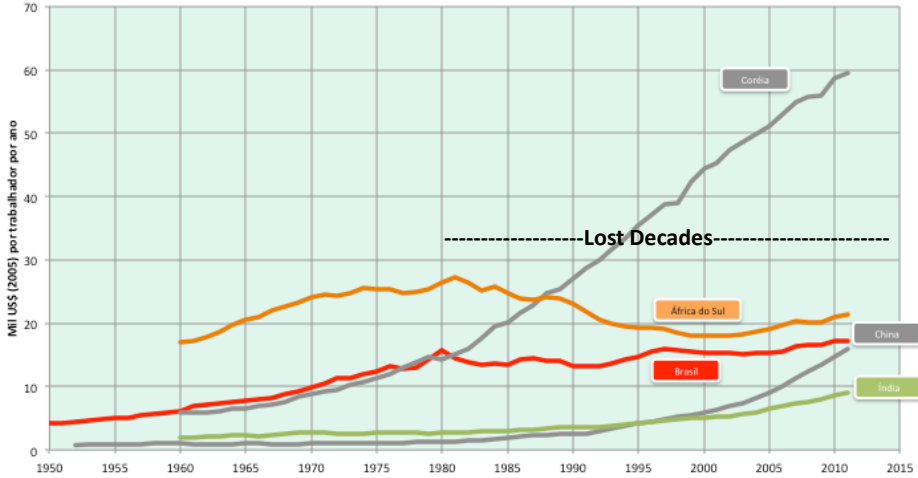


***Main Productive Inclusion Question**

Why Brazil has remained behind in terms of labor productivity?



Fonte: SAE/PR com base na Penn Tables.
 Produtividade média igual a PIB/trabalhador (PIB real a preços constantes).

Meso – Productivity in Brazil

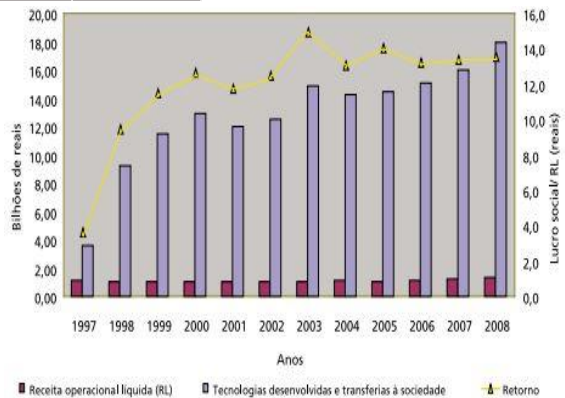
Productivity Growth by Macro Sectors				
	1996-2002	2003-2006	2007-2010	2011-2014
Agriculture	5,7%	2,2%	6,1%	5,3%
Manufacturing	-2,0%	0,1%	0,5%	-0,6%
Services	-0,7%	0,0%	2,2%	0,9%
Total	0,1%	0,4%	2,7%	1,1%

Source: FGV IBRE

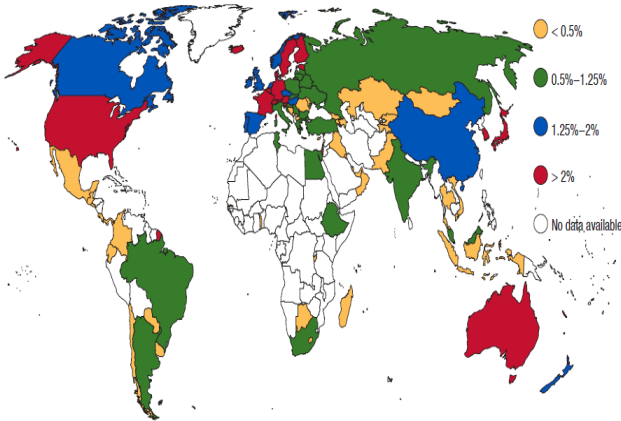
**Brazil: Farm of the World
 Also Mining**

Following Barbosa and Velloso (IBRE) between 2014 and 2017 informality rise explains 46% of productivity fall (-3,6% total)

Embrapa



R&D/GDP 2011-15



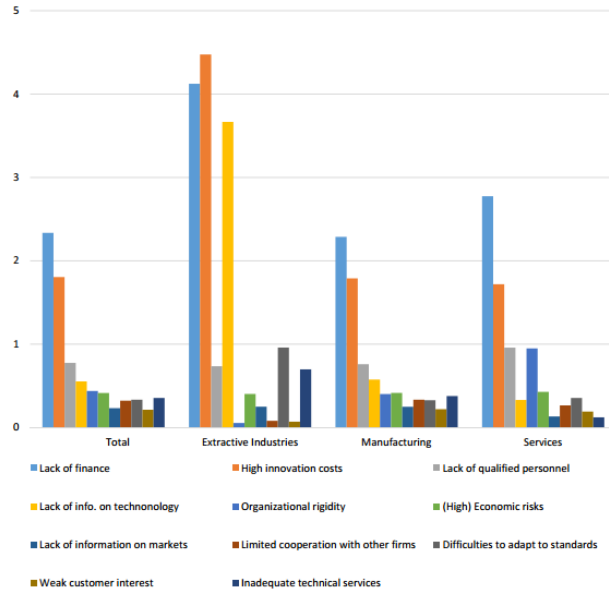
Not so low, but very ineffective as is education

There are publications but not patents

Catching-up mode; no tech contribution

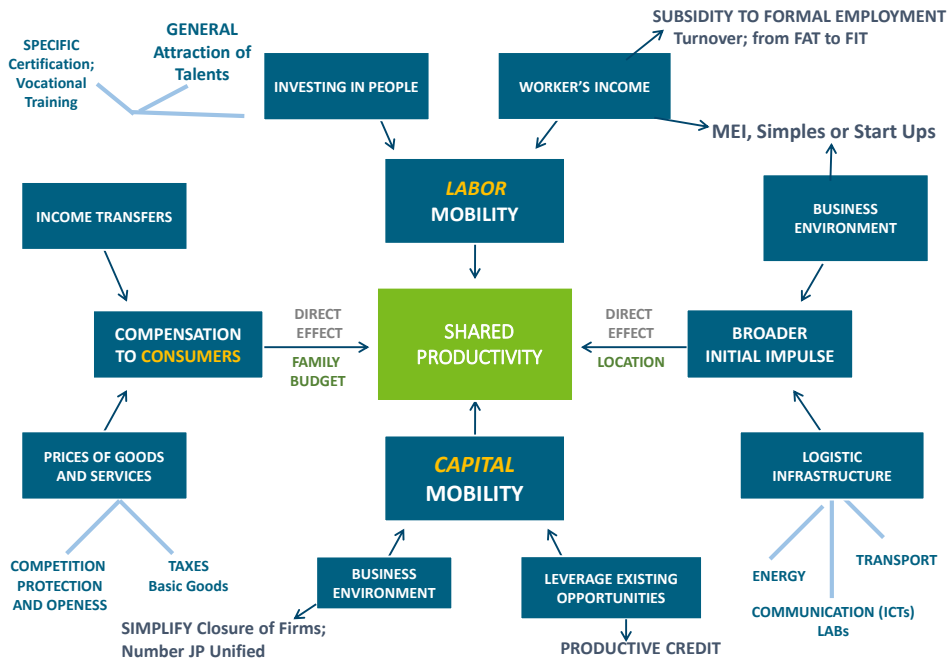
Main Obstacles to Innovation

Figure 4.34: Finance As Most Important Reported Obstacle to Innovate, 2011



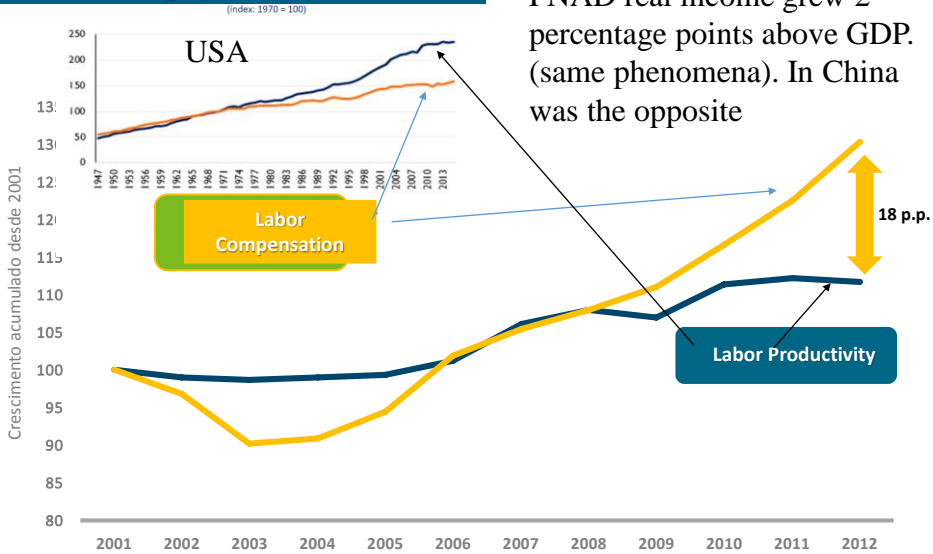
Source: PINTEC 2011 (IBGE).

*Productive Inclusion: Channels of Impact from Shared Productivity Policies



Compensation vs Productivity Is there a gap?

Labor Productivity and Labor Compensation



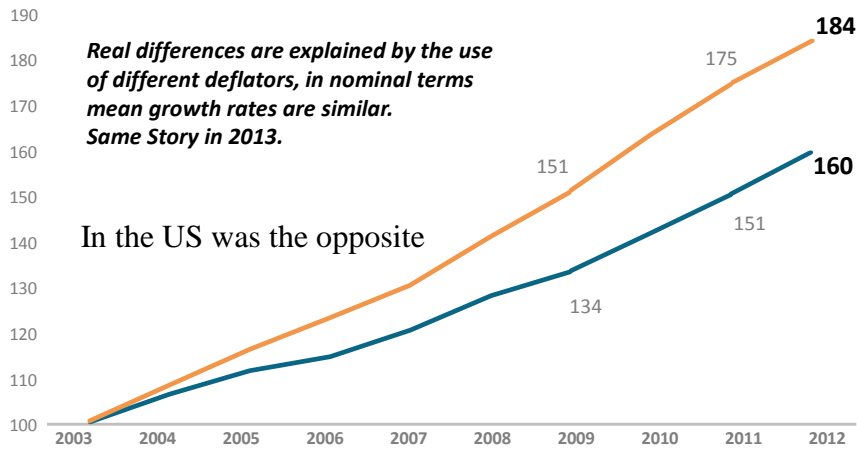
PNAD real income grew 2 percentage points above GDP. (same phenomena). In China was the opposite

Nota: Renda deflacionada com INPC; PIB com deflator implícito do PIB.
Fonte: Renda, Pesquisa Nacional por Amostra de Domicílios (PNAD/IBGE); PIB, Sistema de Contas Nacionais (SCN/IBGE).

How much did it grow? Prosperity

GDP Implicit Deflator X CPI Deflator (INPC)

Real Per Capita 2003 = 100

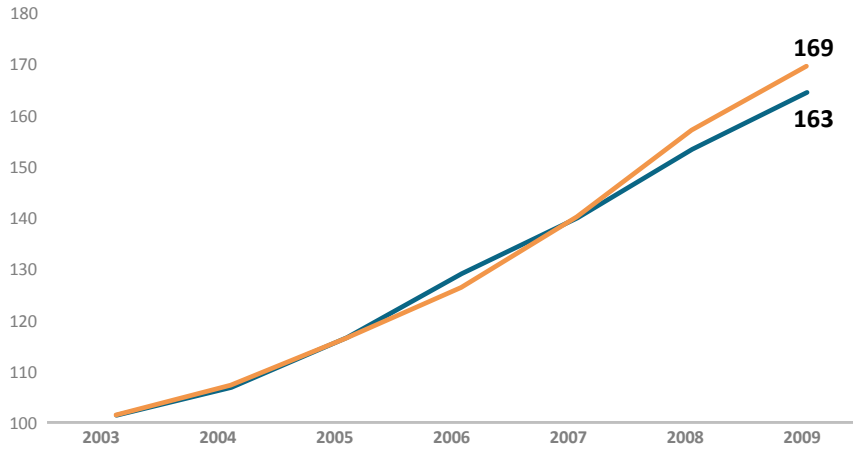


Source: FGV Social from PNAD/IBGE microdata and National Accounts/IBGE

How much did it grow?

Nominal Labor Income National Accounts X Nominal Labor Income PNAD

Real Per Capita 2003 = 100



Source: FGV Social from PNAD/IBGE microdata and National Accounts/IBGE

Growth Gaps Between 2003 and 2013					
In Real Terms					Annual Growth
Gap (HH Income per capita (PNAD) – GDP)					1.9%
Gap Labor Cost (PNAD) - Labor Productivity (GDP per Worker)					2.0%
What explains the 2 nd Gap?					
	Nominal GAP PNAD/GDP	Temporal Adjustment	CPI/Implicit Deflator (ID) Private Consumption (C)	ID Private Consumption(C)/ ID Domestic Demand (C+G+I)	ID Domestic Demand (C+G+I)/ID Total Demand (C+G+I+X-M)
Contribution to GAP %	18	0	41	24	17

Nota: Renda deflacionada com IPCA; PIB com deflator implícito do PIB.
Source: Pesquisa Nacional por Amostra de Domicílios (PNAD/IBGE); Sistema de Contas Nacionais (SCN/IBGE).