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***WHAT DOES PUBLIC SECTOR CONTRIBUTE FOR
NATIONAL TRANSFER ACCOUNTS?
EVIDENCE FOR INDIA'S FLOW ACCOUNTS 1999-00***

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However, the usual disclaimers apply.

Public sector in National Transfer Accounts (NTA)

Individual is the fundamental analytic unit in NTA

Public and private (e.g. families) institutions mediate the individual transactions

Thus, all estimations in the NTA, such as, lifecycle deficit, asset reallocations, and transfers are distinguished by public and private sectors

Public sector in India's federal economy includes all levels of government, public enterprises (departmental and non-departmental), and quasi-government bodies.

For India's NTA, public sector is redefined to include general government comprising all levels of government and quasi-government bodies

Public sector in India's macro-economy can be highlighted by its select contributions to GDP, capital formation, savings, and consumption for 1999-00 (accounting year for India's NTA)

Select contributions of India's public sector, 1999-00

National income, investment, and savings

- Percent of GDP: General government (10.6): Overall public sector (25.6)
- Percent of gross domestic capital formation: General government (8): Overall public sector (29.3)
- Percent of gross savings: General government (-20.6): Overall public sector (-4.3)

Public consumption expenditure in aggregate (public +private) consumption

1. Percent of aggregate consumption expenditure: 13.58
2. Percent to aggregate health expenditure: 13.06
3. Percent of total education expenditure: 54.83

What do these contributions mean for India's NTA 1999-00 in terms of estimation of lifecycle deficit (LCD) and age reallocations?

Methodology for estimation of LCD

Estimation of LCD involves three steps

1. Estimation of aggregate control variables (aggregate income and consumption) from National Income and Product Accounts (NIPA)
2. Estimation of age allocation of aggregate control variables – an attempt to introduce age into NIPA
3. Determine the lifecycle deficit/surplus by age groups and overall age groups, as a basis for estimation of age allocations (= asset reallocations + transfers) by public and private sectors – Implications for inter-generational resource allocation

Aggregate controls for estimation of India's Lifecycle Deficit, 1999-00
(Rs. in crore at current prices: 1 crore=10million)

Variable	Public	Private	Total
AGGREGATE LABOUR INCOME	389956		1082291
* Percent to row s total	35.99*		(100.00)
Compensation of employees	389562		582357
	66.89*		(53.81)
(2/3) of mixed income	Not applicable	499345	499345
			(46.14)
Net compensation of employees from ROW	Not applicable	589	589
			(0.05)
AGGREGATE CONSUMPTION	251108	1046080	1297188
(Less indirect taxes (=Rs.221578 crore)	(100.00)	(100.00)	(100.00)
* Percent to row s total	19.36*		
Education	41189	22209	63398
	(16.40)	(2.12)	(4.89)
	64.97*		
Health	15924	69400	85324
	(6.34)	(6.63)	(6.58)
	18.66*		
Others	193935	954471	1297188
	(77.26)	(91.24)	(88.54)
	16.89*		

Data sources and rules for age allocation of aggregate controls

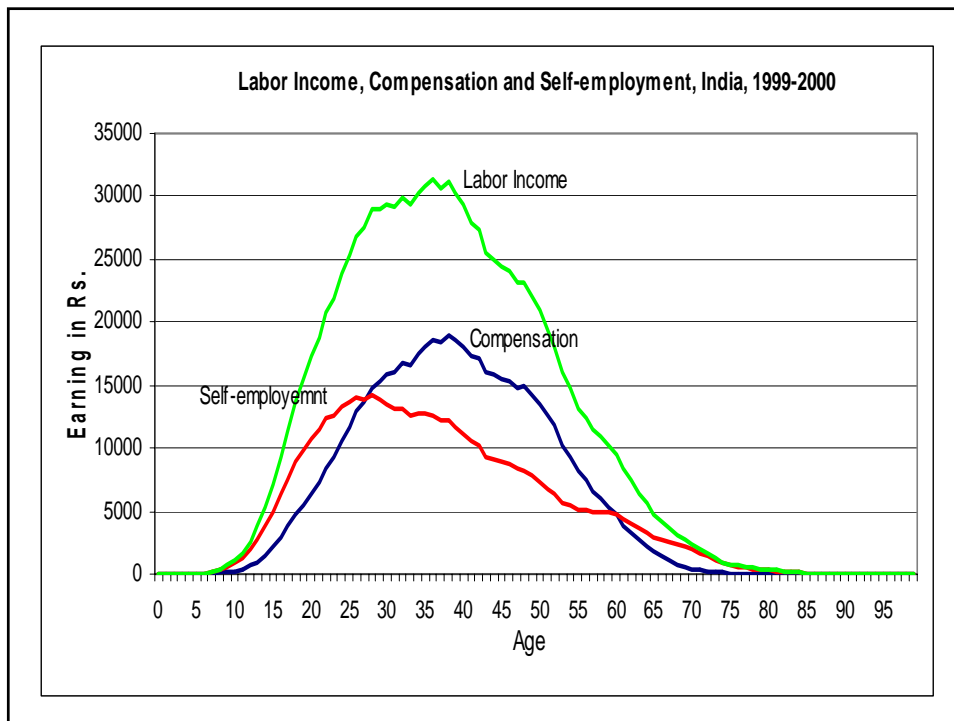
Age allocation for labour income is estimated by using wage and salaries in the NSSO Employment Survey

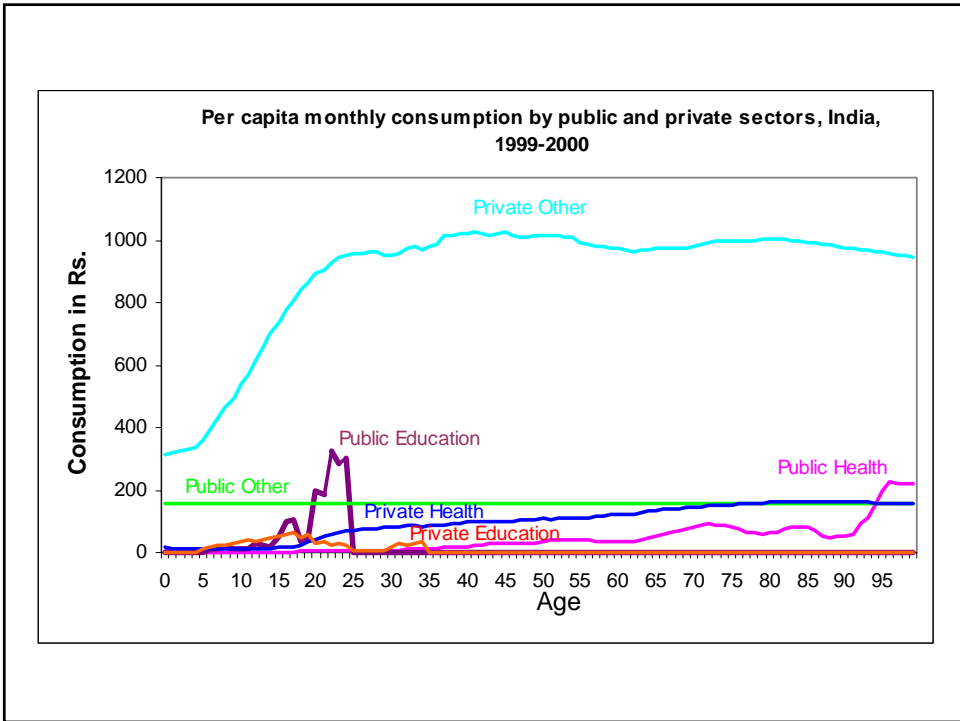
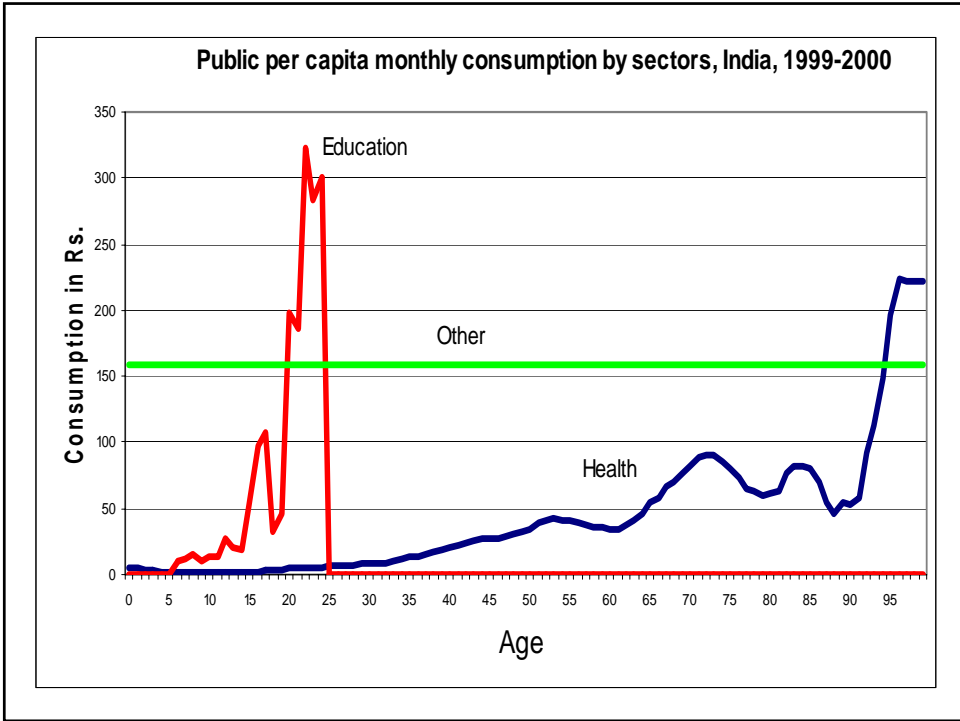
Age allocation of different components of aggregate consumption are estimated by using the sector-specific databases and household consumer expenditure and employment surveys by the National Sample Survey Organisation

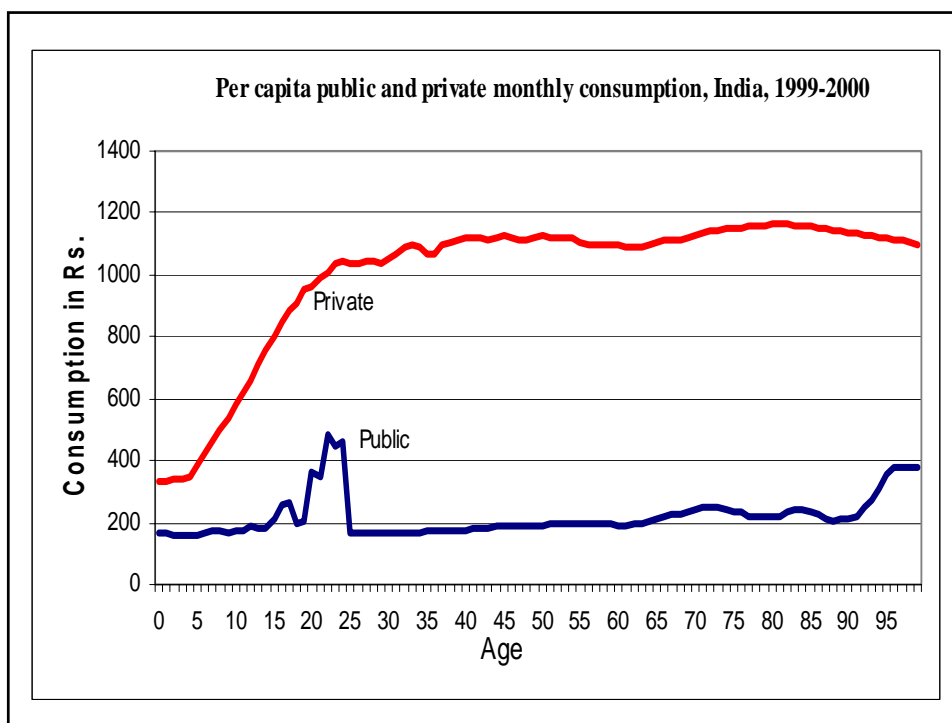
All databases are official and available in the public domain

Annexure 1 through Annexure 4 summaries the allocation rules by income and consumption variables

Age profiles in per capita terms are presented below







Estimated Lifecycle Deficit, 1999-00
(Rs. In crore at current prices: 1 crore = 10 million)

Age groups	Total	0-19	20-29	30-49	50-64	65+
Lifecycle deficit	214898	371439	21172	-176502	-43223	42014
Consumption	1297188	444064	261537	377390	141448	72751
Private consumption	1046080	323868	218495	323611	119773	60333
Other	954471	299914	200212	294591	107237	52518
Health	69400	8147	13826	27076	12536	7815
Education	22209	15808	4457	1944	0	0
Public consumption	251108	120196	43042	53779	21675	12418
Other	193995	88238	33708	46541	17047	8462
Health	15924	1208	1326	5309	4125	3956
Education	41189	30750	8008	1929	503	0
Labor Income	1082290	72625	240365	553892	184671	30737

Estimated consumption shares, 1999-00

Age groups	Total	0-19	20-29	30-49	50-64	65+
Share of labour income in total consumption (%)	83.43	16.35	91.90	146.77	130.56	42.25
Share of public consumption in total consumption (%)	19.36	27.07	16.46	14.25	15.32	17.07
Share within public consumption						
• Others	77.26	73.41	78.31	86.54	78.65	68.14
• Health	6.34	1.01	3.08	9.87	19.03	31.86
• Education	16.40	25.58	18.61	3.59	2.32	0.00
Share within private consumption (%)						
• Others	91.24	92.60	91.63	91.03	89.53	87.05
• Health	6.63	2.52	6.33	8.37	10.47	12.95
• Education	2.12	4.88	2.04	0.60	00.00	00.00

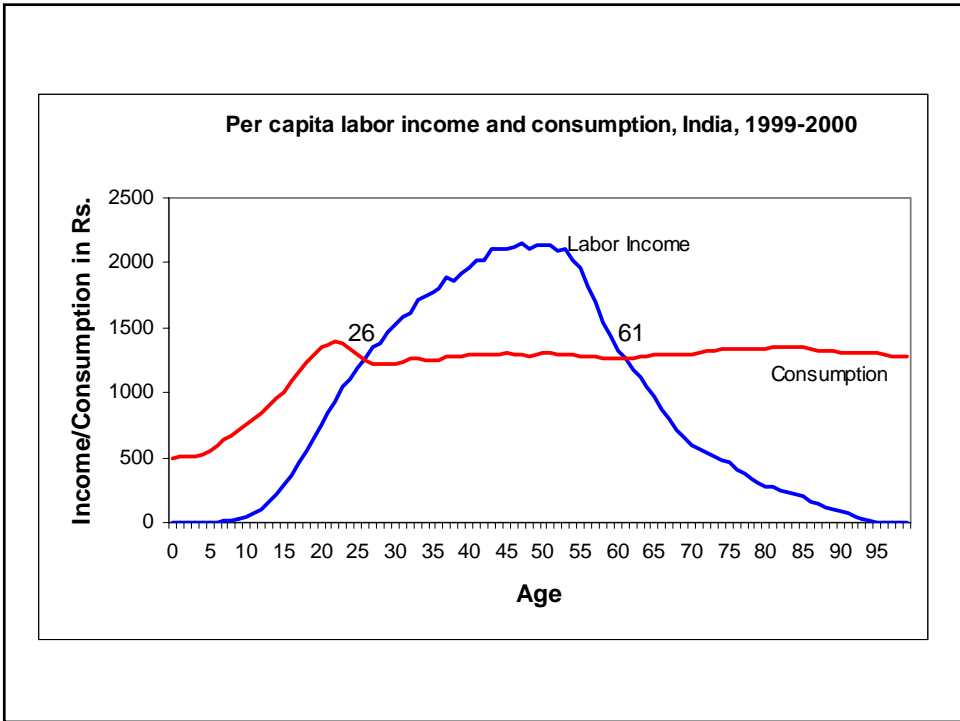
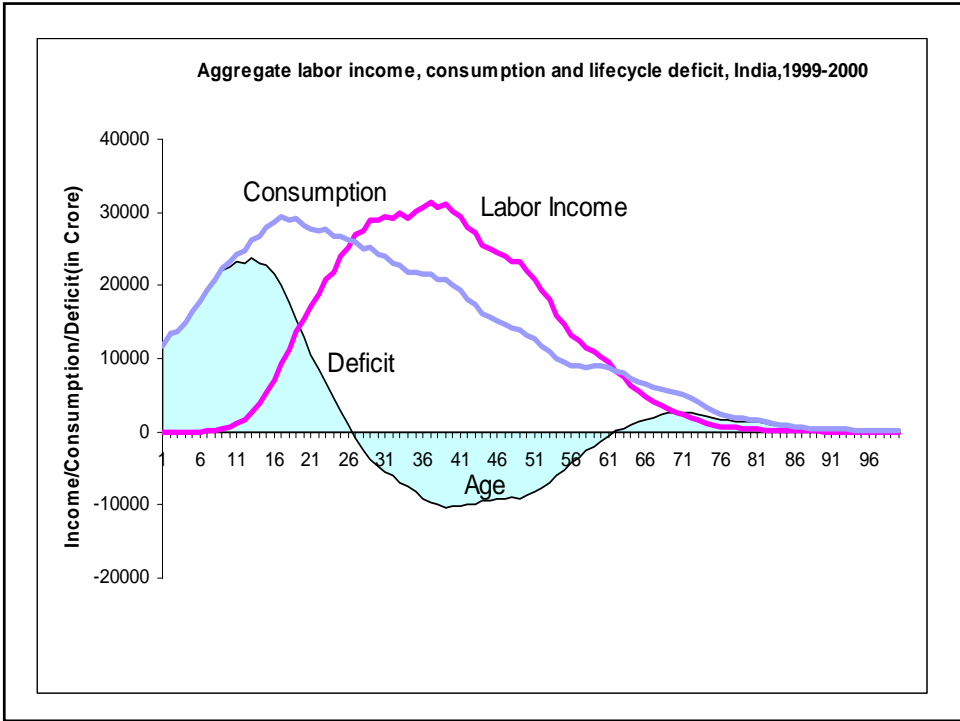
Estimated LCD: Summary of main results

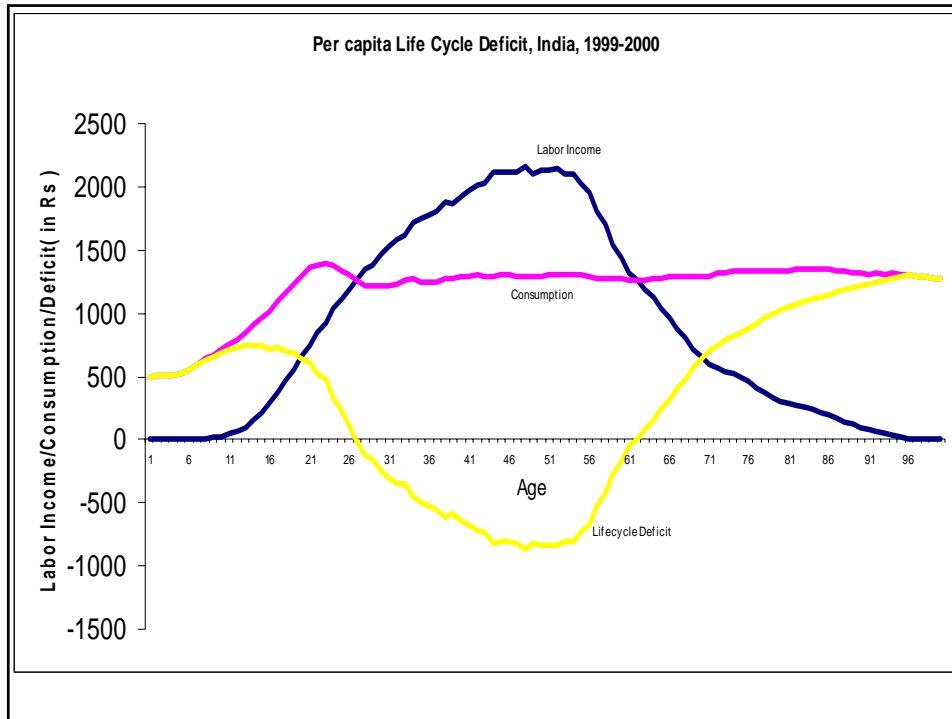
First, the LCD is evident for all age groups except for working population in the age group of 30-49 years and 50-64 years.

Second, the highest LCD is evident for young age dependents (age group 0-19 years) rather than for old age dependents (age group 65+ years). In fact, the LCD in age group 0-19 years is about 9 times higher than for the old age group (65+ years).

Third, the deficit age groups call for age reallocations to finance their excess consumption over labour income.

Age profile of LCD (aggregate and per capita) is presented below.





Methods of financing Lifecycle Deficit

1. Public sector reallocations

- Public sector asset reallocation (Aggregate controls and age allocation rules are the same as given in Revised Estimation of Public AR-Spreadsheet on NTA Website)
- Public transfers (Aggregate controls and age allocation rules are given in Annexure 5 and 6 respectively)

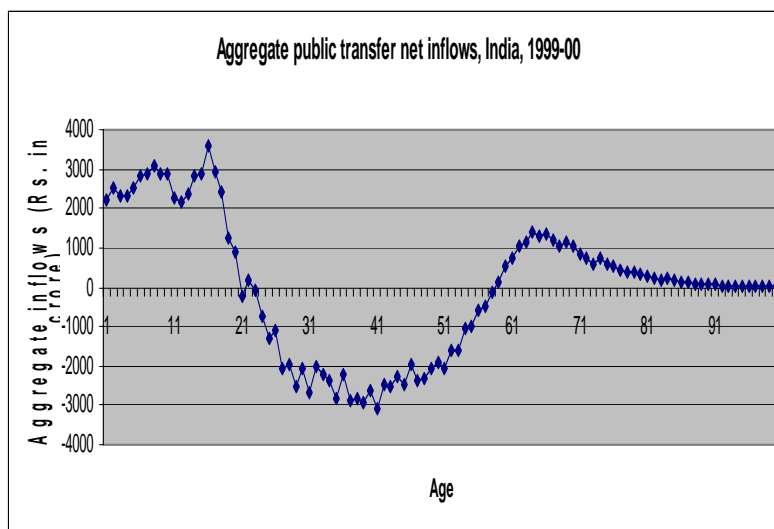
• Private sector reallocation

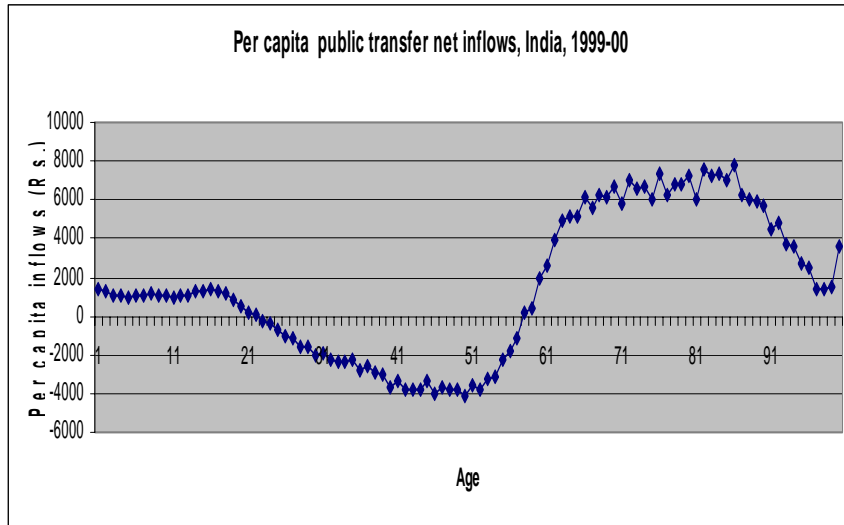
- ❖ Private sector asset reallocation
- ❖ Private transfers – Intra and Inter-household transfers
- ❖ Bequests

Public age reallocations, 1999-00

(Rs. in crore at current prices: 1 crore=10 million)

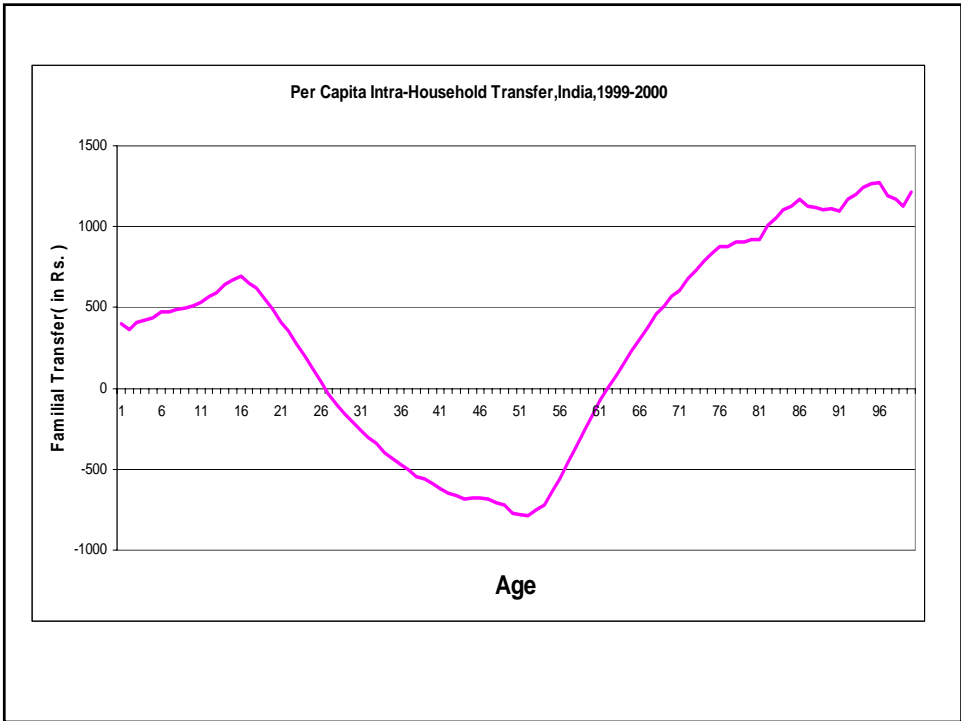
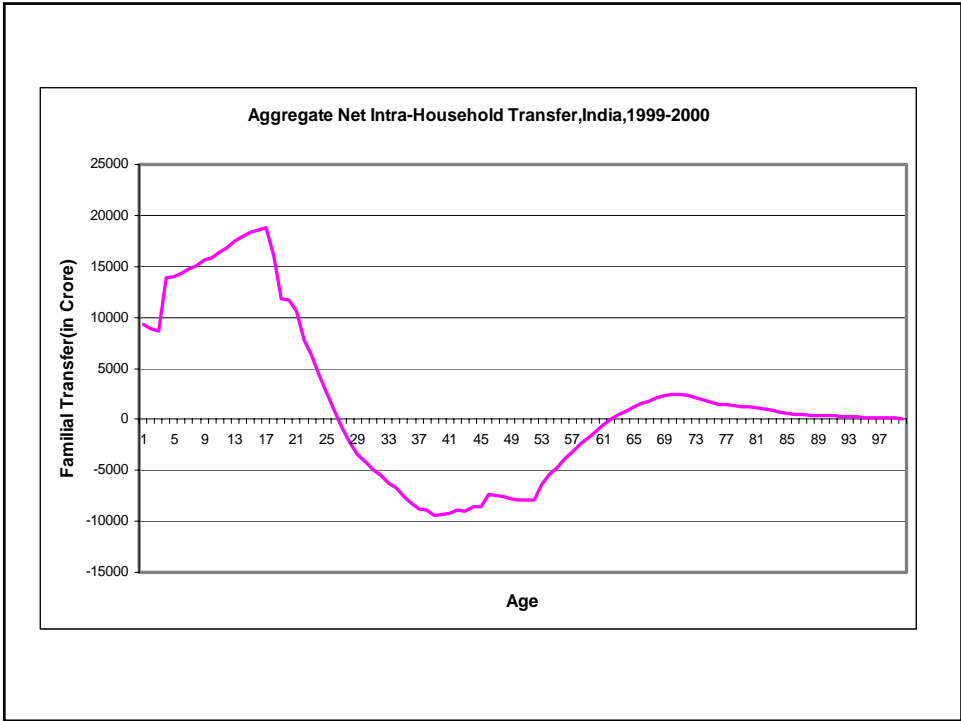
	Age distribution					
	Total	0-19	20-29	30-49	50-64	65+
Public asset based reallocations	-213337	-11641	-69566	-134928	-14016	16814
Income on Assets	-27065	-192325	-95366	77880	112785	69961
Less: Saving (including net public bequests)	186272	-180684	-25801	212808	126802	53148
Public transfers (inflows - outflows)	0	47129	-12098	-49084	-1804	15858
Inflows	303990	120249	44088	58984	43074	37595
In-kind transfers	251110	120196	43042	53779	21675	12418
Cash transfers	52880	53	1046	5205	21399	25177
Outflows	303989	73121	56186	108068	44878	21737
Direct and indirect taxes	231340	55646	42758	82241	34153	16542
Other revenues	72649	17475	13428	25827	10725	5195





**Private transfers, 1999-00
(Rs. In crore at current prices)**

	Age distribution					
	Total	0-19	20-29	30-49	50-64	65+
Private Transfers	203883	294291	23665	-143600	-29539	59065
Intra-household transfers	150751	294103	21463	-158079	-42597	35860
Inter-household transfers	53132	187.992	2201.7	14479.6	13058	23204



Financing consumption for deficit age groups, India, 1999-00

	Percent of total consumption		
	0-19	20-29	65+
Sources of finance			
Labour income	16.35	91.90	42.25
Public asset reallocations	-2.62	-26.60	23.11
Public transfers	10.61	-4.63	21.80
Total public age reallocations	7.99	-31.22	44.91
Private transfers	66.27	9.05	81.19
Private asset reallocations	9.38	30.27	-68.35
Total private age reallocations	75.65	39.32	12.84

Economic dependence and family support for aged in India, 2004

Variable (per 1000 aged persons)	60 th Round of National Sample Survey, 2004		
	Rural	Urban	Total
1. Living arrangement			
• Alone (as an inmate of old age home)	53 (5)	43 (3)	51 (5)
• With spouse only	125	104	120
• With spouse and other members	442	468	448
• With children but without spouse	320	322	321
• With other relations and non-relations, but without spouse	42	49	44
2. Economic dependence			
• Not dependent on others	327	359	335
• Partially dependent on others	138	114	133
• Fully dependent on others	519	516	518
3. Sources of financial support for economically dependents			
• Spouse	127	148	132
• Own children	784	762	779
• Grand children	28	26	27
• Others	61	64	62

Concluding remarks

India's public sector contributes for explanation of LCD and age reallocations for both young and elderly

All forms of public age reallocations are positive for elderly and highest as compared to other deficit age groups

Role of private sector is relatively higher than public sector in contributing to aggregate income and consumption

Private transfers contribute the highest to financing consumption or LCD

NTA results are useful for further analysis of economic-demographic effects of age-structure transitions and ageing in many ways: Estimation of first demographic dividend by economic support ratio; Formulation of macroeconomic policy for ageing

Annexure 1: Allocation rule for aggregate labour income

Allocated according to the age profiles of self-employed and wage and salary employed persons in the National Sample Survey of Employment and Unemployment Survey of India, 1999-00.

Survey data comprised non-reported values for self and non-self employed household persons. These non-reported values were replaced by the average value of employed persons' income by controlling for age and residence.

Annexure 2: Allocation rule for private consumption

Private education consumption

Allocated by applying the regression technique, and by using private (out-of-pocket) education expenditure data from the National Sample Survey (55th Round) of Consumer Expenditure in India, 1999-00.

Private health consumption

Allocated by applying the regression technique, and by using private health expenditure data from the National Sample Survey (55th Round) of Consumer Expenditure in India, 1999-00.

Private consumption other

Allocated by the technique of Equivalence Scale

Annexure 3: Allocation rule for public education consumption

Public education consumption

- Share of enrolment in public education institutions (Government and local body schools or colleges) is proportional to the attendance rate of students in public education institutions within each level of education.
- Structure of attendance rate in 1999-00 remained the same as in 1995-96.
- Share of aggregate public education consumption is proportional to share of revenue expenditure on education and training by education and non-education departments within each level of education.
- Per capita public education consumption is uniform within primary, secondary, and higher education.
- Equal per capita consumption for training and adult education for the population in the age group 25-59 years. Population by single year in Census of India 2001 is used for estimation of per capita consumption of training and adult education.

Annexure 4: Age allocation rule for public health and other consumption

Public health consumption

- Age specific utilization rates of public health facilities
- Age specific per head cost of public health facilities utilization are extracted from the NSSO,2004 healthcare and morbidity survey. These age specific rates are applied to 2001 census age distribution and adjusted by NIPA

Non-public health consumption

Allocated on per capita basis for the entire population

Public consumption other

Allocated on per capita basis for the entire population

Annexure 5: Aggregate controls for estimation of public transfers

Variables	Definition	Measurement for India's NTA	Data sources
In-kind transfers	<ul style="list-style-type: none"> • In-kind transfers of education • In-kind transfer of health • In-kind transfer of others 	Proportion of total final Government Consumption Expenditure of administrative departments to education, health, and others - determined by the share of expenditure on education, health, and others in the Government Final Consumption Expenditure by Purpose	Statement 29, National Income Statistics 2005 Statement 36, National Income Statistics 2005
Cash transfers	Sum of social benefits (e.g. National Social Assurance Programme and Other Social Security and Welfare Programmes) and other current transfers	Current transfers from government administrative departments to private income	Statement 4, National Income Statistics 2005
Explicit taxes	Direct taxes Indirect taxes	<ul style="list-style-type: none"> • Income tax • Corporation tax • All indirect taxes 	Statement 4, National Income Statistics 2005 Table 1.2, Indian Public Finance Statistics 2001-02
Implicit taxes	Non-tax revenues	Sum of non-tax revenues and balance between public sector inflows and outflows	Table 1.2, Indian Public Finance Statistics 2001-02

Annexure 6: Age allocation rules for public transfer variables

Aggregate control variable	Age allocation rule	Data source
1. Public transfer inflows		
In-kind transfers	Allocated by the same rule as that of public consumption of education, health, and others in the estimation of Life Cycle Deficit, 1999-00, as given in Table A1.	Same as in Table A1 for public consumption of education, health, and others
Cash transfers	Allocated in proportion to the number of pensioners by age. NSSO's Employment and Unemployment Survey 1999-00 (55 th Round: July 1999 – June 2000) provides with data on usual principal activity particulars of household members [Block 5.1]. These particulars include age of pensioners (under rentiers, pensioners, remittance recipients etc: Activity Status Code 94). This data is the basis for age allocation of public cash transfers.	Employment and Unemployment in India, 1999-00 , National Sample Survey 55 th Round (July 1999 – June 2000), National Sample Survey Organisation, Government of India (New Delhi)
2. Public transfer outflows		
Income tax	Allocated in proportion to the income from wages and salaries of workers	Employment and Unemployment in India, 1999-00 , National Sample Survey 55 th Round (July 1999 – June 2000), National Sample Survey Organisation, Government of India (New Delhi)
Corporation tax	Allocated in proportion to the private asset income of	Household Consumer Expenditure in India 1999-00 , National Sample Survey 55 th Round (July-December 1999), National Sample Survey Organisation, Government of India (New Delhi)
Indirect taxes	All indirect taxes are allocated in proportion to household persons' consumption expenditure after deducting for education and health consumption expenditures	Household Consumer Expenditure in India 1999-00 , National Sample Survey 55 th Round (July-December 1999), National Sample Survey Organisation, Government of India (New Delhi)
Non-tax revenues	Allocated in proportion of combined direct and indirect taxes	Same as for income tax, corporation tax, and indirect taxes above

THANK YOU