

An Overview of National Transfer Accounts

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Presentation

1. General Principles
2. National Transfer Flow Account
3. Wealth and Wealth Revaluation Account
briefly described

Objective

- Develop a system of accounts that measures the reallocation of 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

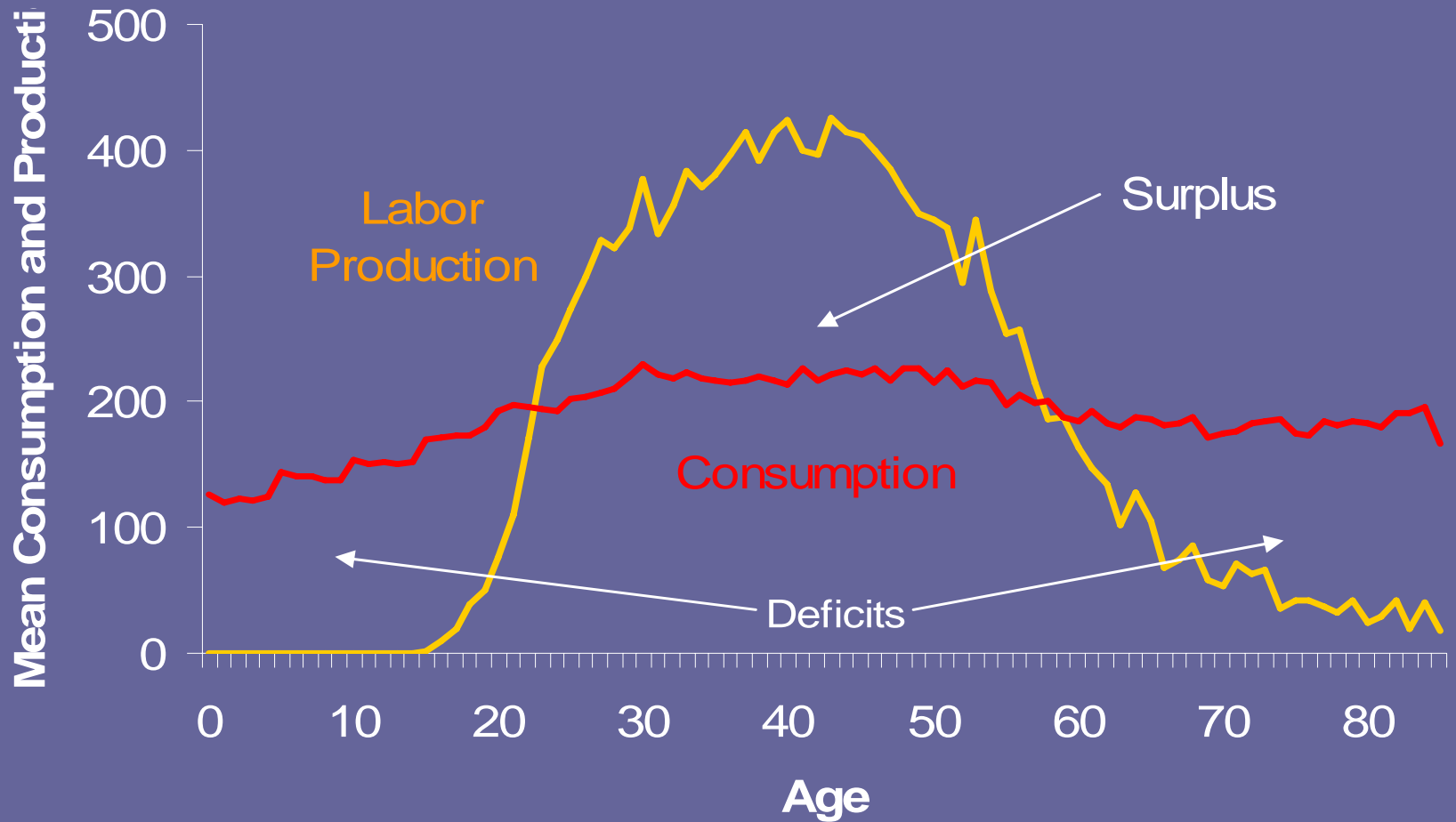
Goals

- International in scope to allow analysis of alternative systems and policies
- Historical depth to improved understanding about evolution of support systems
- Projections to support policy analysis

Importance

- Reallocation systems are large – about half of GDP.
- Profound effect on economic growth and generational equity
- Strained by population aging

Most Important Graph in the World!



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

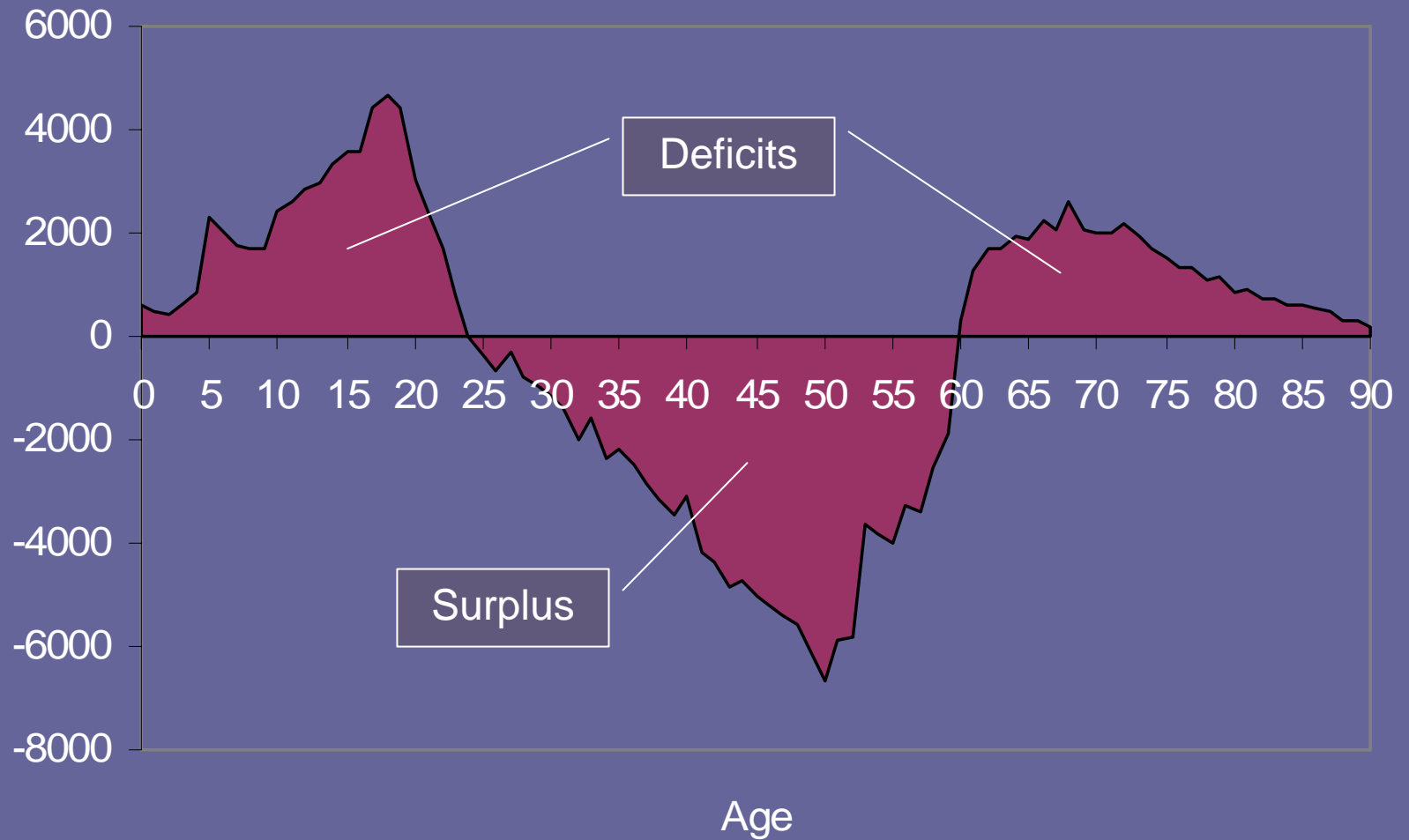
	Total	Age				
		0-19	20-29	30-49	50-64	65+
Lifecycle Deficit	832	1,704	7	-1,329	25	424
Consumption	6,570	1,775	1,163	2,376	757	499
Private	5,290	1,244	951	2,040	640	414
Public	1,280	531	212	335	117	85
Less: Labor income	5,738	70	1,156	3,704	732	75

Upper panel measures the difference between production and consumption over the lifecycle. All values are totals for the age group. Per capita values are also estimated.

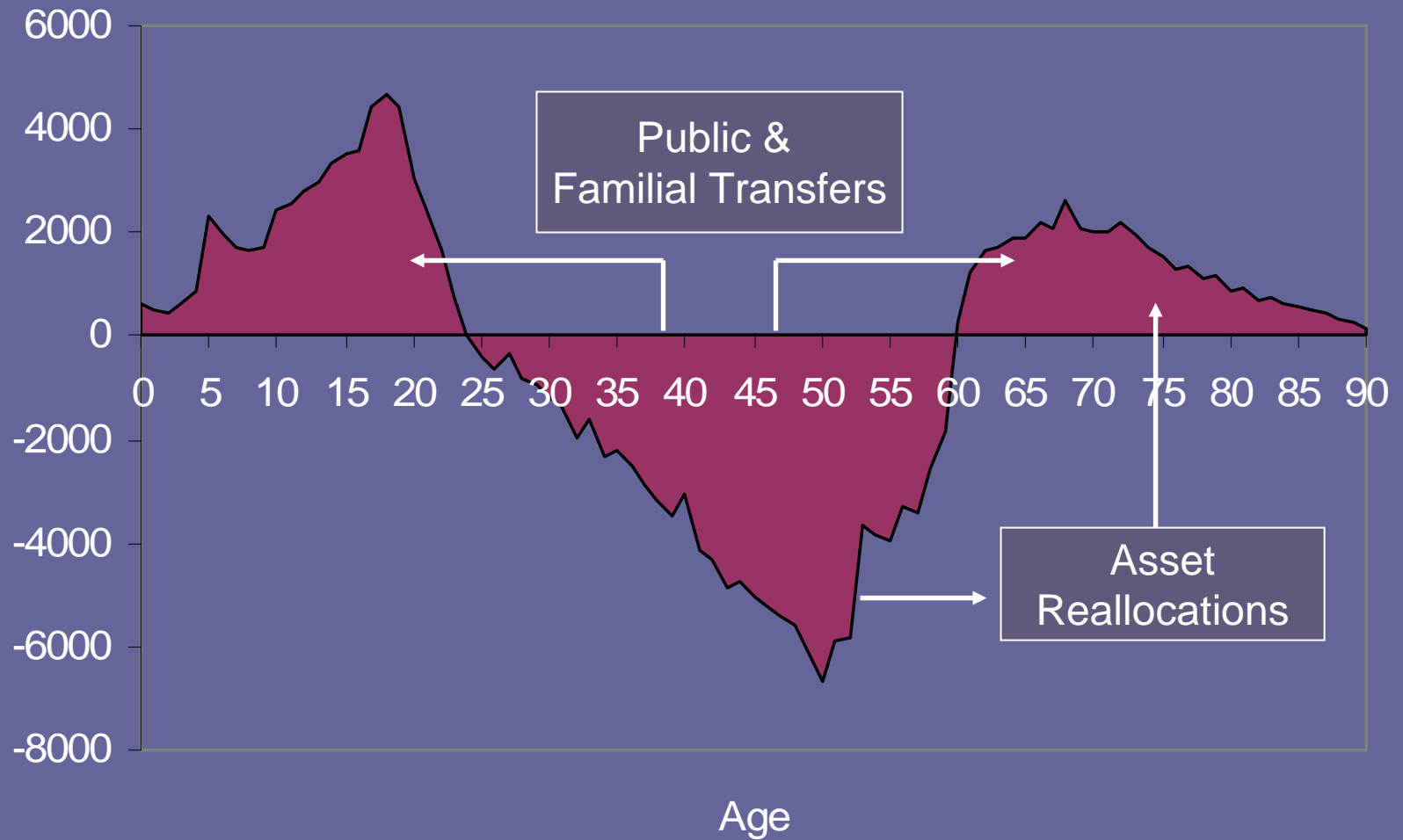
Age Reallocations

Mechanisms for shifting economic resources
from one age group to another

Total Reallocations: Lifecycle Deficit



Major Reallocation Systems



Classification of Reallocations

- Governing institution
 - Public
 - Private
- Economic form
 - Investment
 - Exchange
 - Transfers

Governing Institution

- Public: reallocations that are social mandates embodied in law and regulation and implemented by local, regional, and national governments.
- Private: reallocations that are governed by voluntary contracts, social conventions, etc. Institutions: households, families, firms, and non-profit institutions serving households.

Economic Form: Investment

- Future production and consumption are increased by reducing current consumption;
- Leads to a change in total reproducible material wealth;
- Reallocations from young to old only: capital is accumulated when young; yields return and can be disposed of when old.

Economic Form: Intertemporal Exchange

- Trade of economic resource in one period in return for compensation in one or more future periods;
- No net increase in aggregate wealth: accumulation by one age group balanced by decline in wealth of another age group

Economic Form: Intertemporal Exchange

- Consumer Credit
 - One group reduces current consumption and another group increases current consumption
 - Reallocations in either direction are possible
- Exchange of land and other non-reproducible assets
 - Buy land from old person when young; sell to young person when old.
 - Reallocations of consumption from young to old only.

Economic Form: Transfers

- Reallocations which involve no *quid pro quo*;
- Transfers can flow in either direction
 - From older (parents and taxpayers) to younger (children);
 - From younger (taxpayers and adult children) to older (elderly/parents).

Table 1. A Classification of NTA Reallocations.

	Asset Reallocations		
	Capital	Property and Credit	
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 Insurance Land	Familial support of children and parents Bequests Charitable contributions

Source: Adapted from Lee 1994.

NTA Institutions II

- All transactions are between individuals
- All wealth is held by individuals
- Social and economic institutions are intermediaries only.

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.

NTA Consists of Three Accounts

- Flow Account – measures all inter-age flows;
- Wealth Account – measures the value of the wealth associated with each flow.
- Wealth Revaluation Account – measures change in wealth due to changes in asset prices, interest rates, and policy.

NT Flow Account Identity:

- Inflows
 - Labor income
 - Capital income
 - Interest income and rent
 - Transfer inflows
- Outflows
 - Consumption
 - Investment
 - Accumulation of credit and property
 - Transfer outflows

$$y_l + y_k + y_m + \tau^+ = c + I_K + I_M + \tau^-$$

NT Flow Account Identity:

Lifecycle Deficit =	$C - y_l$
Lifecycle Reallocations =	
Capital Reallocations +	$y_k - I_k$
Land and Credit Reallocations +	$y_m - I_M$
Net Transfers	τ

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Lifecycle Reallocations	832	1,704	7	-1,329	25	424
Asset 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. Asset reallocations combine capital, credit, and land.

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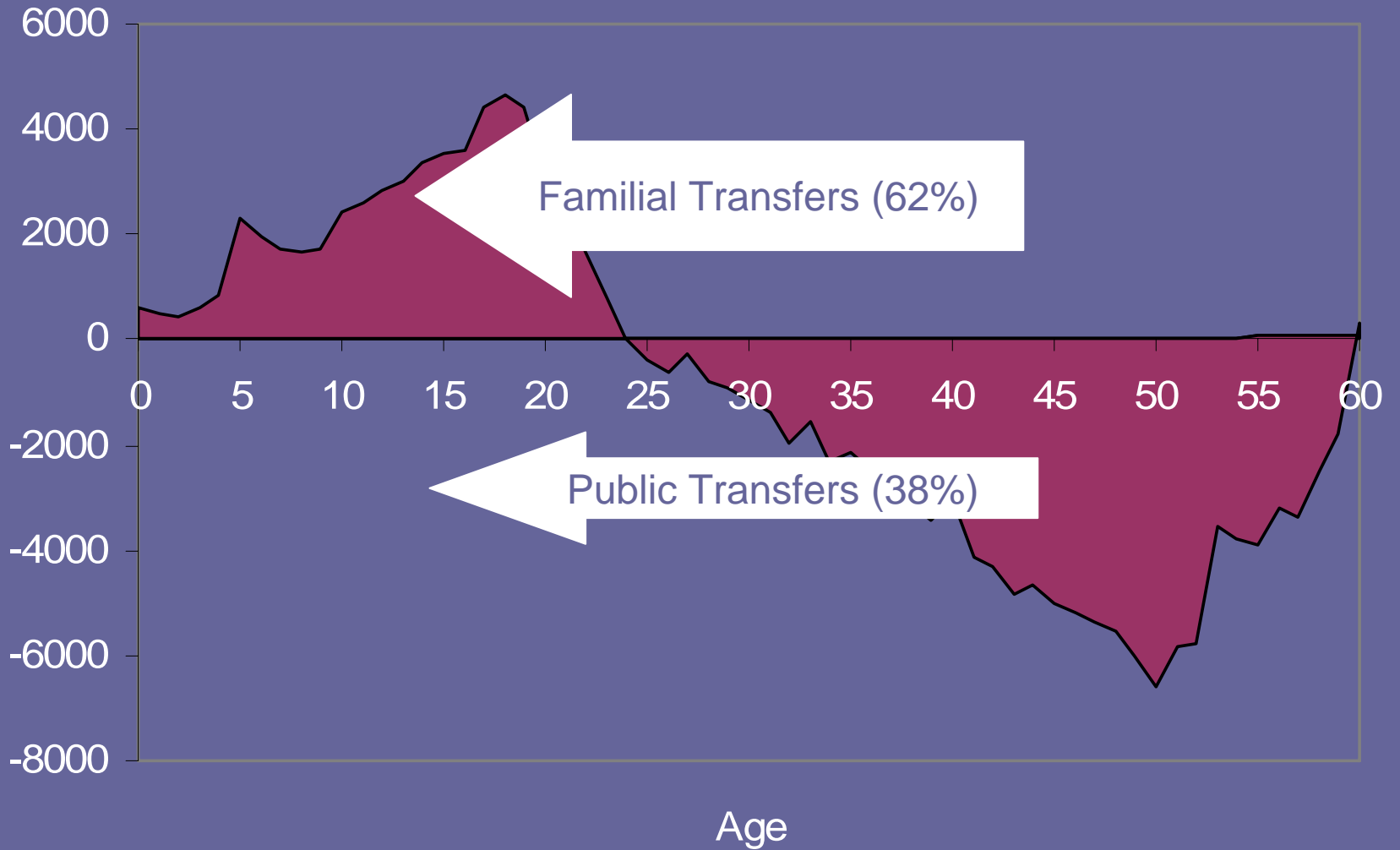
Assets reallocations are equal to asset income (profits, interest income and rent) less saving. Age groups with negative asset reallocations are saving in excess of their asset income.

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

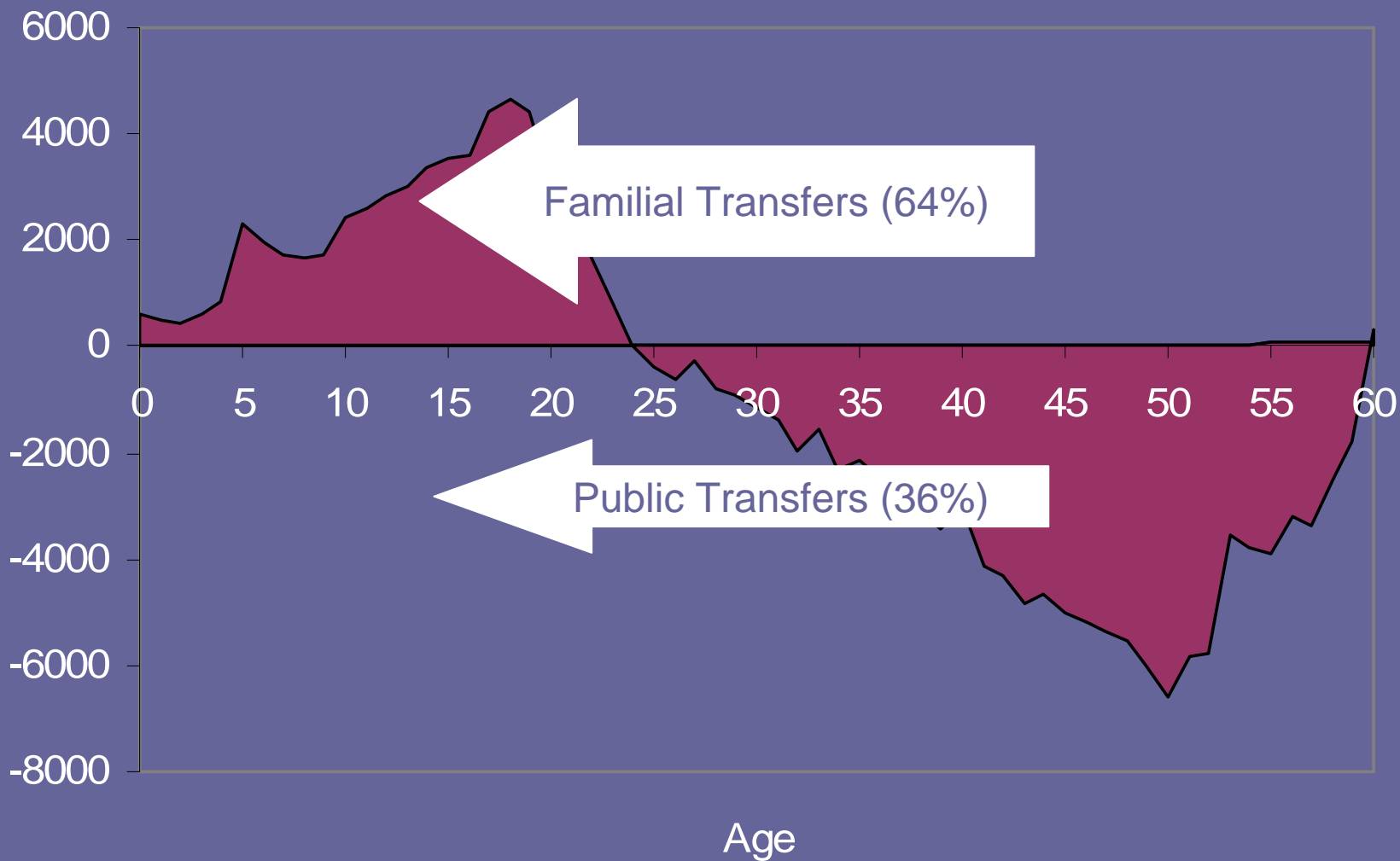
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Net transfers consist of public transfers (cash transfers + in-kind transfers less taxes) and private transfers (mostly familial transfers). Positive values imply that inflows exceed outflows.

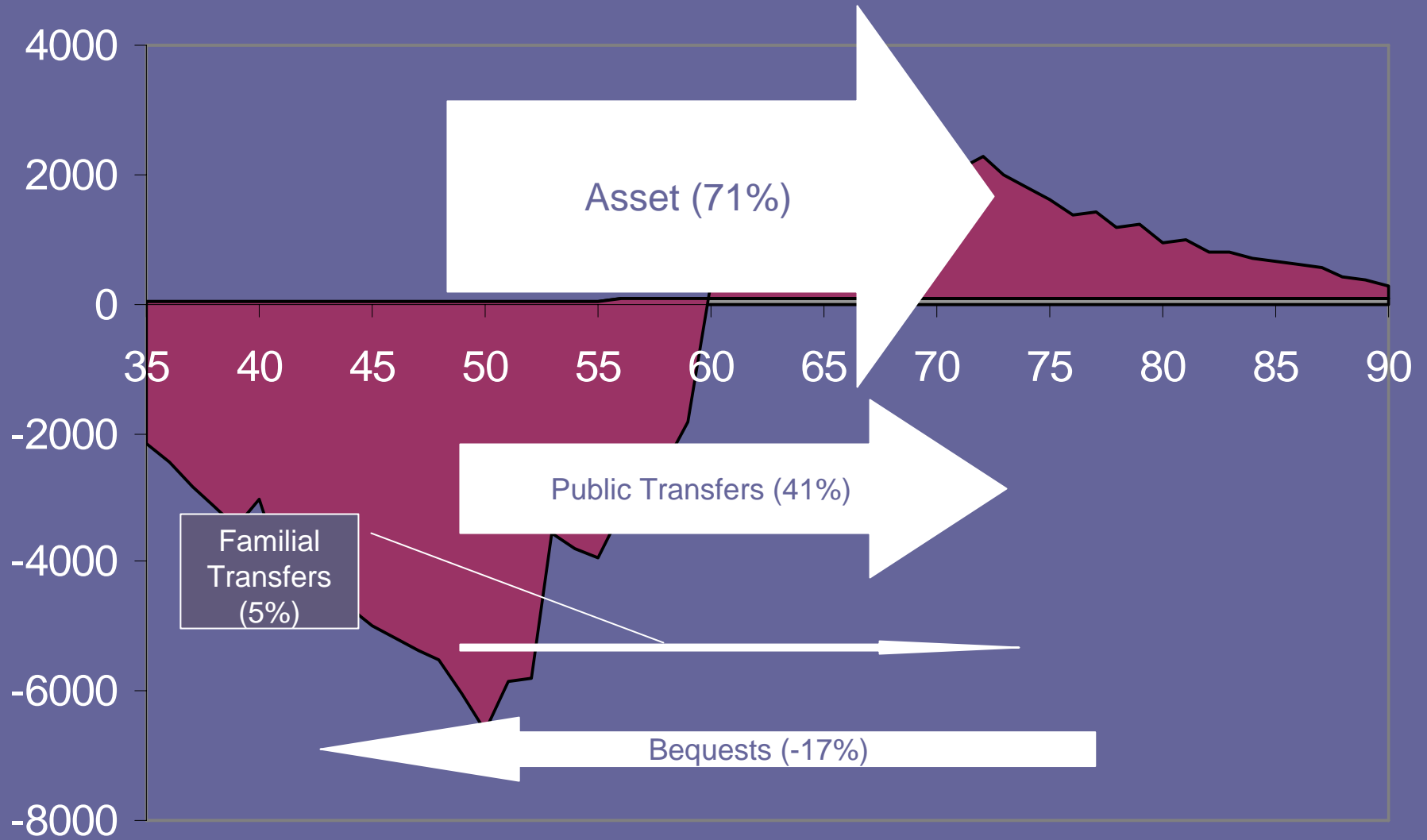
Reallocations to US Children (% of consumption)



Reallocations to Taiwan Children (% of consumption)



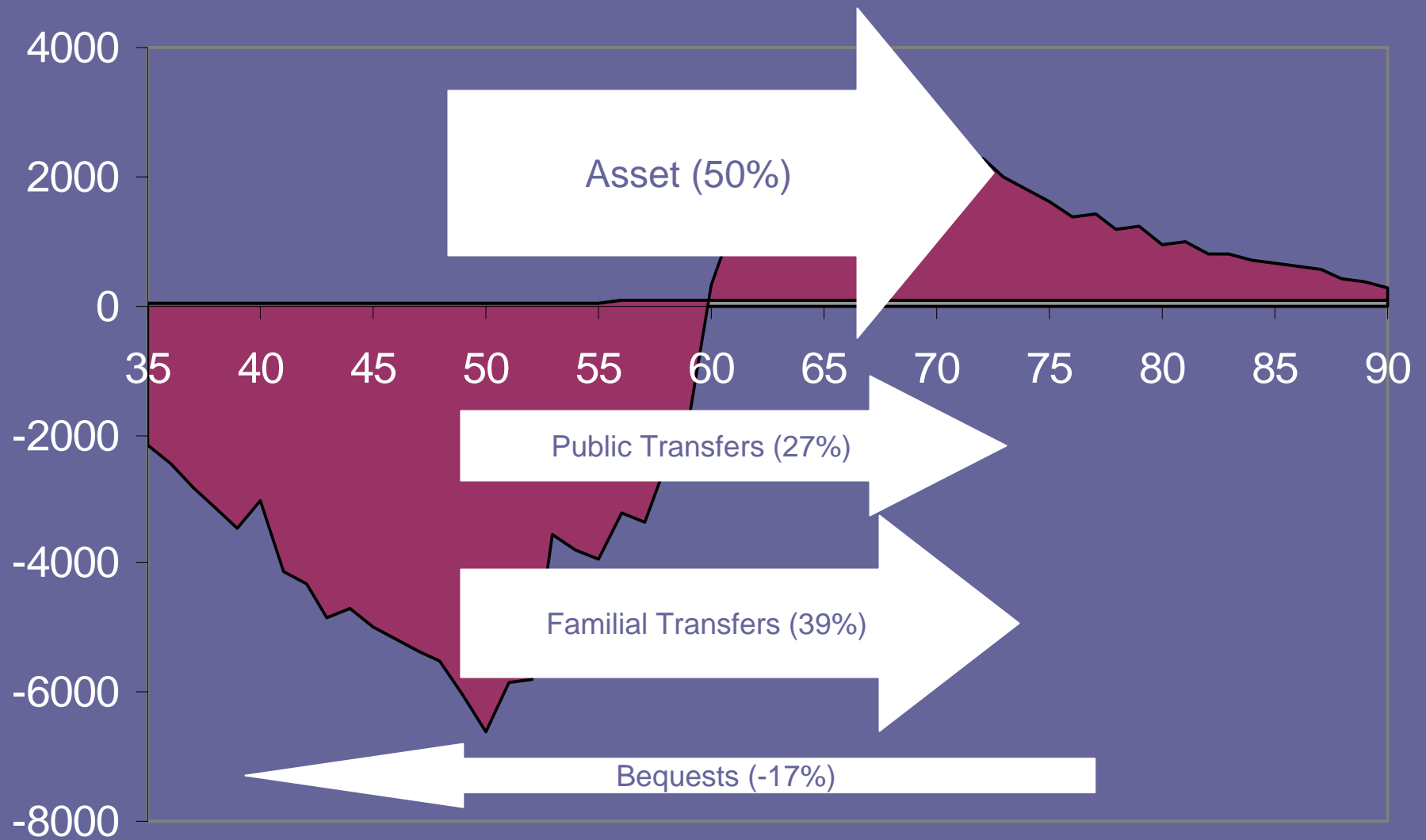
Reallocations to the US Elderly (% of Consumption)



Note: Familial transfers are intervivos only.

Age

Reallocations to Taiwan Elderly (% of Consumption)



Note: Familial transfers are inter vivos only.

Age

Lifecycle Wealth

- Lifecycle wealth is the present value of the net flows or reallocations from the lifecycle account
- Lifecycle Wealth ($W(a,t)$) =
 - Capital ($K(a,t)$)
 - + Land and Credit ($M(a,t)$)
 - + Transfer Wealth ($T(a,t)$)

Lifecycle Wealth

- Markets for capital, land, and credit establish current prices and values
- Transfer wealth is not traded; thus

$$T(a, t) = \sum_{x=0}^{\omega-a} (1+r)^{-x} \tau(a+x, t+x)$$

Flows and Lifecycle Wealth

- K and M change over time due to investment and changes in capital prices.
- For capital:

$$K(a+1, t+1) =$$

$$K(a, t) + I(a, t) + \frac{P^K(t+1) - P^K(t)}{P^K(t)} K(a, t)$$

Transfers and Transfer Wealth

- In the absence of revaluations, transfer wealth evolves as:

$$T(a+1, t+1) = T(a, t) + I^T(a, t)$$

$$I^T(a, t) = rT(a, t) + \tau(a, t).$$

Transfer Wealth and Transfers

- Transfer wealth will also be subject to revaluations due to:
 - Changes in interest rates
 - Changes in policy

- *NT Wealth Account*
 - *Records wealth in all forms (capital, credit, transfer wealth) by age*
- *NT Wealth Revaluation Account*
 - records revaluations in assets due to changes in asset prices
 - Records revaluations in transfer wealth due to changes in interest rates and policy

Further Reading

- NTA website: Documents/Methods
- Mason, Lee, Tung, Lai, and Miller (2005), NTAWP 05-01

The End