

BRAZIL BEYOND 2010

OPPORTUNITIES AND CHALLENGES



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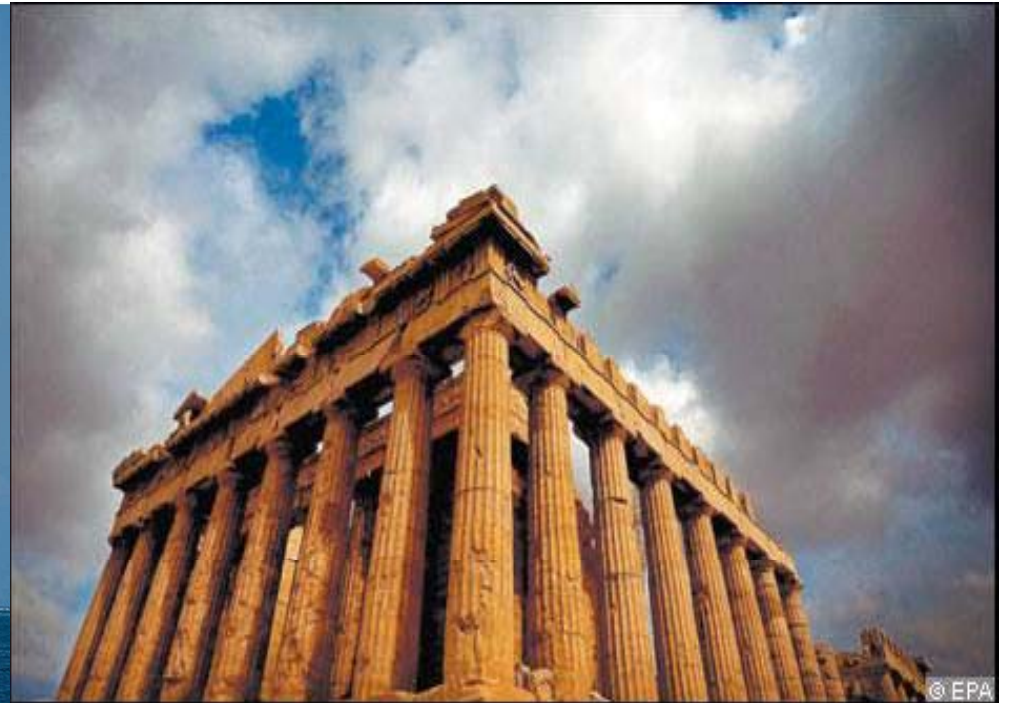
I thank Fabio Giambiagi (BNDES), Ilan Goldfajn (Itaú-Unibanco), Rodrigo Soares (PUC-Rio), Fernando Veloso (IBMEC-RJ) and Rogério Werneck (PUC-Rio), for slides, data and invaluable insights. Alessandro Rivello and Pedro Tepedino provided excellent research assistance. All errors are mine.

Outline

- Introduction
- Long-Term Threats and Opportunities
- Medium and Short-Term Challenges
- Conclusion

Long-Term Perspectives for the Brazilian Economy

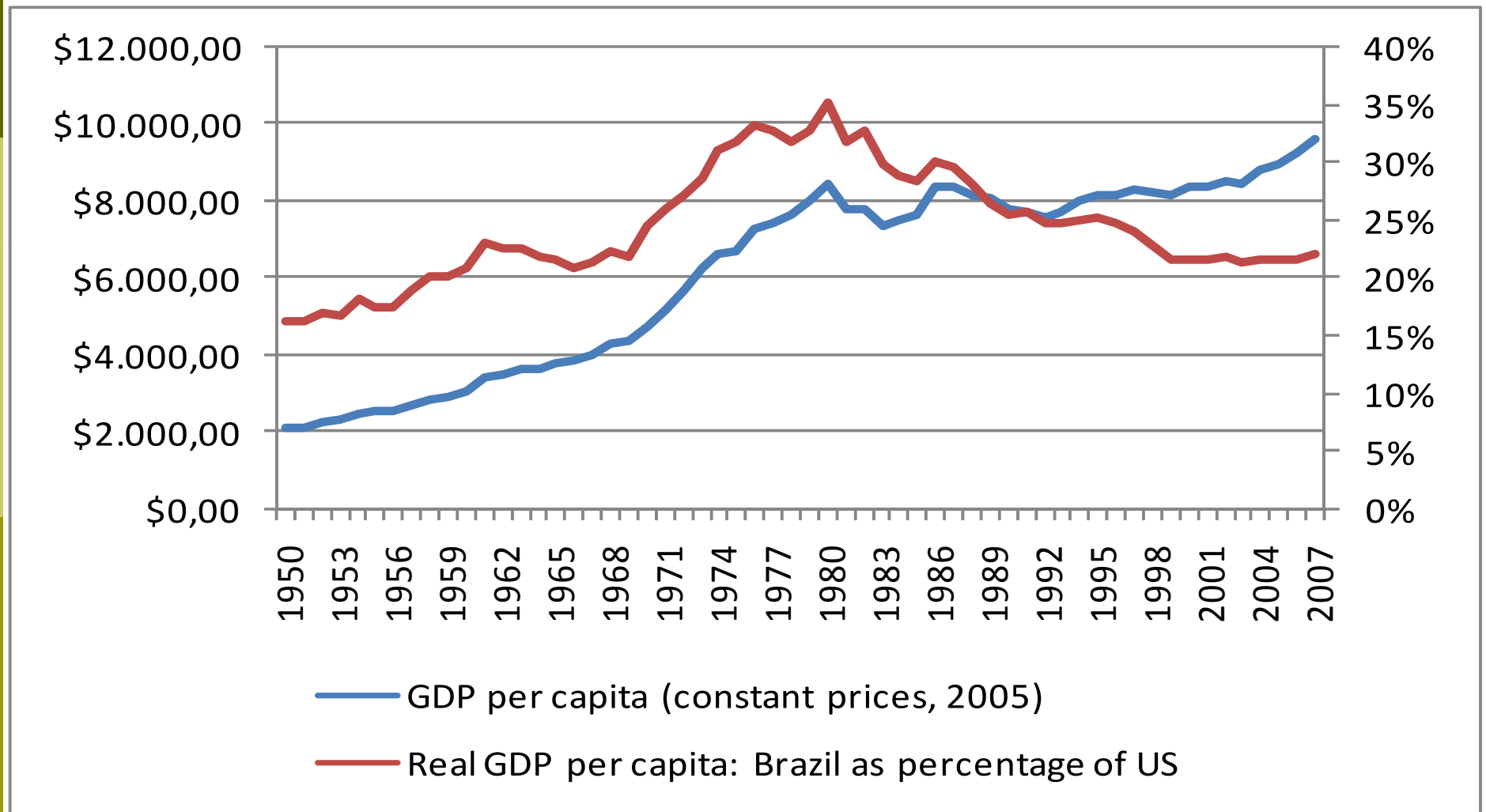
Opportunities & Threats



How to achieve sustainable growth? (1)

- After growing vigorously during the half-century after 1930 (GDP increased at 6.5% annually; and GDP per capita at 3.7%), the Brazilian economy stalled.
- The loss of growth momentum after 1980 was associated with the worsening of several other macroeconomic indicators:
 - Public savings fell precipitously;
 - Investment/GDP ratio also fell;
 - Inflation rose up to hyperinflation levels;
 - Real Exchange Rate depreciated remarkably.

GDP per Capita: Brazil (1950-2007)

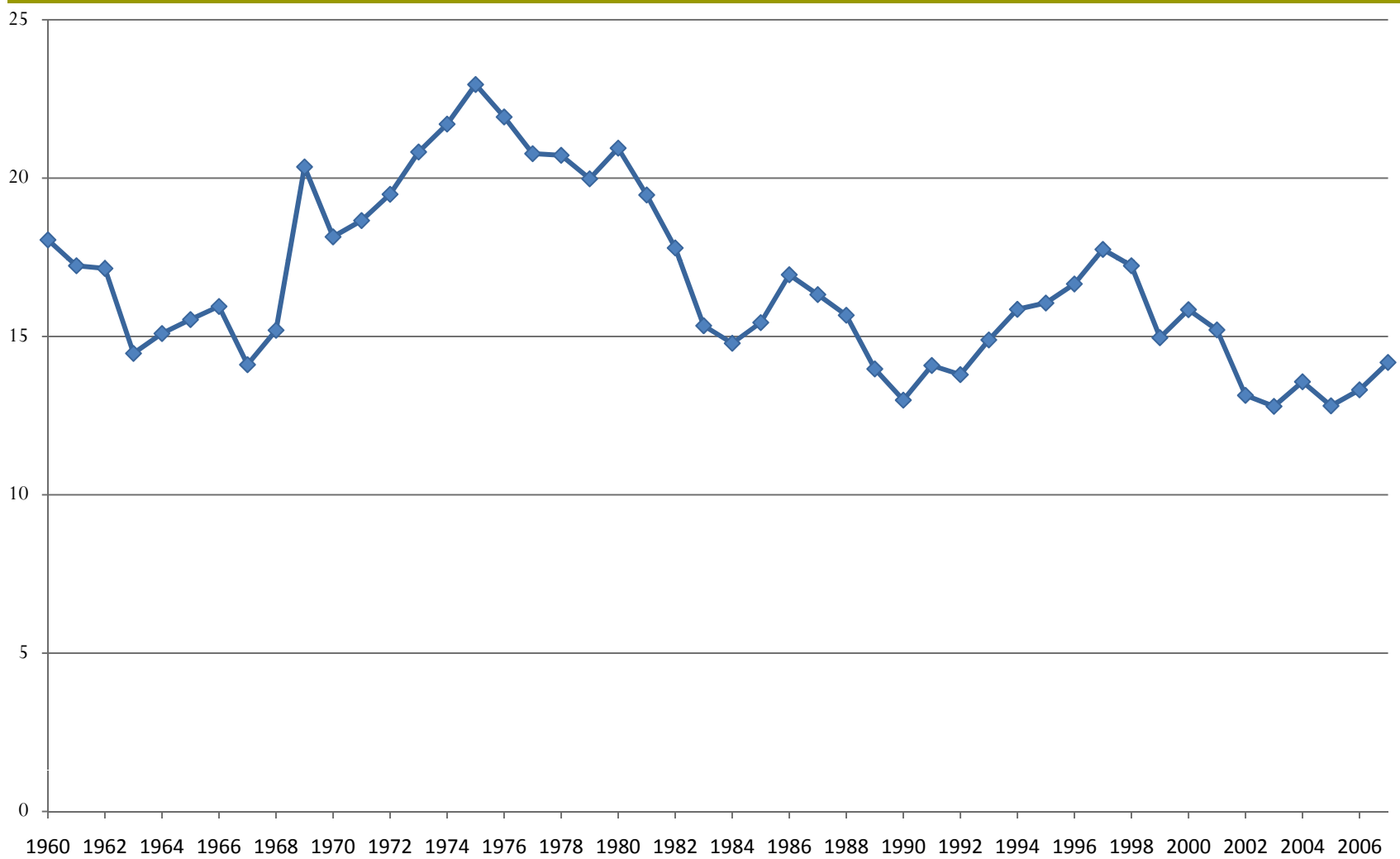


Data Source: Penn World Table 6.3 (http://pwt.econ.upenn.edu/php_site/pwt63/pwt63_form.php).

How to achieve sustainable growth? (2)

- It is customary to emphasize that, in order to achieve sustainable growth, Brazil needs to increase investment as a share of GDP, especially in infrastructure.

Investment/GDP (%): Brazil (1960-2007)

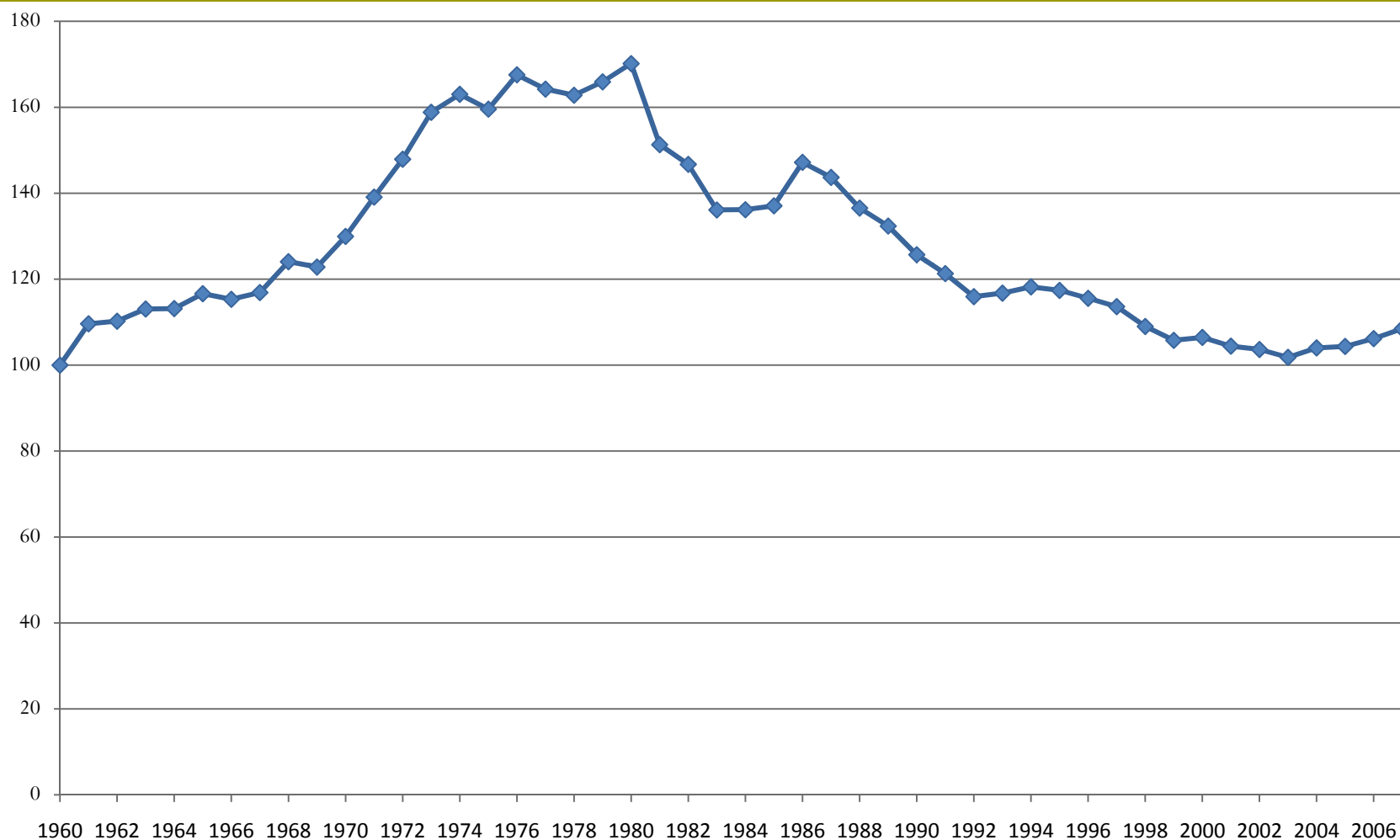


Source: Fernando Veloso (IBMEC-RJ) from Penn World Table 6.3 data.

How to achieve sustainable growth? (3)

- However, equally or more important, but much less cited, is the need to increase total factor productivity (TFP).

Total Factor Productivity : Brazil (1960-2007)



Source: Fernando Veloso (IBMEC-RJ) from Penn World Table 6.3 data.

How to achieve sustainable growth? (4)

- Brazil's output per worker is 22,3% of the US's.
- According to Veloso [2010], 84% of the difference between output per worker in Brazil and in the US is explained by human capital (45%) and TFP (39%).
- To achieve sustainable growth, it is necessary:
 - Increase the share of investment in GDP;
 - Improve the quality of human capital (Education);
 - Create conditions conducive to TFP growth.

Why TFP in Brazil is low and has grown very little?(1)

- ❑ Despite the important reforms during the 1990s (macroeconomic stabilization, trade opening, privatizations), TFP has grown little until 2003.
- ❑ Studies indicate that low TFP growth in Latin America after economic reforms are associated with inefficiencies in the allocation of production factors.
- ❑ Such inefficiencies account for a substantial part of the difference between TFP in developing countries and the US.

Why TFP in Brazil is low and has grown very little? (2)

- If existing production factors were more efficiently allocated, TFP would grow substantially.
- One important cause of inefficient factor allocation is **informality**. Informal firms tend to be too small and inefficient.
- In the World Bank's "Doing Business" overall classification, Brazil ranks 129nd among 183 countries.
- The report shows many problems in Brazil:
 - Barriers to entry and exit of firms in Brazilian markets;
 - Labor regulations impede efficient labor reallocation;
 - Tax system is too complex and taxes are too high;
 - Lack and cost of credit is still a problem.
- The solution of many of these problems does not require major reforms.

EDUCATION



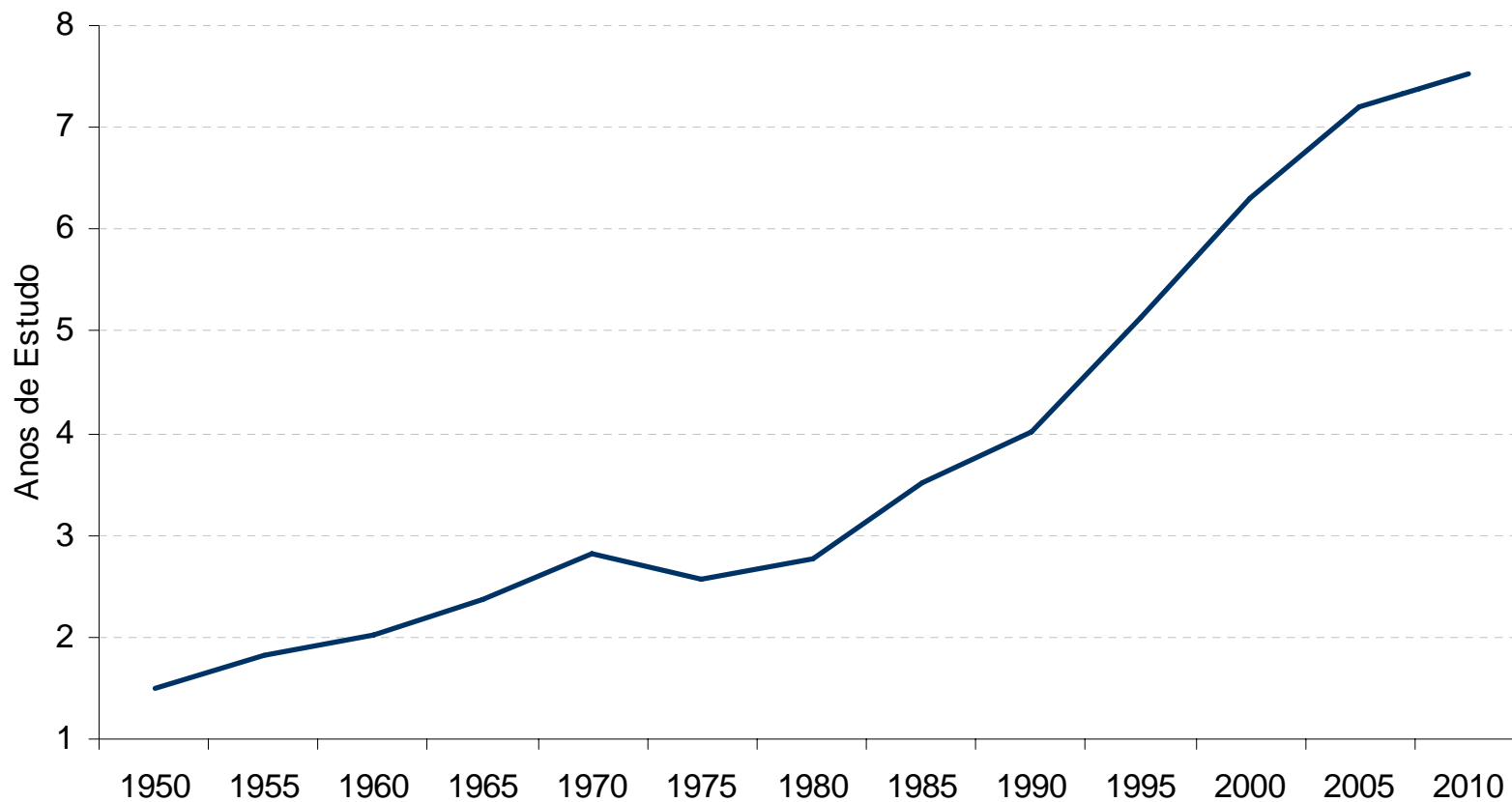
Source: As Rachaduras no Orçamento da Educação, *Revista Época*, May 2nd, 2010
(<http://revistaepoca.globo.com/Revista/Epoca/0,,EMI137349-15223,00.html>).

Education: good and bad news (1)

- **Good news:** unlike our recent past, children are now going to school. Universal coverage has been achieved for the first years of schooling.

Brazil: Average years of schooling (population older than 15)

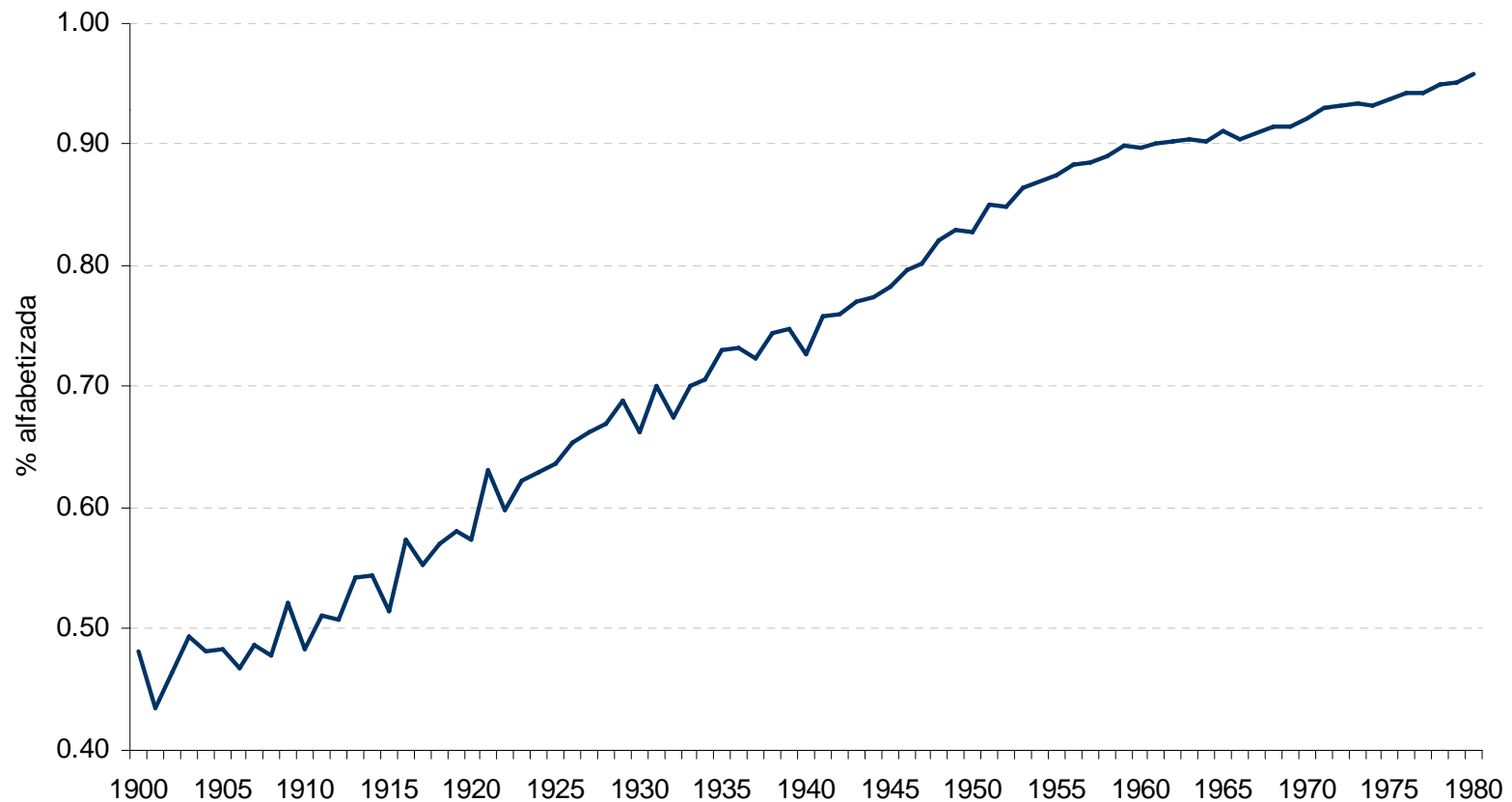
Anos Médios de Estudo da População acima de 15
Brasil, 1950-2010
[Barro & Lee 2010]



Source: Rodrigo Soares (PUC-Rio) from Barro and Lee [2010] dataset.

Brazil: Literacy Rates per year of birth

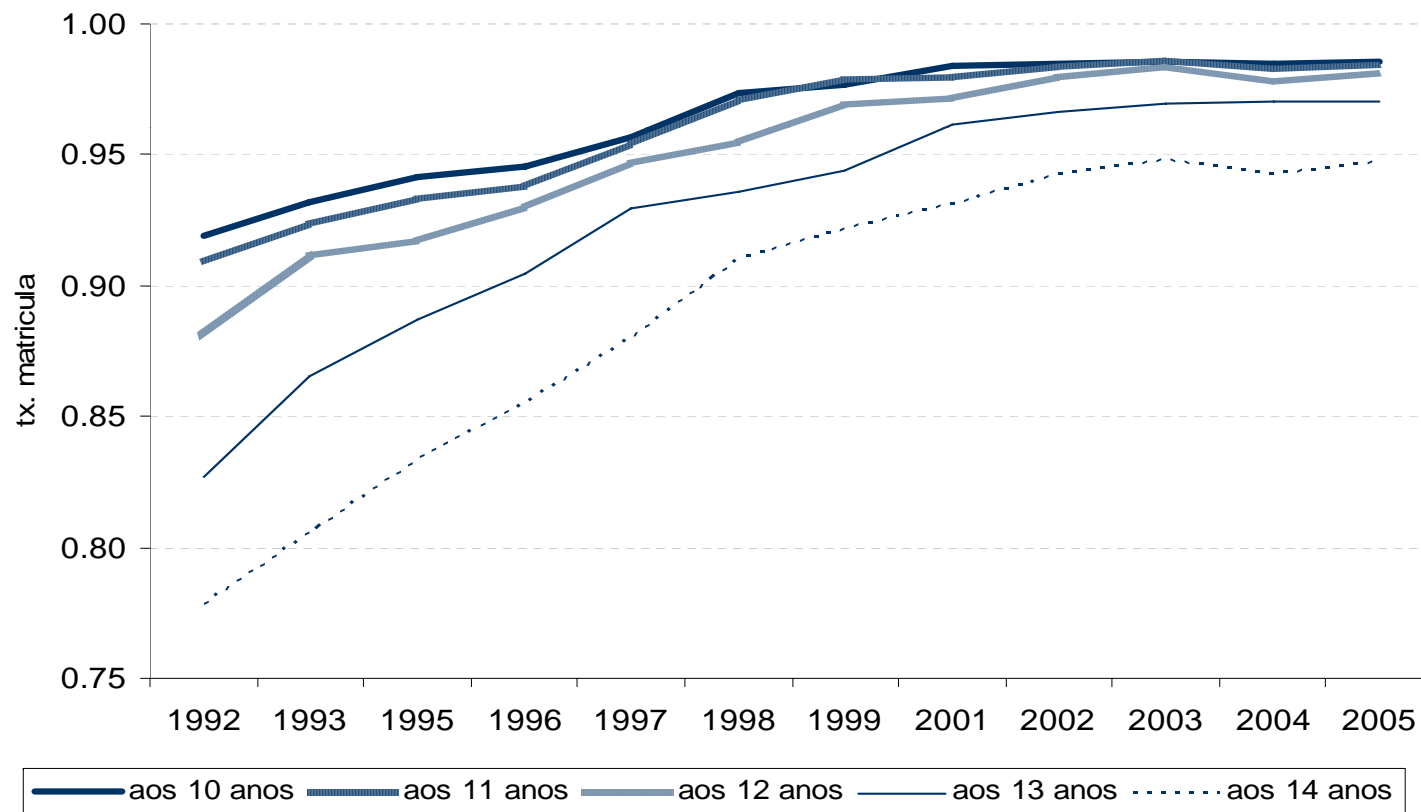
Taxa de Alfabetização por Ano de Nascimento - Brasil - 1900-1980
[PNAD's 1982-2007]



Source: Rodrigo Soares (PUC-Rio) from PNAD dataset - IBGE [1982-2007].

Enrollment Ratios per age and year

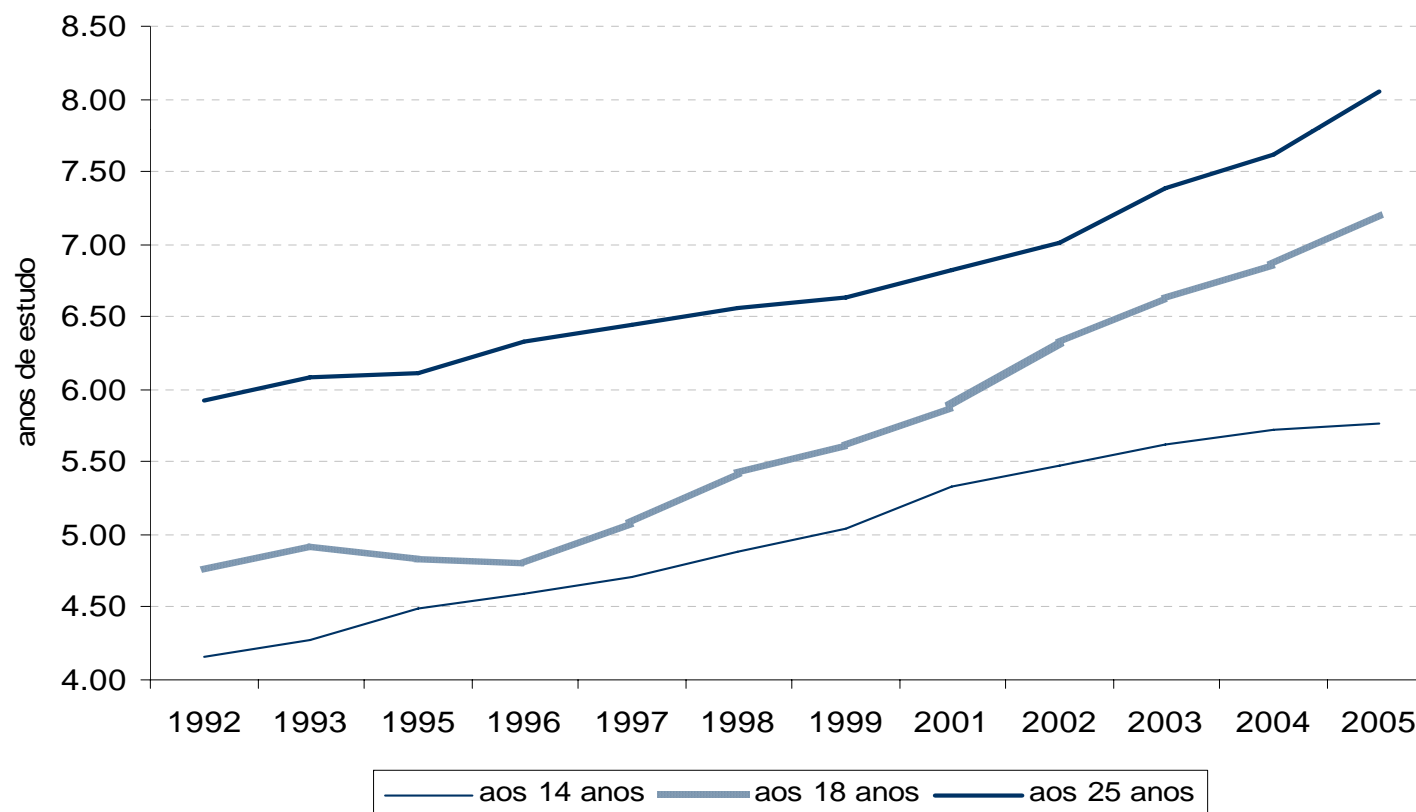
Taxa de Matrícula por Idade e Ano - Brasil - 1992-2005
[PNAD's 1992-2005]



Source: Rodrigo Soares (PUC-Rio) from PNAD dataset - IBGE [1992-2005].

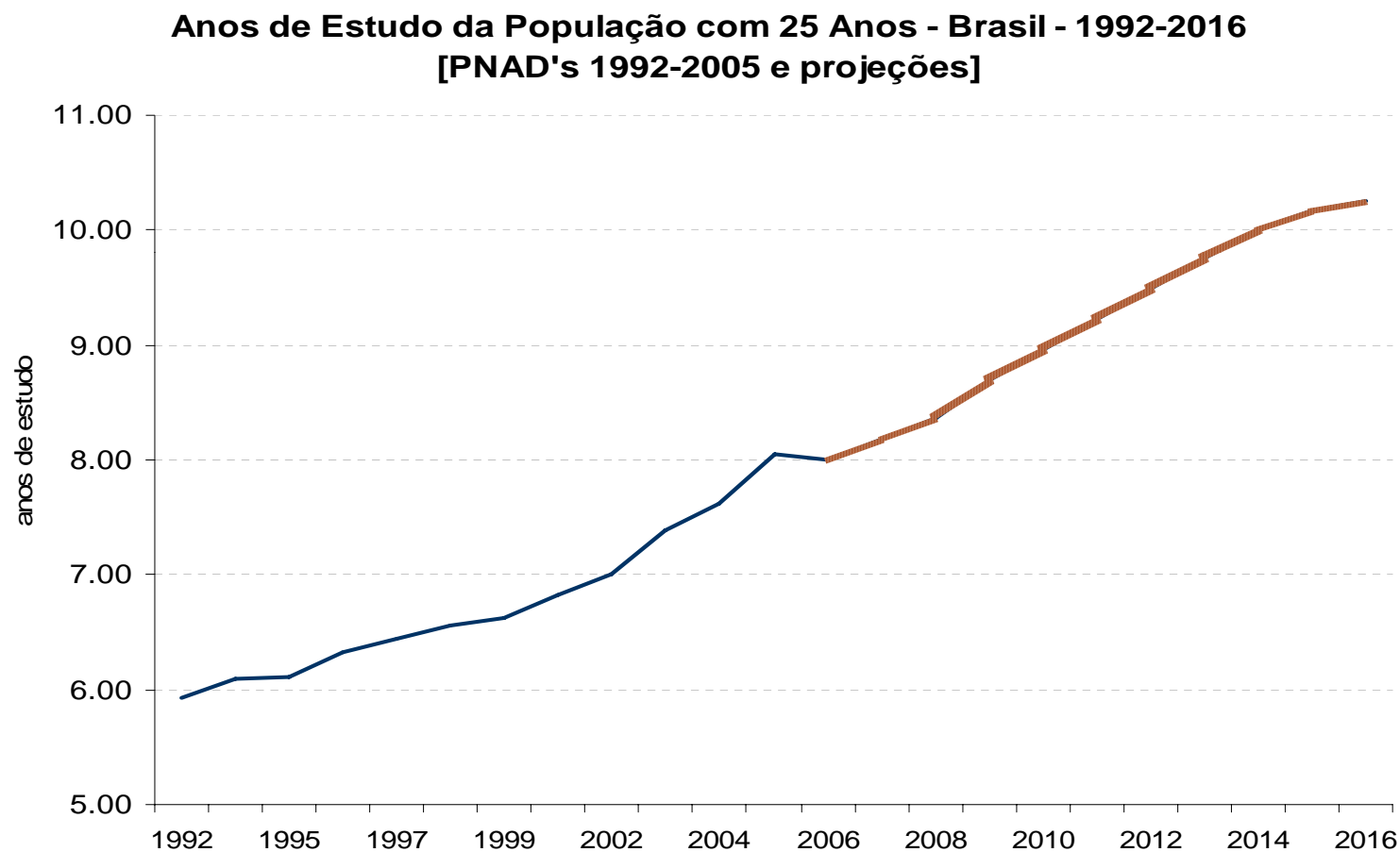
Years of Schooling per age and year

Anos Completos de Estudo por Idade e Ano - Brasil - 1992-2005
[PNAD's 1992-2005]



Source: Rodrigo Soares (PUC-Rio) from PNAD dataset - IBGE [1992-2005].

Year of Schooling at 25: Evolution and Forecast



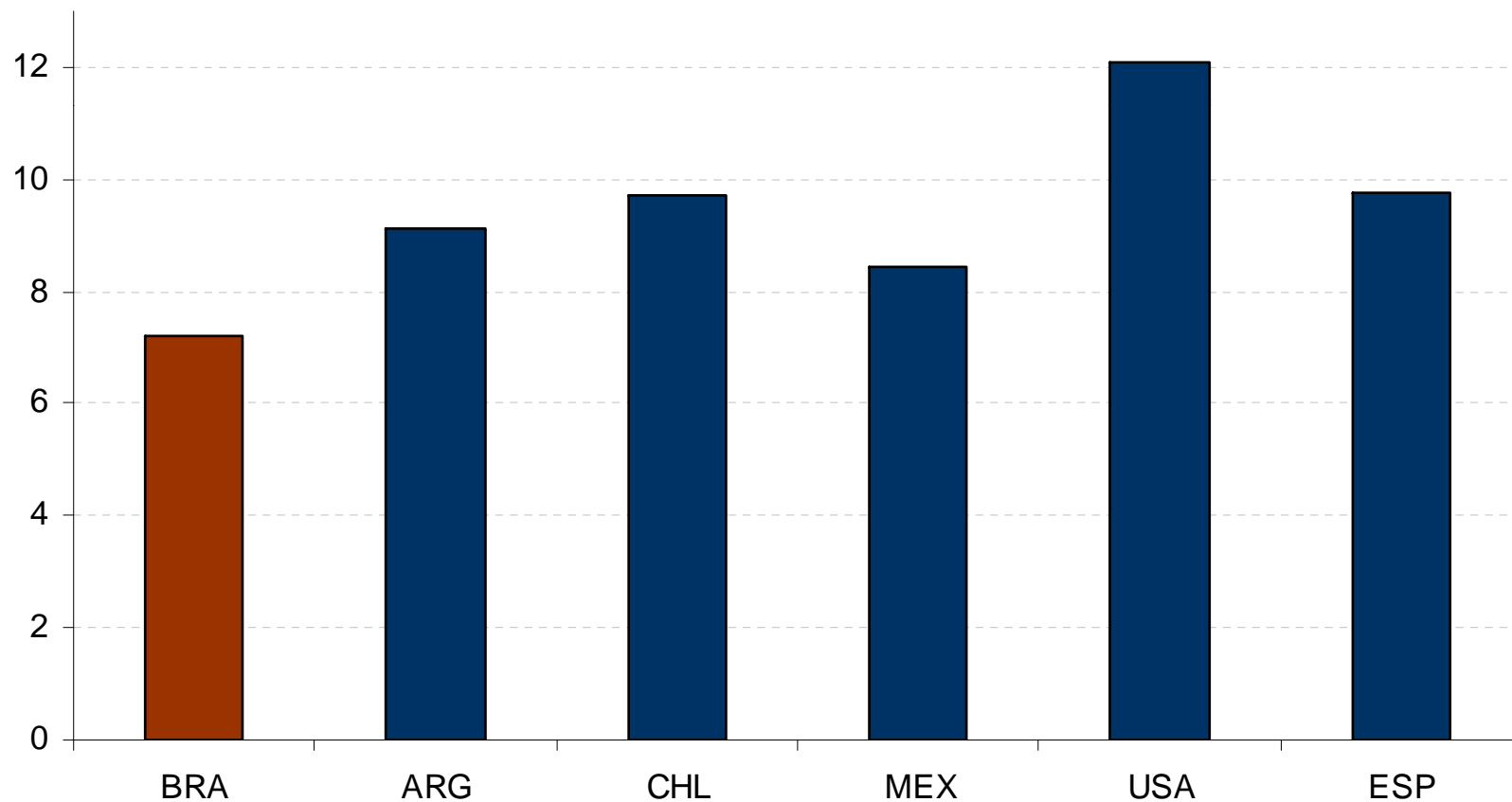
Source: Rodrigo Soares (PUC-Rio) from PNAD dataset - IBGE [1992-2005].

Education: good and bad news (2)

- Good news: unlike our recent past, children are now going to school. Universal coverage has been achieved for the first years of schooling.
- **Bad news:** children are **not** learning nearly enough. There is room for further improvement in year of schooling, but the main flaw is how little students learn.

Average years of schooling (15+)

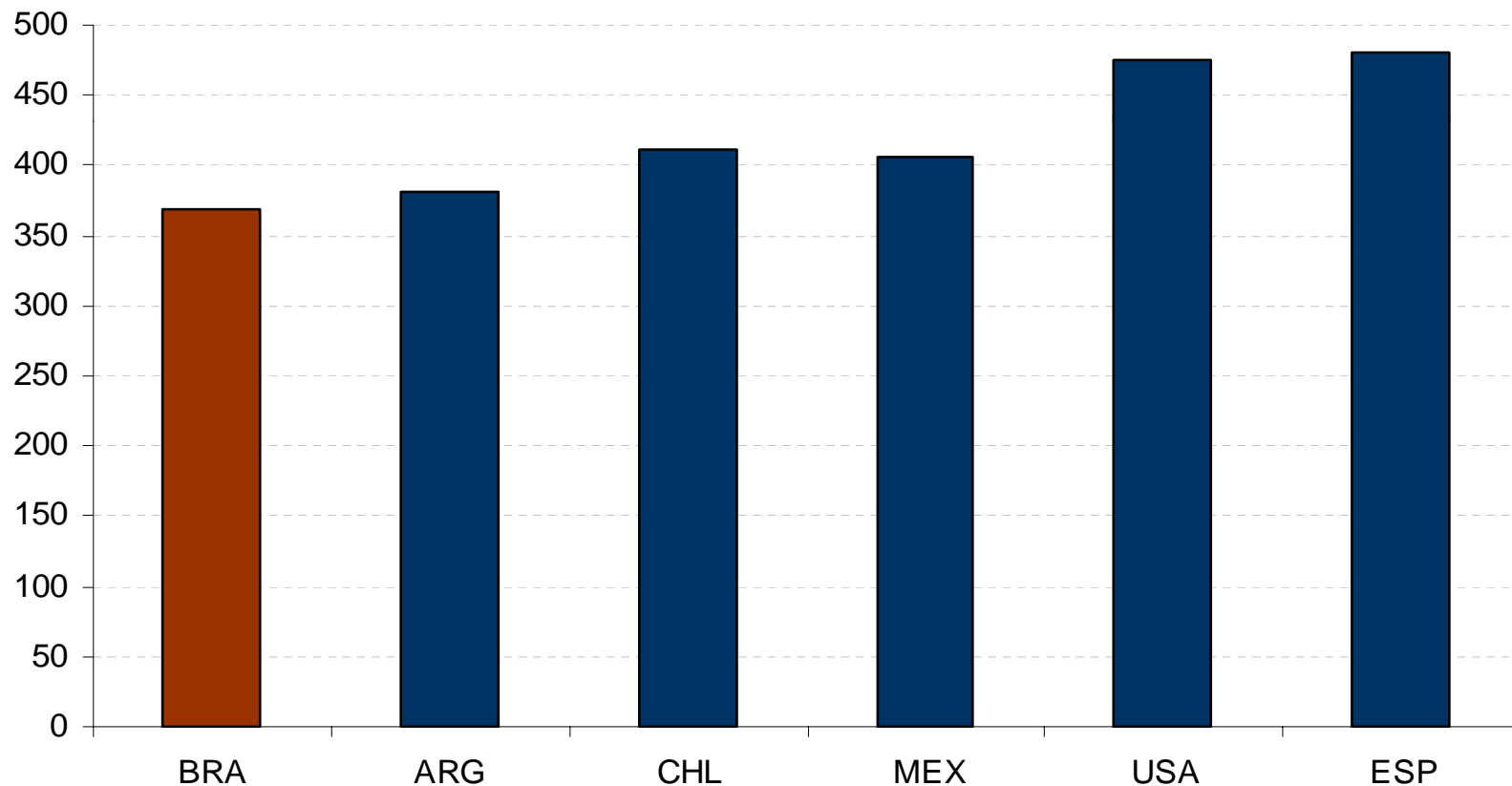
Anos Médios de Estudo da População acima de 15 - 2005
[Barro & Lee 2010]



Source: Rodrigo Soares (PUC-Rio) from Barro and Lee dataset [2010].

Average performance in Math tests

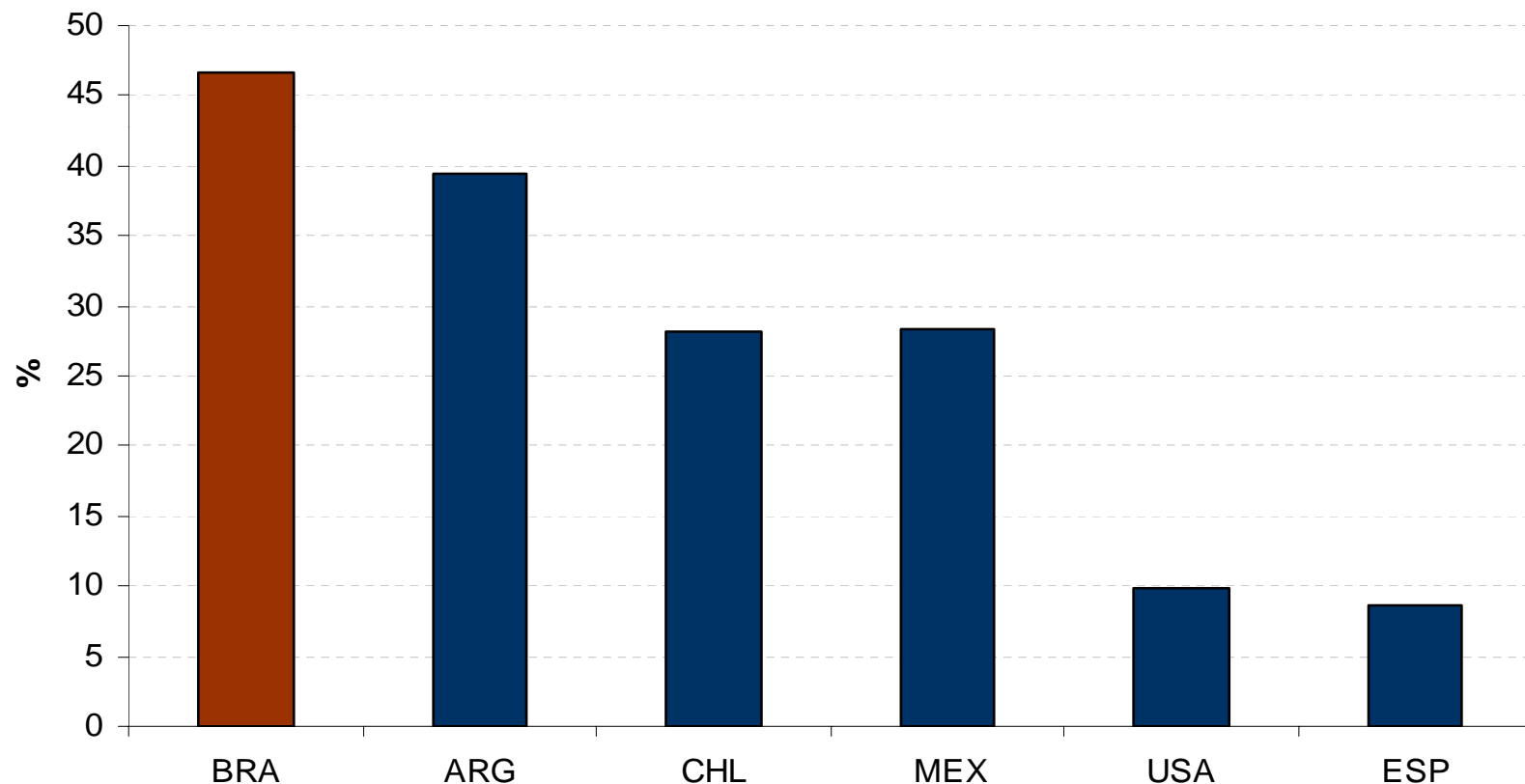
Performance Média no Exame Padronizado de Matemática -
PISA - 2006



Source: Rodrigo Soares (PUC-Rio) from PISA – 2006 scores.

Percentage of students at the minimum proficiency level in Math tests

Porcentagem de Alunos no Nível de Proficiência Mínimo do Exame Padronizado de Matemática - PISA - 2006

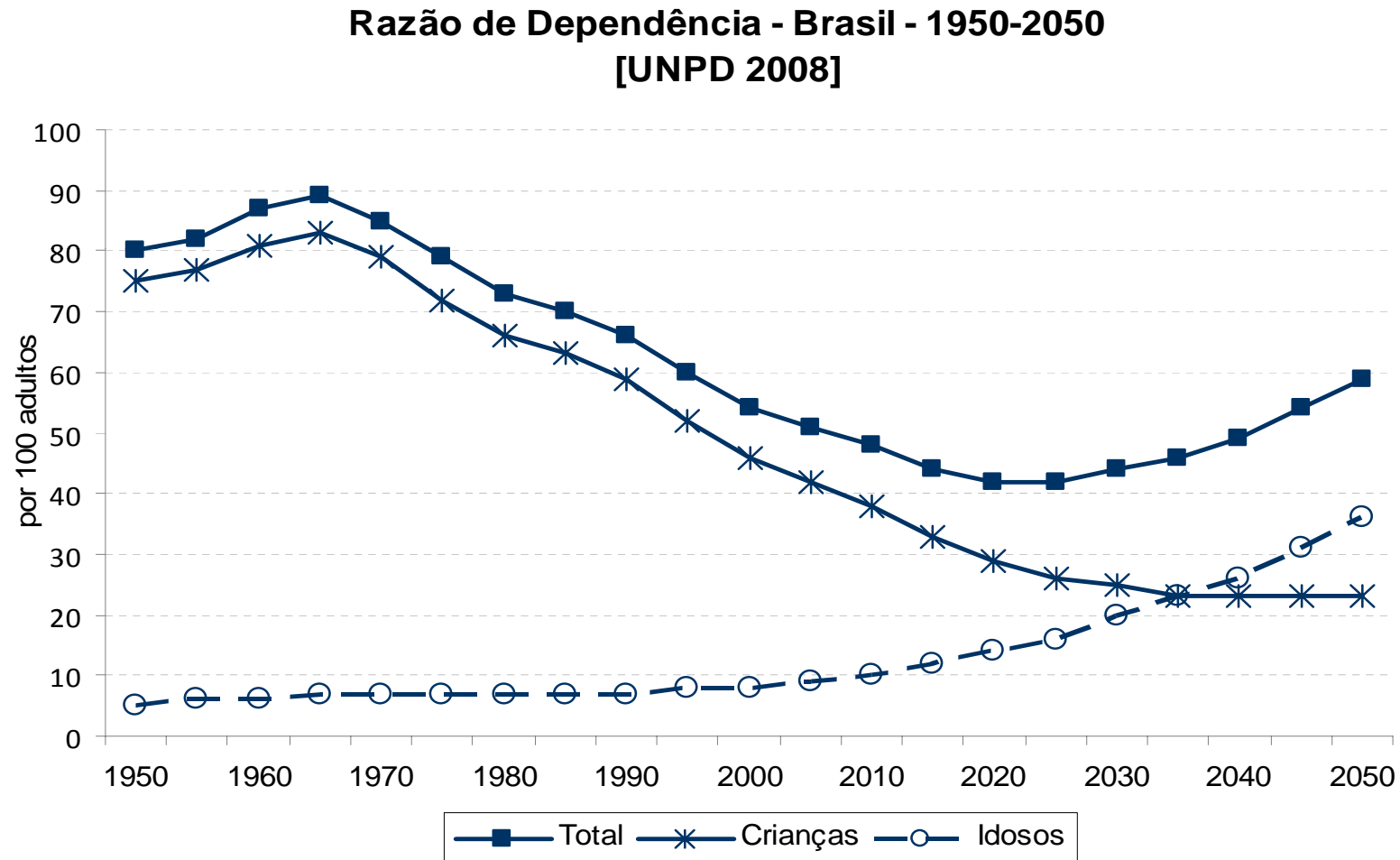


Source: Rodrigo Soares (PUC-Rio) from PISA [2006] scores.

DEMOGRAPHY

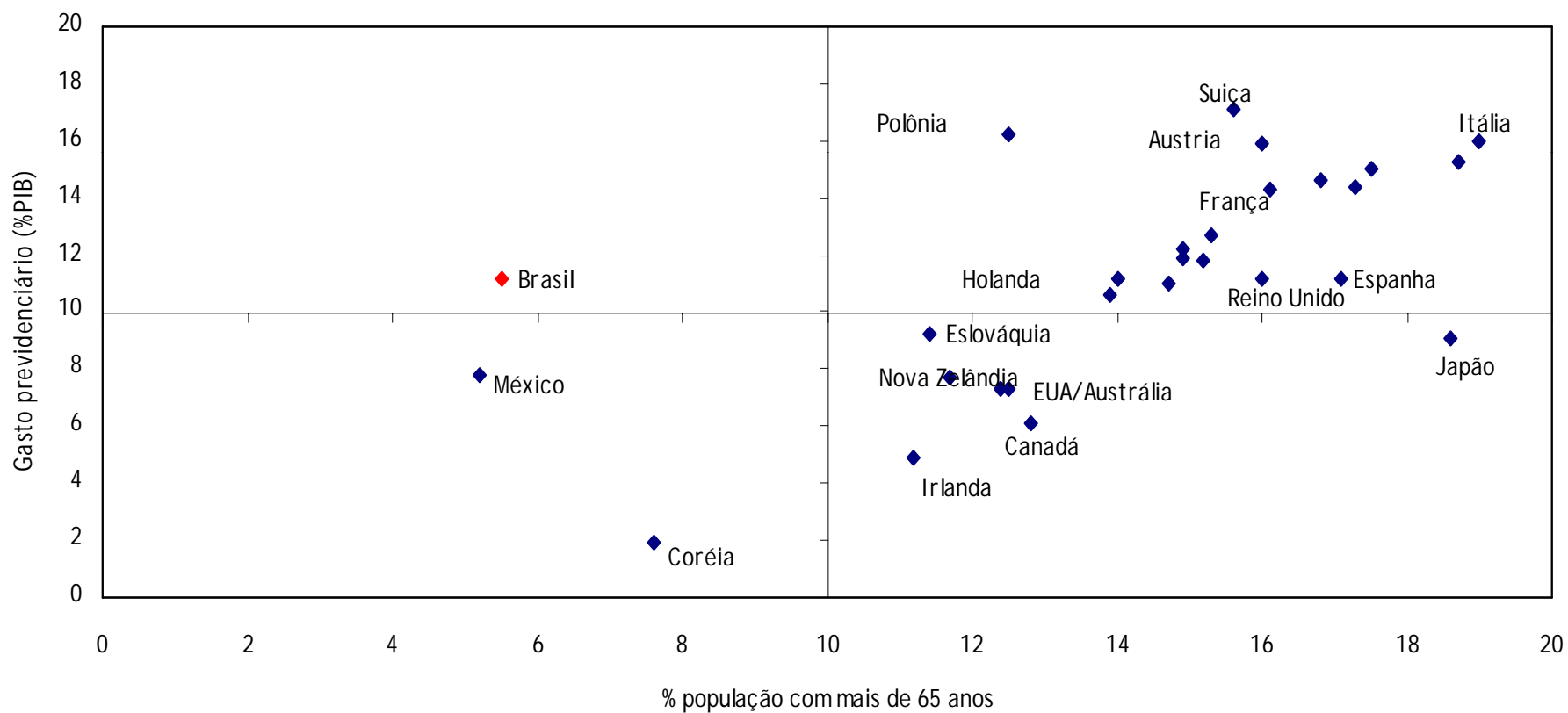
- A key variable to assess the impact of demographic developments is the **dependency ratio**. It is the ratio of the number of people not in the labor force (the dependent part – children and elders) and those in the labor force (the productive part).
- Brazil has a window of opportunity in the next 20 years, when the dependency ratio will reach its minimum. This means that there will be lots of people working when compared to those not working.

Dependency Ratio: Evolution and Forecast



Source: Rodrigo Soares (PUC-Rio) from UNPD [2008].

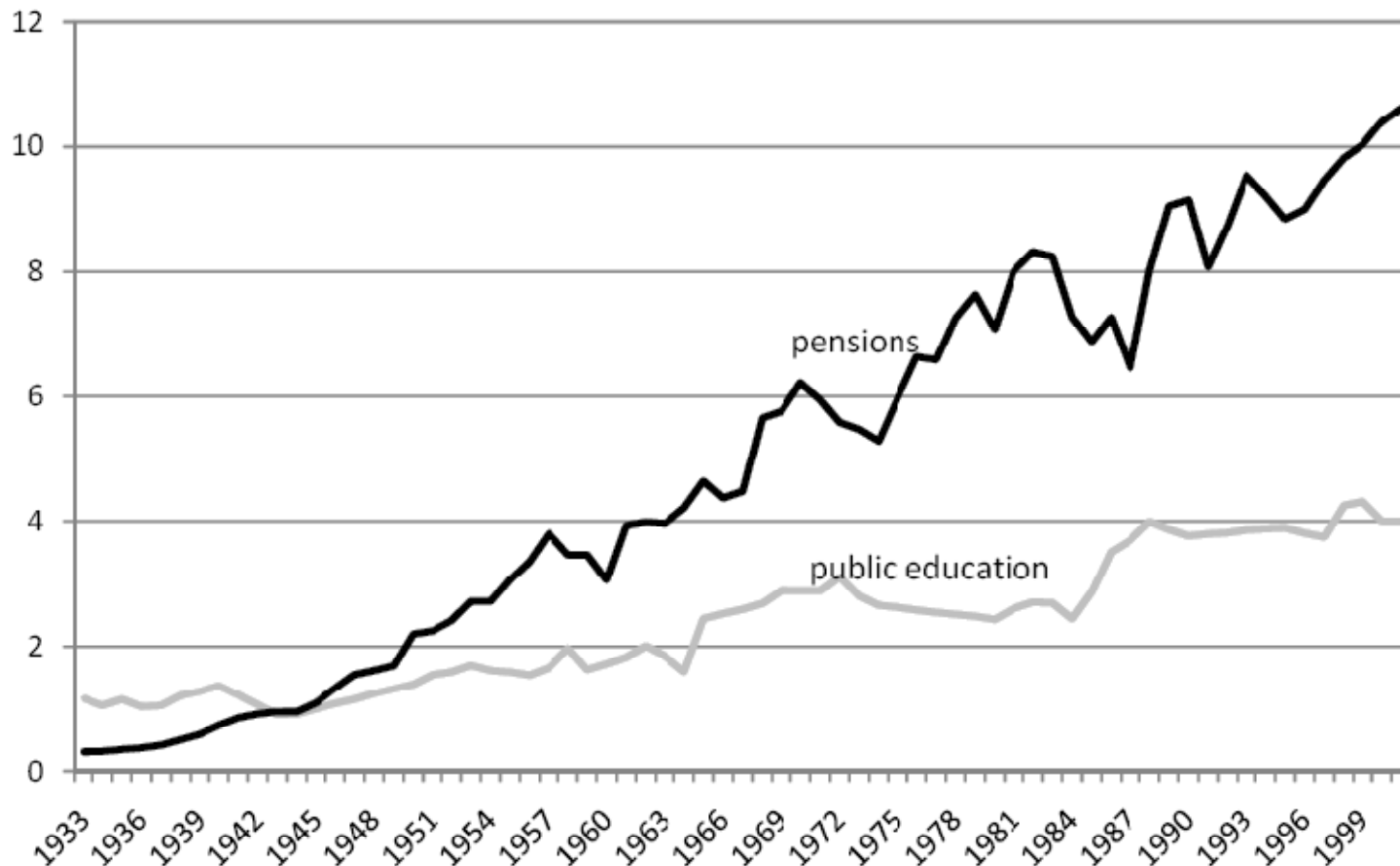
Social Security



Source: Fabio Giambiagi (BNDES).

Public Savings and the demographic challenge

Public Expenditures in Education and Social Security as % of GDP – Brazil – 1933-2000



Source: Rodrigo Soares (PUC-Rio) from Pereira, Turra e Queiroz [2010].

Public sector savings in face of the demographic challenge

- In the long run, the aging of the population and social security are the highest threats to the public sector finances.
- It is very risky not to take action now, when a gradual plan may be implemented.
- It is not advisable to keep postponing the problem. The political economy will only worsen. In 2050, 30% of the population, and 35% of the voters, will be over 65.

Synthesis: Brazil's long term challenges and opportunities

□ Opportunities:

- Increase in labor productivity + positive medium term demographics (demographic dividend).
- Increasing institutional stability.

□ Challenges:

- Invest more (infrastructure);
- Educate more and better;
- Reduce allocative distortions to improve Total Factor Productivity;
- Change social security rules to ensure long term solvency in face of the aging of the population.

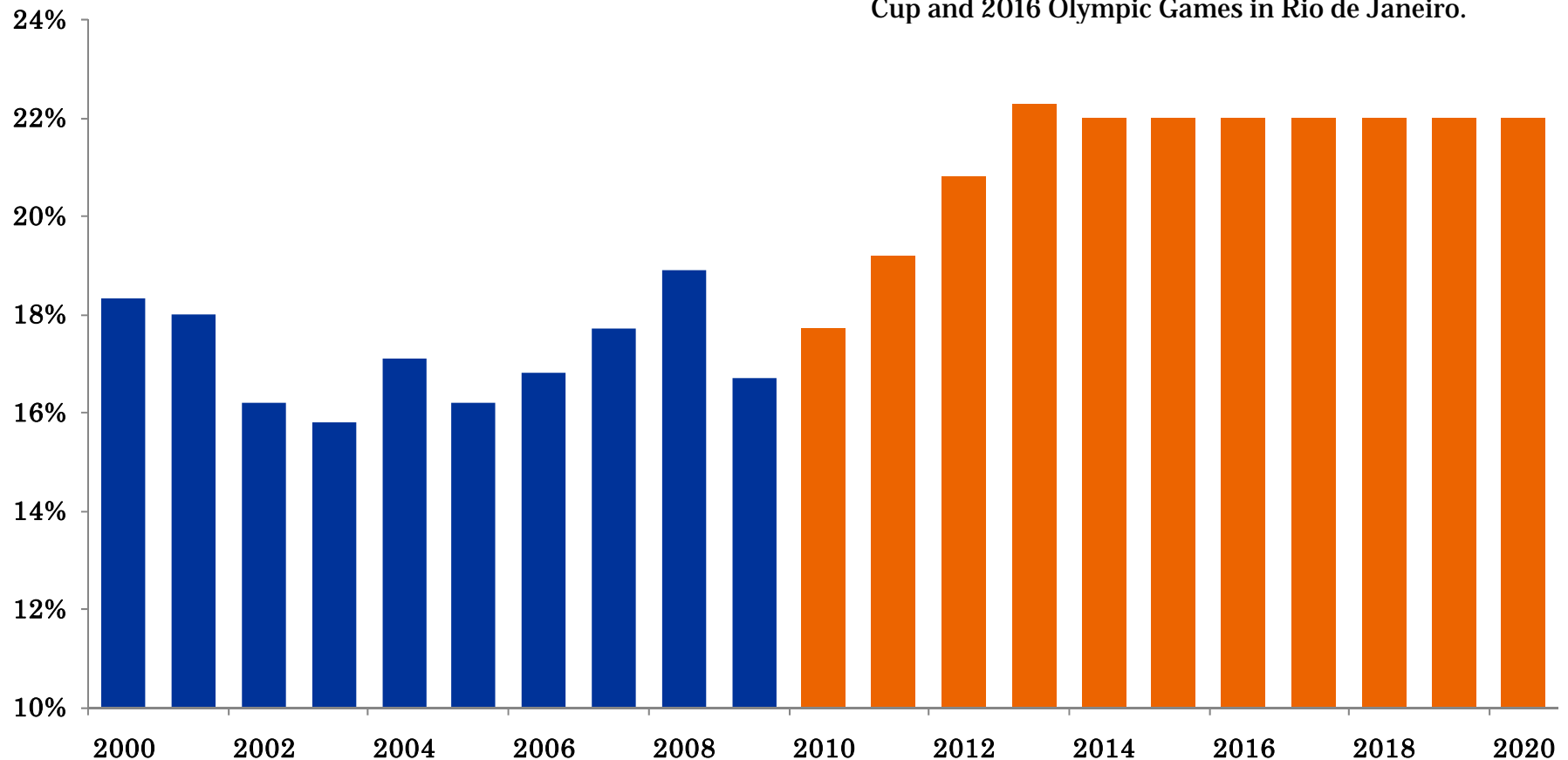
Short-Term and Medium-Term Challenges



A successful medium-term scenario

Investment/GDP ratio will grow in the medium-term, as a result of the following factors:

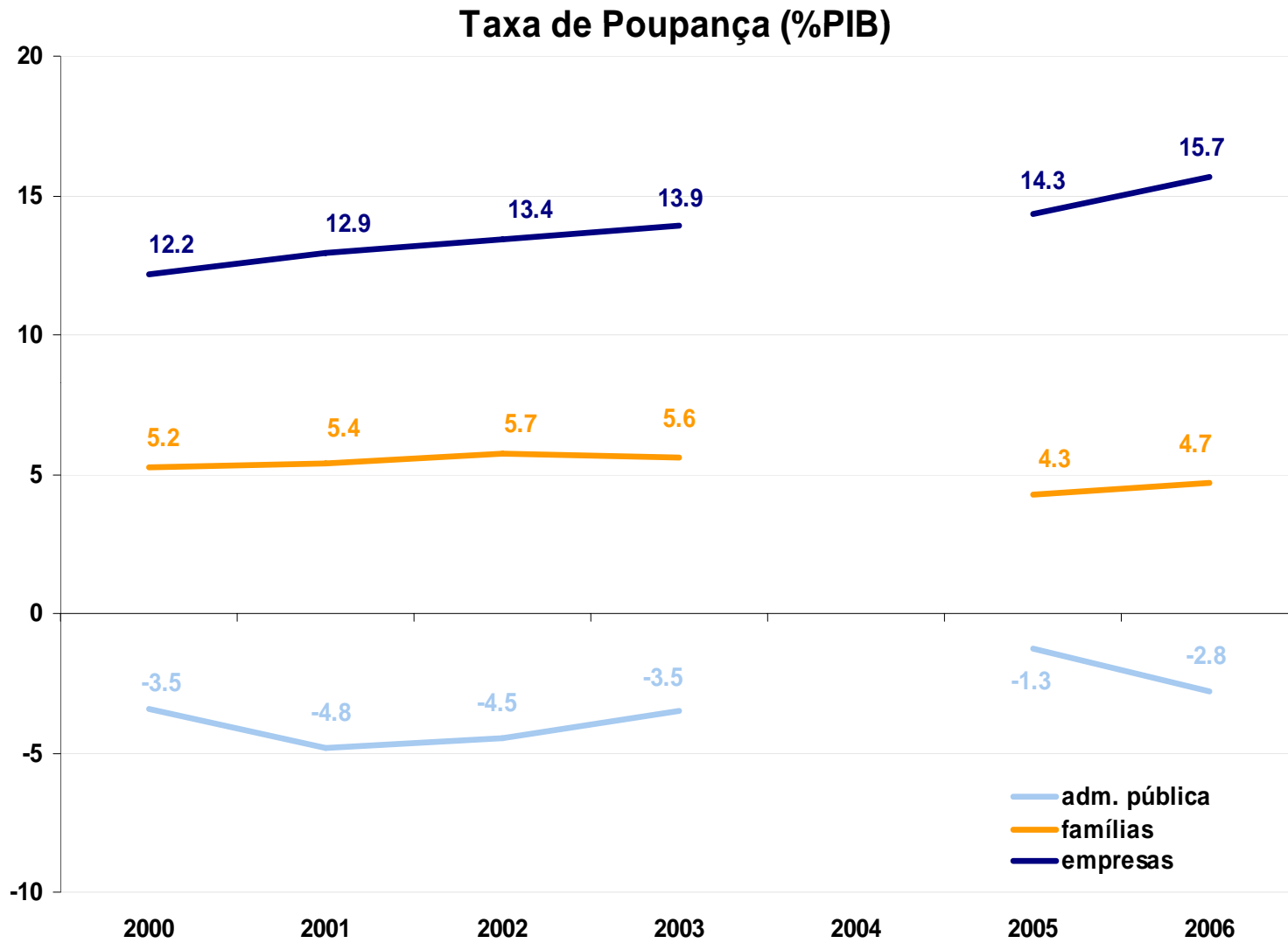
1. Brazilian economy is expanding, and there is financial deepening;
2. Brazilian consumers are using more credit;
3. Mortgage market is very small and is taking off;
4. Real interest rate shows a long-term (albeit slow) downward trend;
5. Oil explorations related to the Pre-Salt layer;
6. Infrastructure investments related to the 2014 World Cup and 2016 Olympic Games in Rio de Janeiro.



Fonte: Itaú Unibanco

Source: Ilan Goldfajn (Itaú-Unibanco).

Domestic Savings (% of GDP)



Source: Ilan Goldfajn (Itaú-Unibanco) with National Accounts data (IBGE).

Medium-term successful scenario

| Medium-Term Scenario | | | | | | | | | | | | | | |
|--------------------------------------|----------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Data and Forecasts | | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 |
| External Sector | | | | | | | | | | | | | | |
| Exchange Rate | Dec | 2,34 | 1,74 | 1,80 | 1,84 | 1,87 | 1,90 | 1,90 | 1,95 | 1,96 | 1,97 | 2,00 | 2,05 | 2,15 |
| Current Account | % of GDP | -1,72 | -1,54 | -2,52 | -3,78 | -4,09 | -4,69 | -4,60 | -4,64 | -4,66 | -4,47 | -4,13 | -3,89 | -3,48 |
| Economic Activity | | | | | | | | | | | | | | |
| GDP growth (actual) | % | 5,14 | -0,19 | 7,46 | 4,83 | 4,44 | 4,90 | 5,00 | 4,90 | 4,90 | 4,90 | 4,80 | 4,80 | 4,73 |
| GDP growth (potencial) | % | 4,70 | 3,80 | 4,20 | 4,60 | 4,70 | 4,90 | 5,00 | 4,90 | 4,90 | 4,90 | 4,80 | 4,80 | 4,70 |
| Inflation | | | | | | | | | | | | | | |
| CPI | % | 5,90 | 4,31 | 5,46 | 5,50 | 4,70 | 4,30 | 4,15 | 4,00 | 3,90 | 3,80 | 3,70 | 3,50 | 3,50 |
| Monetary Policy | | | | | | | | | | | | | | |
| Selic Target (%yy) | Dec | 13,75 | 8,75 | 11,50 | 12,75 | 12,00 | 11,00 | 10,00 | 9,50 | 9,00 | 8,25 | 7,75 | 7,50 | 7,25 |
| Actual Real Interest Rate (%yy) | Dec | 7,41 | 4,25 | 5,69 | 6,87 | 7,01 | 6,47 | 5,64 | 5,28 | 4,92 | 4,32 | 3,95 | 3,82 | 3,62 |
| Equilibrium Real Interest Rate (%yy) | Dec | | 7,02 | 6,59 | 6,19 | 5,81 | 5,45 | 5,12 | 4,80 | 4,51 | 4,23 | 3,97 | 3,73 | 3,50 |

Source: Ilan Goldfajn (Itaú-Unibanco).

Medium-Term Challenges (1)

- Given the low saving rates prevailing in Brazil, the increase in investment/GDP ratios will require foreign savings (=current account deficits).
- Given the good investment opportunities in Brazil, the foreign financing of investments may very well be successful, generating economic growth for Brazil and good returns for investors.

Medium-Term Challenges (2)

- However, large current account deficits are always a source of concern, and as the recent crisis has once more shown, bubbles must be avoided.
- Central Bank must remain vigilant and tough stances on financial prudential regulation and supervision must be kept.
- The main threat, however, comes from the fiscal side.

Short and Medium-Term Challenges: Fiscal Governance (1)

- ❑ Brazil has had a long history of fiscal mismanagement.
- ❑ Since the Real Plan (1994), the fiscal stance has fixed enough to keep inflation under control.
- ❑ Since 2000, the Fiscal Responsibility Law has provided further improvements, and it was essential for the Brazilian economy to weather the 2002 crisis without losing inflation control.

Short and Medium-Term Challenges: Fiscal Governance (2)

- ❑ Since 2003, good times have been the rule, except for a brief period after Lehman's demise.
- ❑ Growth resumption and the incorporation of previously informal workers and businesses into the formal sector are boosting fiscal revenues.
- ❑ Unfortunately, what the government has done so far is to spend the extra revenues in current expenditures.

Short and Medium-Term Challenges: Fiscal Governance (3)

- ❑ There is no short-term risk for public debt sustainability, but as it was here shown before, the long-term prospects are bleak if social security rules are not changed.
- ❑ However, fiscal profligacy has many deleterious short-term effects, besides endangering long-term prospects.
- ❑ For a long time, Brazil has undertaken the wrong mix of macroeconomic policy. Except for brief periods, fiscal policy has been very expansionary, while monetary policy has bore the brunt of inflation control.

Short and Medium-Term Challenges: Fiscal Governance (4)

- ❑ The expansionary stance of fiscal policy is the main reason why interest rates are abnormally high in Brazil.
- ❑ A better mix of macroeconomic policies would allow interest rates to fall, which would have many benefits.
- ❑ It would enhance credit and growth.
- ❑ It would lower the public debt cost, allowing the debt/GDP ratio to fall. This would create a virtuous cycle that would further lower interest rates.
- ❑ Studies also indicate that expansionary fiscal policies are associated with overvalued real exchange rates. Lower interest rates together with less expansionary fiscal policy would depreciate the real exchange rate.

Short and Medium-Term Challenges: Fiscal Governance (5)

- ❑ The next President has better deter the fiscal expansion right from the start. And this will not be an easy task, given the power that special interests have gained.
- ❑ During Lula's second term, there has been a steady movement towards more state involvement in economic matters.
- ❑ The international crisis gave the government an excuse to display as countercyclical many outlays that are in permanent.

Short and Medium-Term Challenges: Fiscal Governance (6)

- ❑ There is a clear policy to increase the importance of state-owned banks.
- ❑ BNDES received 6% of GDP (US\$ 100 billion) as a long-term subsidized loan from the Treasury.
- ❑ To transfer the funds as loan instead of new capital was a clever way to avoid increasing the primary fiscal deficit and the net public debt. With the loan, only the gross debt is affected.

Short and Medium-Term Challenges: Fiscal Governance (7)

- These resources are mainly aimed at sustaining investment programs of large firms with access to international capital markets. The interest rates (based on the TJLP) are highly subsidized.
- These subsidized loans should be made transparent, for public scrutiny. It is not clear that it is reasonable to spend such large amount of scarce and very expensive public funds to subsidize large firms.

Short and Medium-Term Challenges: Fiscal Governance (8)

- In summary, there is a major short-term challenge for the next President: to revert the enormous fiscal expansion that, although not new, has received new impetus in the last few years.
- If this is not done, the Central Bank will have to keep high real interest rates to fight inflation.
- Keeping the schizophrenic macro-policy mix for very long endangers the inflation targeting regime, and, ultimately, inflation control.



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