of Aggregate Lifecycle



Note: All values expressed as a proportion of total labor income. Countries ordered using percentage of population under age 25.

Transition in Net Lifecycle Deficit

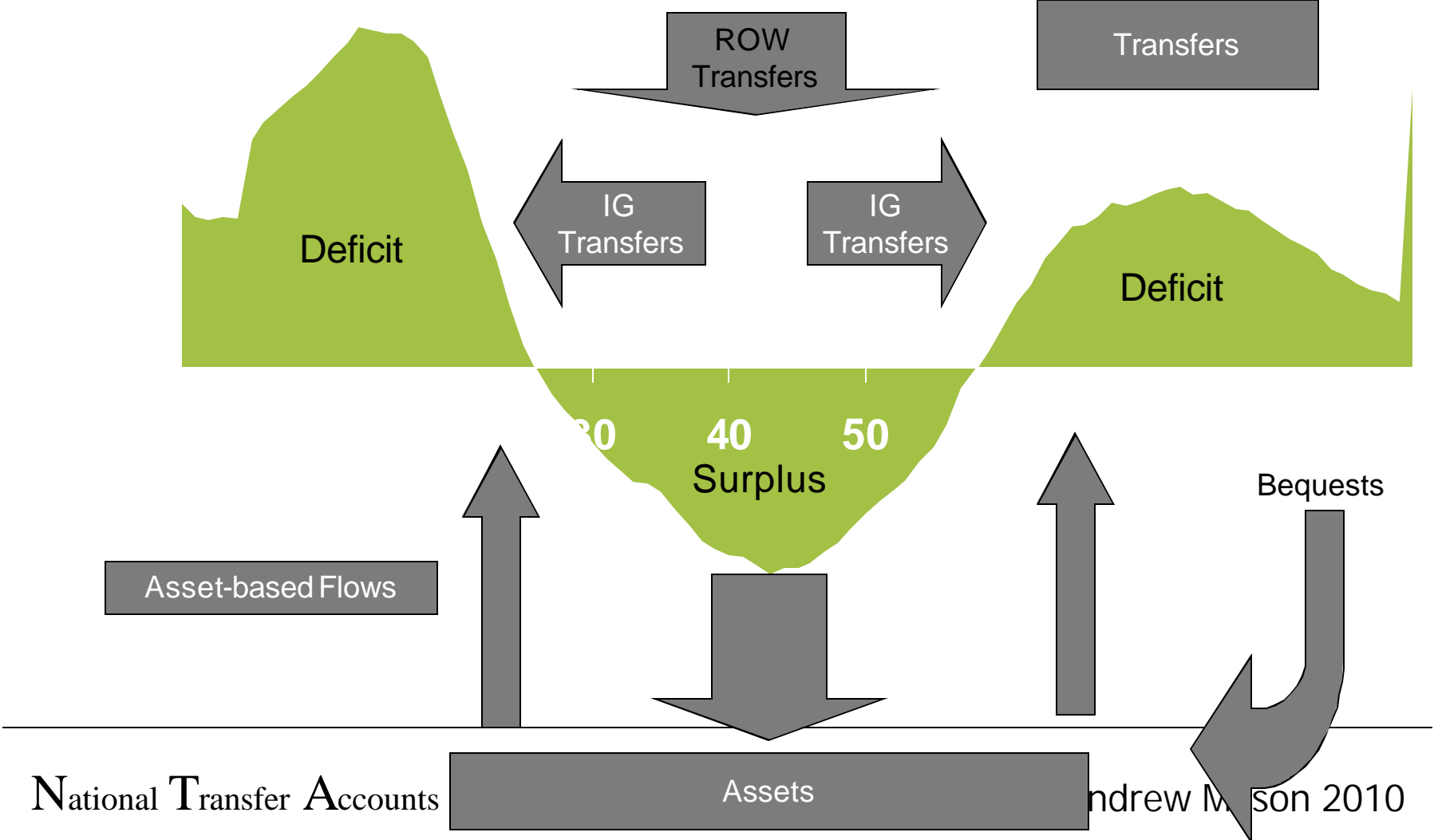


Net deficit is sum of child and old-age lifecycle deficits and lifecycle surplus.

Share and Save: Age Reallocation System

- ? Reallocation system is the counterpart to the economic lifecycle
- ? System by which resources are shifted from one age group to another
- ? All intergenerational flows arise through some form of sharing or saving.
- ? There are many variants of these economic forms that involve governments, families, non-profits, markets, etc.

The Generational Economy



The Generational Economy and the Young

? Asset-based flows

- Minor children: no credit or other assets.
- Young adults: student loans, credit cards, and other consumer debt.

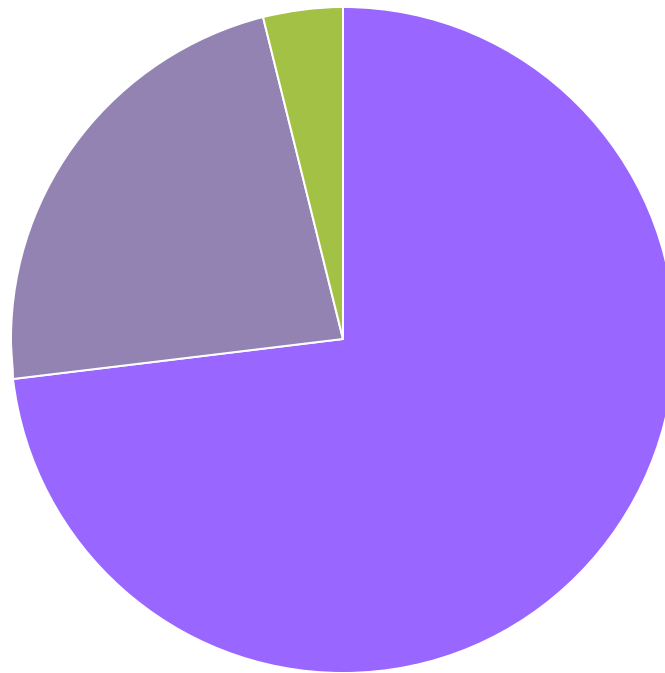
? Public transfers

- The educational system
- Publicly funded health care
- Other public goods and services.

? Private transfers

- Familial, intra-household transfers from parents and perhaps grandparents.

Asset-reallocation system for children, average values



Note: Preliminary estimates that will be revised.

Generational Economy: The Working Ages

High expectations of the working ages

- Meet own material needs
- Transfers to children
- Transfers to the elderly
- Save for retirement and a bequest descendants.

~~Sandwich generation~~

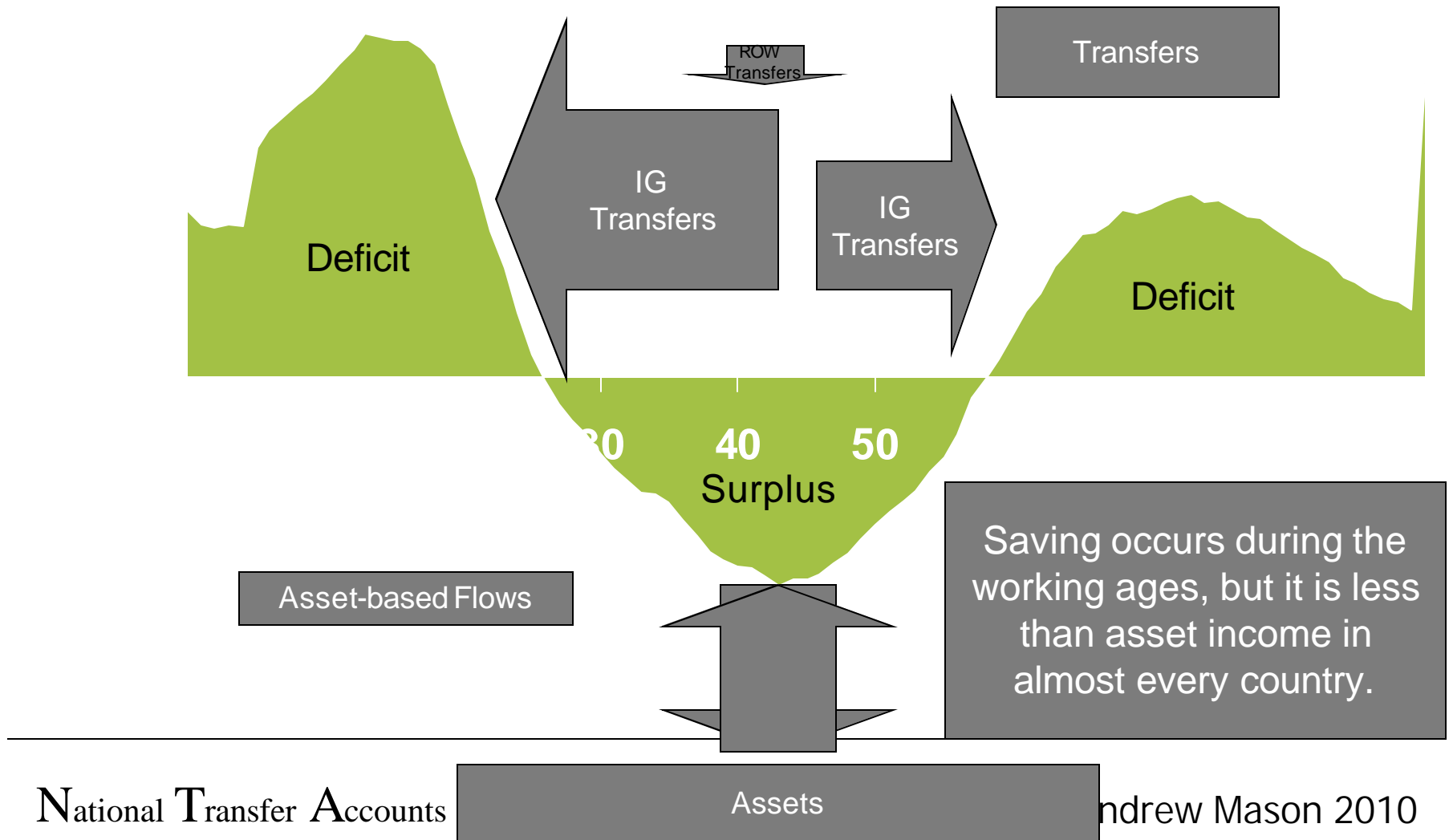
Panini Generation



The Panini Generation

- ? In young countries, net transfers just to children exceed the lifecycle surplus.
- ? In older countries, net transfers to children and the elderly exceed the lifecycle surplus.
- ? In almost every country, working-age adults are relying heavily on assets to meet their own material needs and their familial and social obligations to other generations.
- ? They are saving, but substantially less than the income earned from assets.

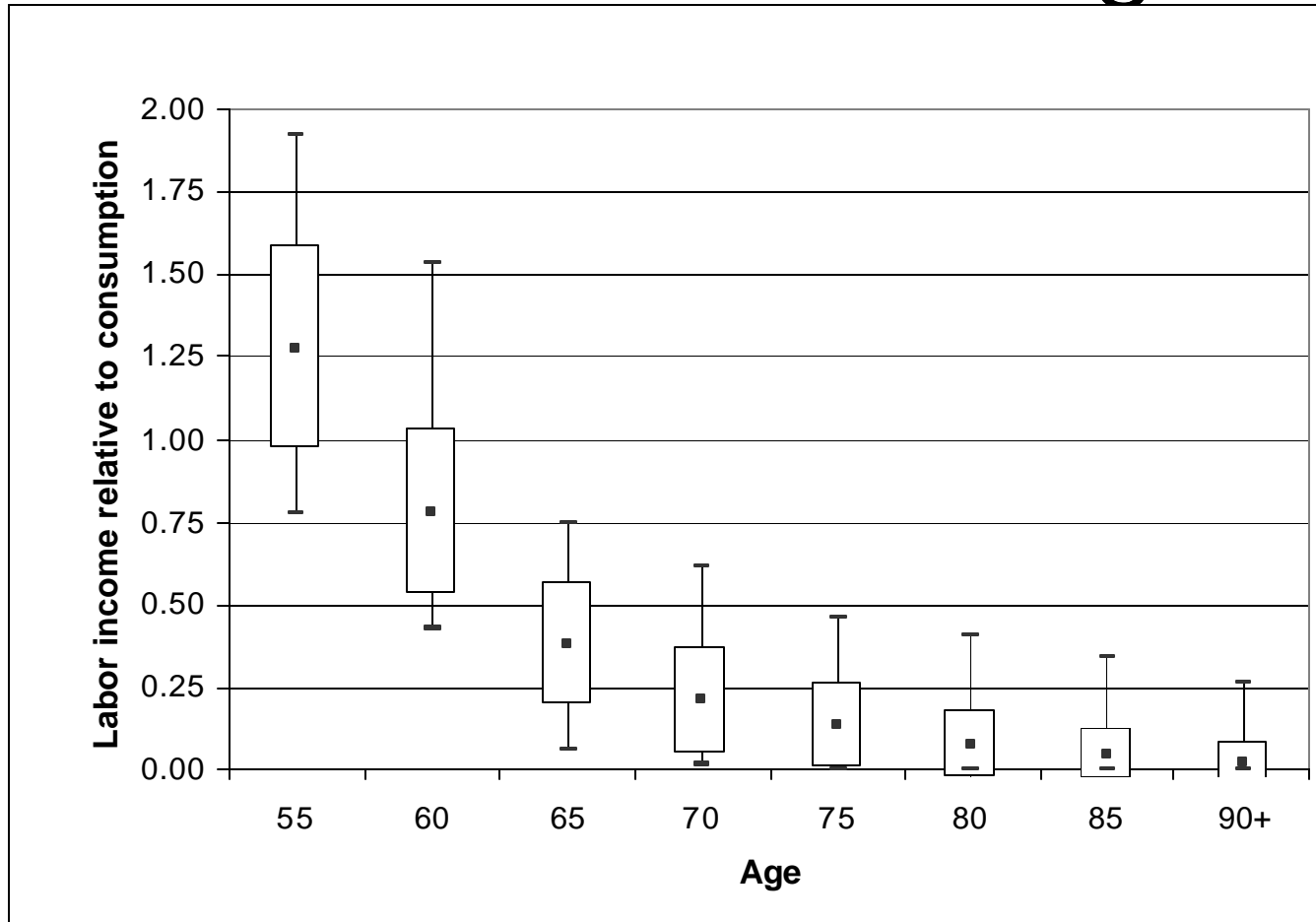
The Generational Economy: The Working Ages



The Older Generation

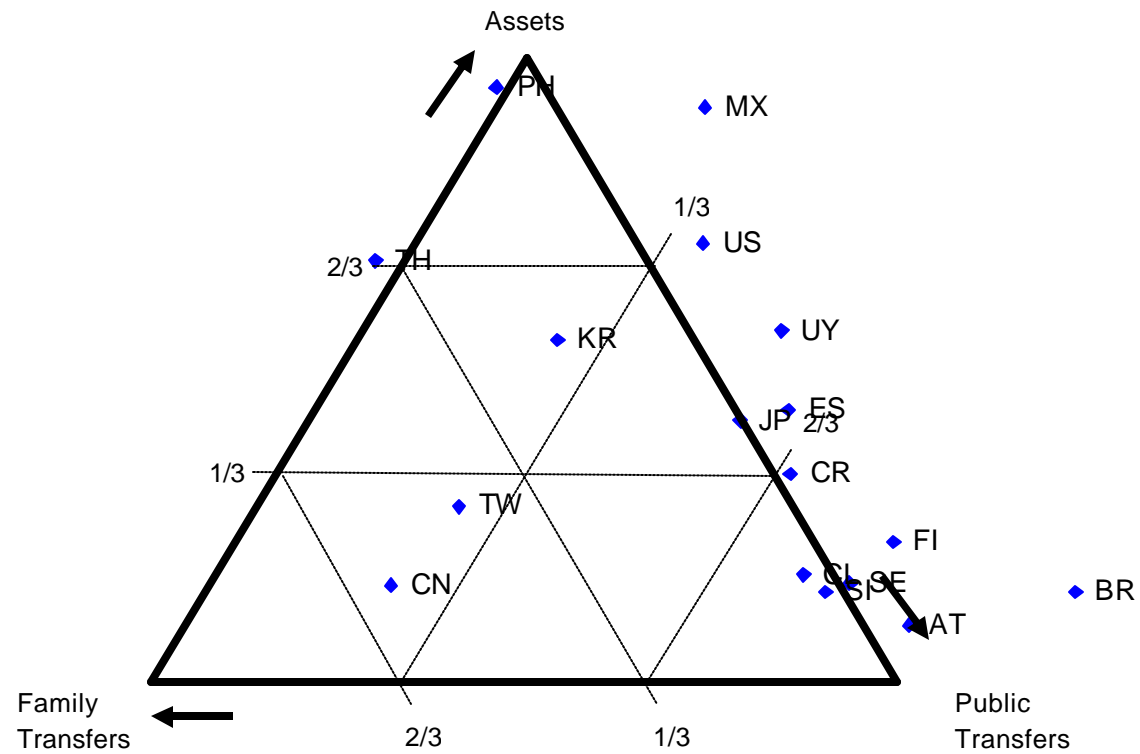
- ? The lifecycle deficit for the elderly reflects
- Consumption by the elderly, public transfers, tastes, biology
 - Labor income reflects retirement and tax policy, taxes for end of life leisure, income, health status, etc.
 - In all countries, labor income at older ages is substantially less than consumption.

Labor Income at Older Ages

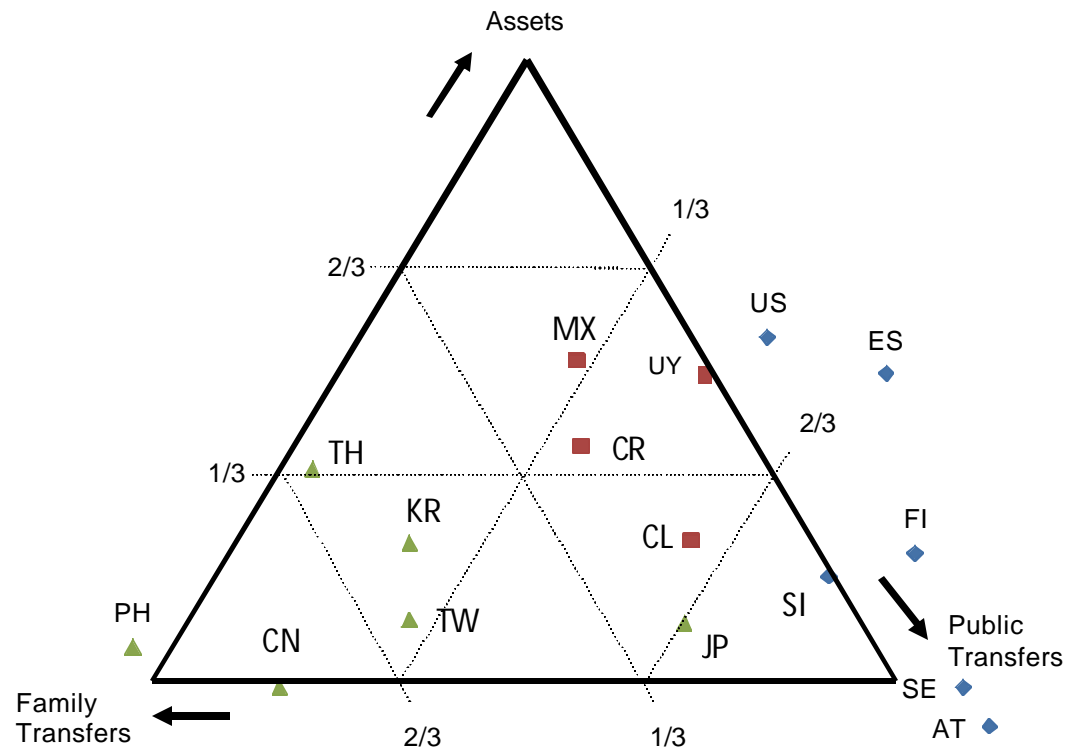


Boxes mark +/- one standard deviation around the mean. Whiskers mark maximum and minimum values.

Funding the Lifecycle Deficit Persons 65 and older



Funding the Lifecycle Deficit Persons 85 and older



Summary of Private Transfers to the Elderly

- ? Gross flows decline with development
- ? Net flows complement others components of the reallocation system
- ? Familial transfers are of greater importance to the very old

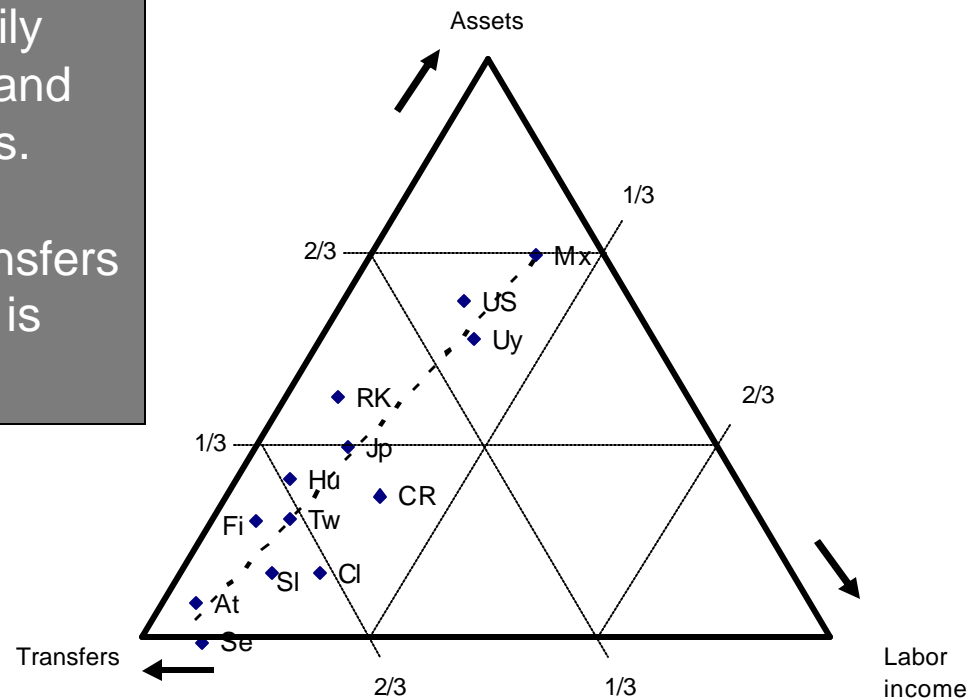
Funding Old-age Consumption: A Cross-country Comparison

- ? Great variation in the importance of transfers and assets-flows to those 65 and older.
- ? Key tradeoff
 - Transfers and asset-based flows
 - Unclear whether an increase in transfers to the elderly crowds out lifecycle saving (Feldstein) or crowds in bequests (Barro).

Funding consumption, 65+, synthetic cohort estimates.

Tradeoff is primarily between transfers and asset-based flows.

Tradeoff between transfers and labor income is modest.



What do transfers crowd out?

- ? Preceding graph conceals possible effects of the support system on consumption.
- ? A simple statistical analysis provides a useful DESCRIPTION of how four components - consumption, labor income, transfers, and asset-based flows - vary across countries.

$$Y_{i,j} = a_j + b_j t_i + \epsilon_{i,j}$$

where Y is C, AR, or YI

A one unit increase in transfers must be balanced by a one unit increase in consumption, a one unit decrease in asset-based flows, a one unit decrease in labor income, or some combination of the three. Seemingly unrelated regression problem for which OLS is appropriate, although it would be nice to have more than 13 observations!

Results: Regression of NTA flows on net transfers for 65+, 13 countries.

Dependent variable	Coefficient	Standard error
Consumption	0.224	0.237
Labor income	-0.110	0.078
Asset-based flows	-0.666	0.183

An Important Issue

- ? Are asset-based flows lower in high transfer settings because asset income is lower or saving is higher?
- ? If asset income is lower, results would be consistent with high transfers leading to lower accumulation during the working years.
- ? If saving is higher, results would be consistent with higher transfers leading to higher bequests.

Results: Regression of NTA flows on net transfers, 65+, 13 countries.

Dependent variable	Coefficient	Standard error
Saving	0.003	0.378
Asset income	-0.656	0.401

Nothing can be concluded based on these estimates – standard errors are HUGE!

Conclusions

? Population aging is changing the generational economy

- Resources flowing to children have declined
- Net flows to children and elderly have reached historic lows in many countries
- Future will be dominated by increase in flows to the elderly

Conclusions

? Child support system

- Children are supported through public and private transfers.
- Obligations fall primarily on working-age adults
- Important variation in the importance of the public and private sector not discussed here.

Conclusions

- ? Support system and the elderly
 - Countries differ widely
 - Public transfers very important in Europe and many Latin American countries
 - Familial transfers play an important redistributive role outside of the West
 - ? Size of public sector
 - ? Age of the elderly
 - Importance of asset-based flows varies
 - Strong tradeoff between transfers and asset-based flows.

Conclusions

? Working-age generation

- Great demands on those in the working ages
- Age transition has substantially eased those demands in Asia, LAC, and the West; this will be reversed over the coming decades.
- Labor income is insufficient to meet the resource requirements of those in the working ages.
- Working-age populations rely heavily on assets to meet their generational obligations.

The End