

ECONOMICS OF AGEING

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Brazil Demography Data

Demographic Statistics Brazil – 1980 to 2030

<u>Year</u>	<u>Median Age</u>	<u>Life Expectancy at Birth.</u>	<u>Ratio of Demographic Dependency/a</u>	<u>Inverse of the demographic dependency ratio.</u>	<u>Population 0 – 14 years of age/b</u>	<u>Population 0 – 14 years of age as a % of the total population.</u>	<u>School age population /c</u>	<u>School age population as a % of the total population.</u>
1980	20,3	63,4	10,9	9,17	45.339.850	38,24	70.363.097	59,4
1990	22,5	67,2	11,66	8,58	51.789.936	35,33	80.418.237	54,9
2000	25,3	71	13,08	7,64	51.002.937	29,78	84.821.134	49,5
2010	29	73,5	15,48	6,46	49.439.452	25,58	83.083.466	43
2020	33,6	75,9	20,64	4,85	41.571.334	20,07	75.427.382	36,4
2030	37,9	77,7	29,08	3,44	36.761.006	16,99	65.474.084	30,3

a: Ratio between the population of 60 years or older and the population of 15 to 59 years.

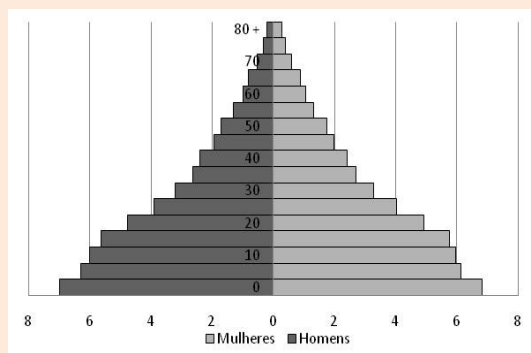
b: Group of individuals of 0 to 14 years old.

c: Group of individuals of 0 to 24 years old.

Reference: Paulo Tafner and Marcia Carvalho – Rumo a uma Política Social Flexível.

Changes on age structure and tendencies for the next decades

1980



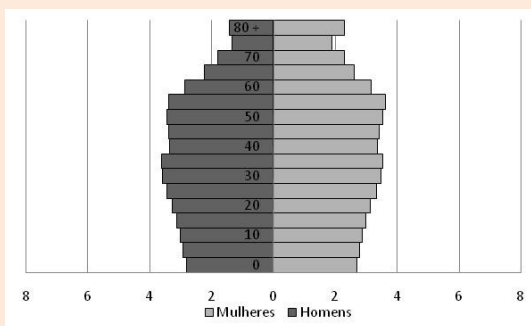
2000



2020



2040



Time period	TFR	> Age 60 (%)
1960	6,28	4,7
1980	4,36	6,0
2000	2,3	8,5
2020	1,53	13,7
2040	1,5	23,8

Reference: IBGE/Censos Demográficos e Projeções Populacionais (Revisão 2013).

Introducing Age Into National Accounts

National Transfer Accounts

National Transfer Accounts quantify the economic flows for members of each age group or generation.

The flows are important because they reflect a fundamental feature of all societies: the economic lifecycle.

Transfers by Sector

Flows are disaggregated by sector, public and private.

Public transfers consist of two flows:

- a) inflows to each age group that arise from publicly funded health, education, pensions, and other public programs;
- b) outflows from each age group, typically in the form of taxes, that fund these programs.

Private transfers include both the flows between households and those that occur within households.

Public and Private Transfers

At ages below 5, publicly funded health care is the largest source of consumption;

Between ages 5 and 15, public education becomes the largest age-related component;

Pensioners - The lack of a minimum retirement age leads to incentives to early retirement

Pension Benefits, on August 2018, for age and time of contribution, begin at age 45 and reach a plateau at the age bracket 60 to 70 years for time of contribution and 70+ for age.

Public and Private Transfers

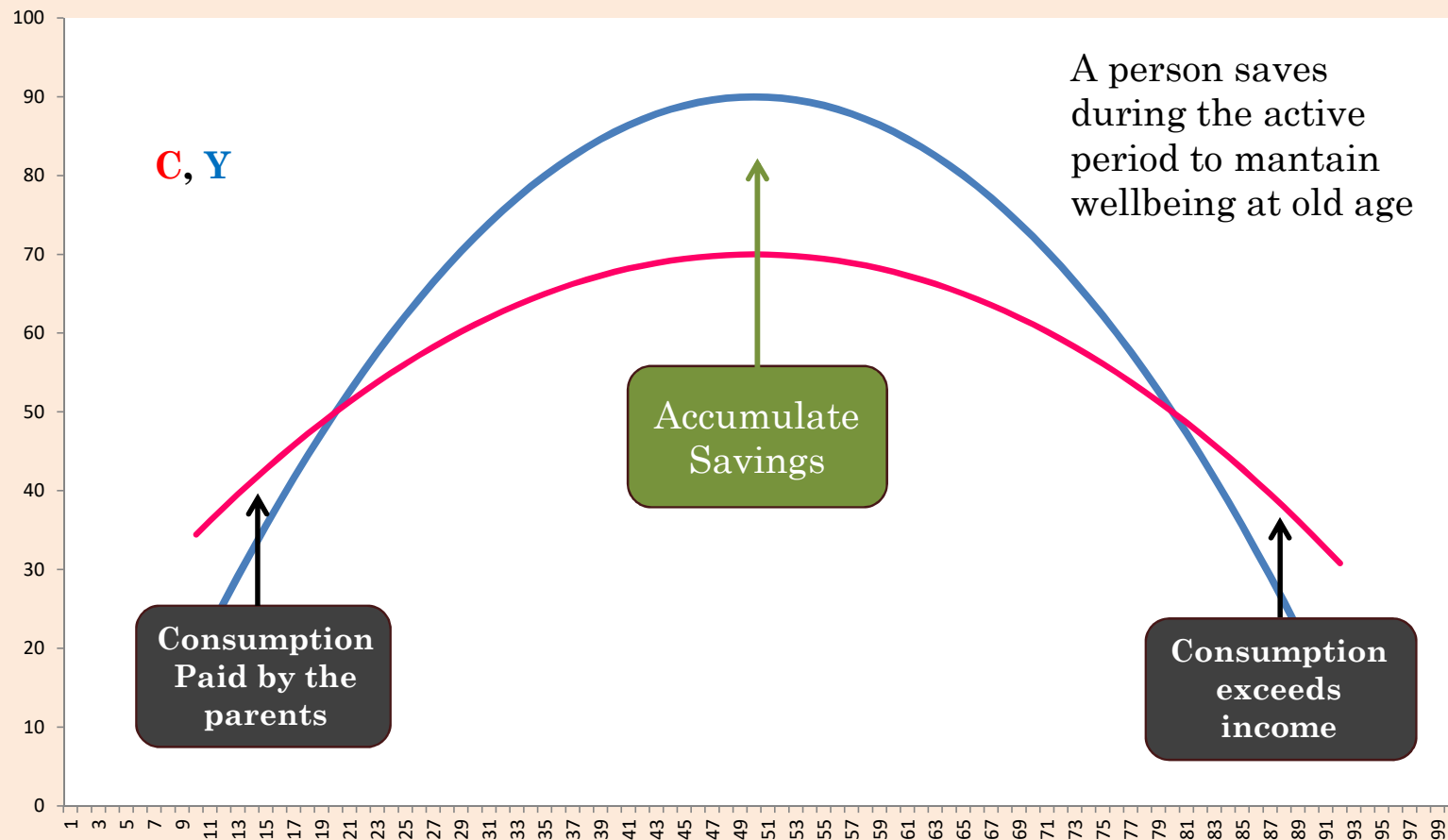
Among people aged 65 and above:

Net public transfers account for more than 90% of the consumption (Turra et alii p.397);

Net private transfers are negative for the elderly, ie, the elderly make private transfers to their adult children;

This pattern may be an indirect effect of the substantial support that the elderly receive from the public sector in Brazil.

The Economic Lifecycle



Intergeneration Transfers in Brazil

The Economic Lifecycle in Brazil

The normalized lifecycle surplus (or deficit) is the positive (or negative) difference between labor income and consumption at each age divided by the average labor income at ages 30–49.

The surplus stage for the Brazilian people lasts about 20 years, starting between ages 30 and 35 and ending between ages 50 and 55. (Turra p.395)

The Economic Lifecycle in Brazil

The old-age lifecycle deficit occurs at an early age and is very large in Brazil.

This is explained by

- a) The absence of strict rules linking benefits to contributions, which creates incentives to withdraw early from the labor force;
- b) There is a steady increase of consumption with age, which is driven mainly by the consumption of private health care;

Elderly Biased Public Transfers in Brazil: Impact of the Model of Economic Development

- In Brazil the consolidation of primary state-run education did not occur before most of the elderly population had begun receiving retirement benefits (Rios-Neto, 2005).
- Economic development based on import substitution (an industrial bias) has increased the importance of the social security system in the Brazilian welfare state, while neglecting investments in education and health.

Public Transfers to Children Brazil – 2010 and 2015

PUBLIC TRANSFERS TO CHILDREN IN BRAZIL	2010	2015
HEALTH (0 to 19 years old)		
R\$ billion	25.658	39.518
USD PPP billion	19.234	21.178
EDUCATION		
Expenditures in Primary, Secondary and Post-Secondary non-Tertiary Education - R\$ Billion	166.249	283.532
Expenditures in Primary, Secondary and Post-Secondary non-Tertiary Education - USD PPP Billion	119.949	151.946
TOTAL (HEALTH + EDUCATION) - R\$ Billion	192.907	323.050
TOTAL (HEALTH + EDUCATION) - USD PPP Billion	138.677	173.124

According to OECD Data, in 2010 - 1.386 Real = 1 USD PPP and in 2015 1.866 Real = 1 USD PPP. The exchange rates were, in 2010 R\$ 1.759 = 1 USD and in 2015 R\$ 3.327 = 1 USD.

Public Transfers to the Elderly (ages 60+)

PUBLIC TRANSFERS TO THE ELDERLY (AGES 60+)	2010	2015
ELDERLY (60+ YEARS OF AGE)		
HEALTH		
R\$ billion	45.541	88.474
USD PPP billion	32.858	47.414
PENSIONS - RGPS (General Rules and Regulation of the Social Security System)		
PENSIONS - R\$ Billion	149.678	255.704
PENSIONS - USD PPP Billion	107.993	137.033
PENSIONS BY DEATH - R\$ Billion	54.974	92.027
PENSIONS BY DEATH - USD PPP Billion	39.664	49.318
AID (Illness, Prision, Accident) - R\$ Billion	11.740	21.546
AID (Illness, Prision, Accident) - USD PPP Billion	8.470	11.547
TOTAL VALUE OF PENSIONS - R\$ Billion	216.392	369.277
TOTAL VALUE OF PENSIONS - USD PPP Billion	156.127	197.898
TOTAL VALUE OF PENSIONS + HEALTH -- R\$ Billion	261.933	457.751
TOTAL VALUE OF PENSIONS + HEALTH -- USD PPP Billion	188.985	245.311

According to OECD Data, in 2010 - 1.386 Real = 1 USD PPP and in 2015 1.866 Real = 1 USD PPP. The exchange rates were, in 2010 R\$ 1.759 = 1 USD and in 2015 R\$ 3.327 = 1 USD.

Public Transfers to Children and Elders (60+) in Brazil, 2010 and 2015

PUBLIC TRANSFERS TO CHILDREN (0-15) AND ELDERS (60+) IN BRAZIL, 2010 and 2015	2010	2015
CHILDREN		
TOTAL (HEALTH + EDUCATION) - R\$ Billion	192.907	323.050
TOTAL (HEALTH + EDUCATION) - USD PPP Billion	138.677	173.124
ELDERLY 60+		
TOTAL VALUE OF PENSIONS + HEALTH R\$ Billion	261.933	457.751
TOTAL VALUE OF PENSIONS + HEALTH -- USD PPP Billion	188.985	245.311
ELDERLY 60+ - CHILDREN (ABSOLUTE VALUES) R\$ Billion	69.026	134.701
ELDERLY 60+ / CHILDREN (RELATIVE VALUES IN USD PPP) %	138.27%	141.70%

*OBS.: CHILDREN, for education ,persons with 0 - 15 years of age, for health persons 0 – 19 years of age.
ELDERS 60+ persons in the age brackets 60 to 69 years old, 70 to 79 and 80+.*

Public Resources Per Capita Received by Children and Youth (0 – 19) and Elderly (60+) in Brazil – 2010 and 2015.

PUBLIC RESOURCES PER CAPITA RECEIVED BY CHILDREN AND ELDERLY IN BRAZIL – 2010 and 2015	Resources Per Capita	
	2010	2015
<u>CHILDREN</u>		
PER CAPITA VALUE (HEALTH + EDUCATION) - R\$	2,929.71	5,136.58
PER CAPITA VALUE (HEALTH + EDUCATION) - USD PPP	2,106.11	2,752.72
<u>ELDERLY 60+</u>		
PER CAPITA VALUE OF PENSIONS + HEALTH R\$	13,584.33	19,705.17
PER CAPITA VALUE OF PENSIONS + HEALTH -- USD PPP	9,801.11	10,560.09

Policy Implications

Transfers to Children and Youth and to the Elderly

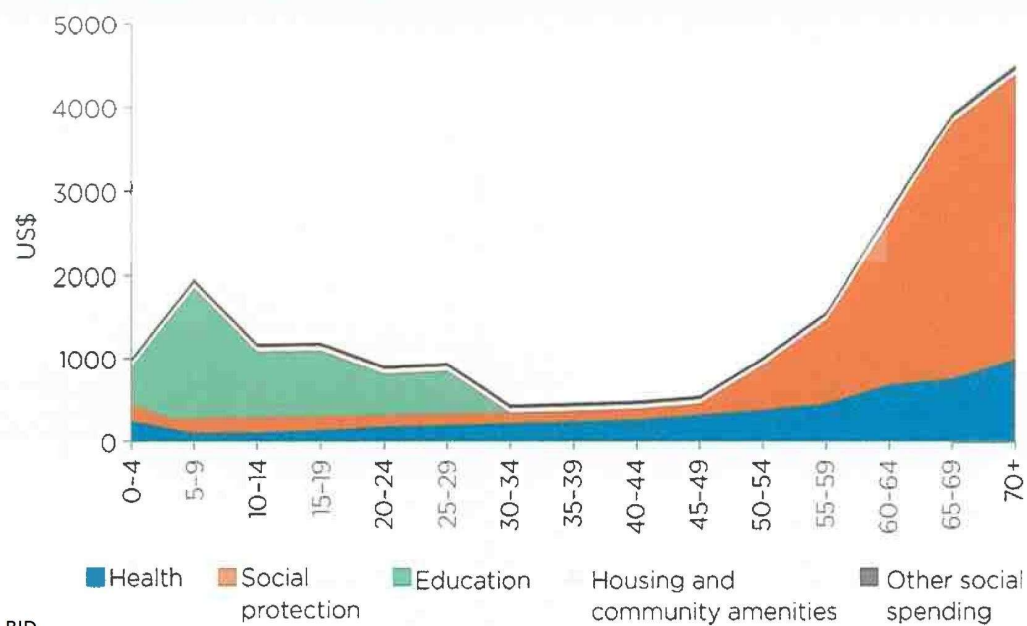
1-) It is necessary to study the relationship between intergenerational transfers and measures of well being, like poverty rates and income inequality.

➔ Might help policymakers to improve investments in children's human capital.

2-) Large amounts of public resources are transferred to the elderly every year severely constraining transfers to children, especially to poor children.

➔ Reduce the rate of growth of the expenditures with social security and increase the rate of growth of the expenditures with education at primary, secondary and post-secondary levels, and public health for children and youth (0 to 19).

Figure 7. Per capita Government Spending by Age Group



Source: BID

Per capita expenditure of LAC countries according age of beneficiaries

Age of beneficiaries	Per capita expenditure of LAC countries
0 – 10	1,500
10 – 25	1,000
30 – 49	500
65+	4,000

Source: IDB Better Spending for Better Lives

Increase of Public Spending on Aging in the LAC Region from 2015 to 2065

Total Increase from 2015 to 2065 on	%
Pension costs	8
Public Health	5.2
Education	-1.6
Public Spending on Aging in the LAC Region, from 2015 to 2065 : 16% to 27.6% of GDP. <i>Source: IDB–Better Spending for Better Lives</i>	

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THANK YOU!