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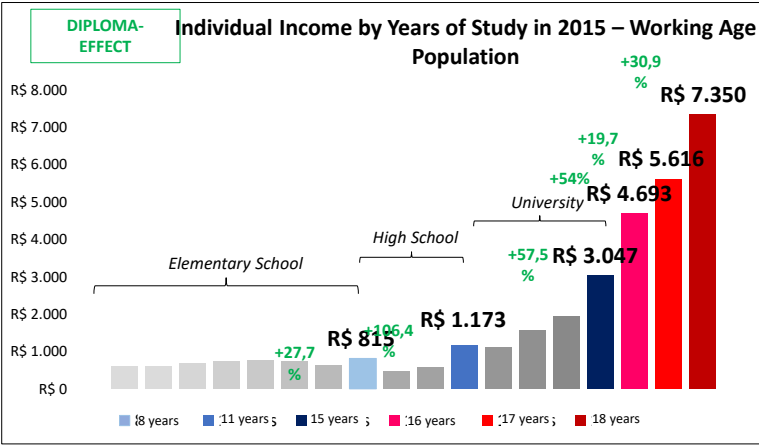
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Educational Private Premiums



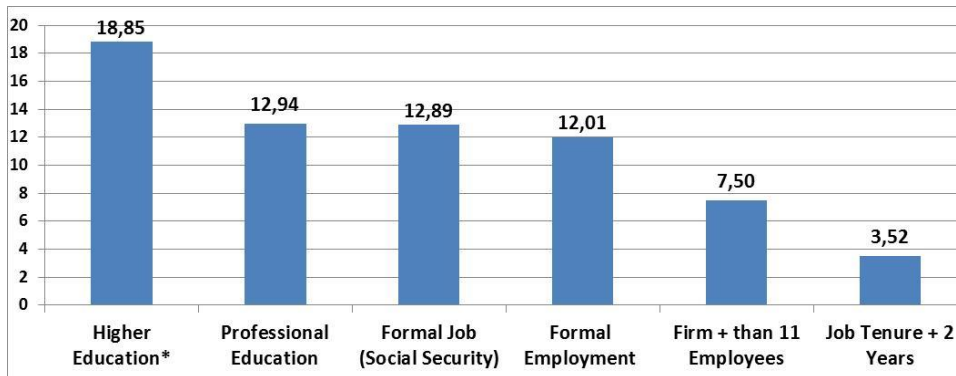
Source: FGV Social with PME/IBGE microdata

*Law nº 11.274 feb/2006 – Elementary School now has a nine-year duration, including 6 year old children, setting a deadline for the implementation in the entire system by the end of 2010.

Bivariated Evolution of Productive Attributes in Percentage Points

2003 to 2014

6 Main Metro Areas



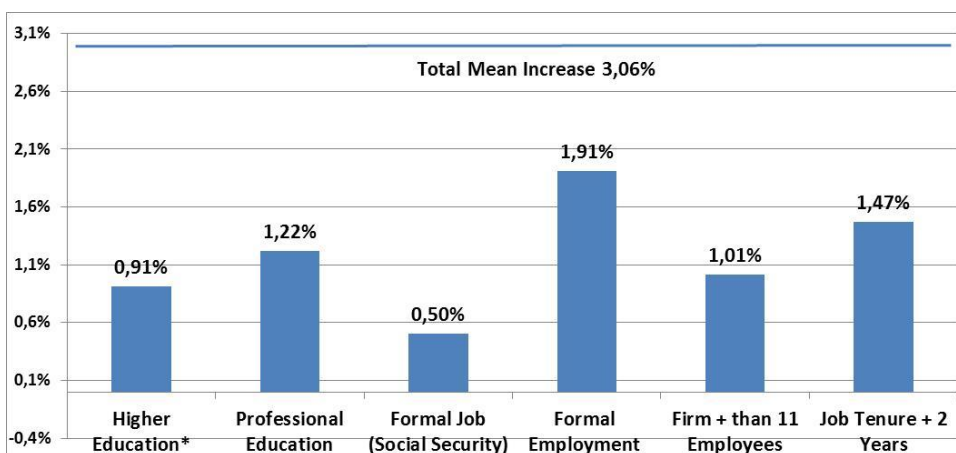
Cummulative Increase in the Occupied population share of those with given Productive Attributes = Other Equalization Force – Similar wrt Developed and Emerging countries

Source: CPS/FGV from PME/IBGE microdata , data until February 2015 * at least incomplete level

Bivariated Evolution of Earnings By Productive Attributes

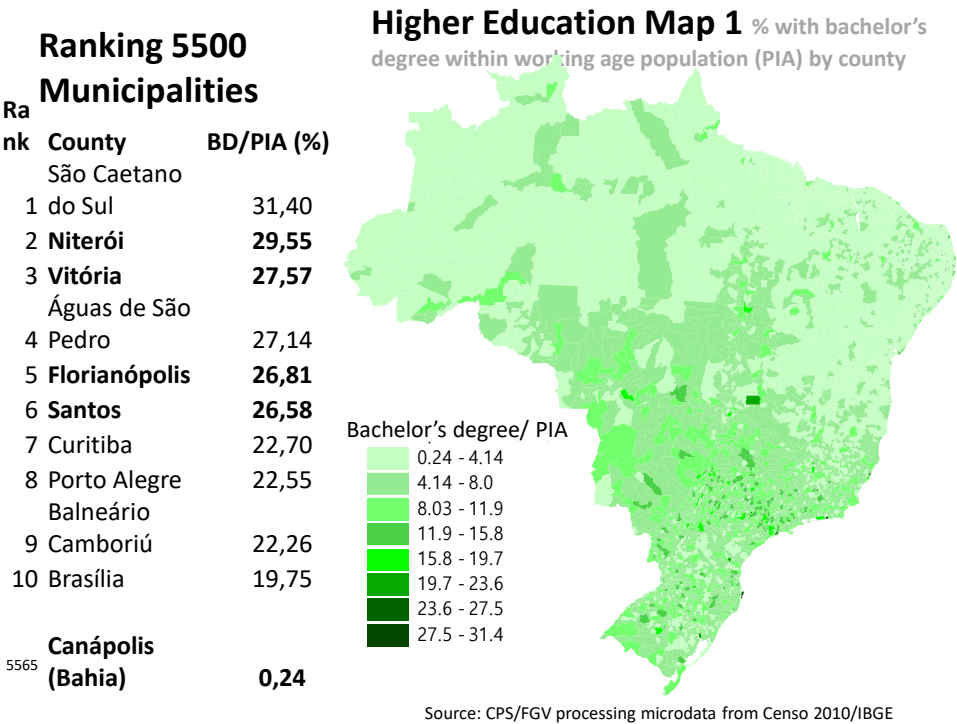
2003 to 2014

6 Main Metro Areas



Source: CPS/FGV from PME/IBGE microdata , data until February 2015 * at least incomplete level

Earnings increase (per year) of those with better Productive Attributes increased less than the mean = Equalization of Returns – Opposite wrt Developed and Emerging countries (except Latin American Countries)



You-Index (Higher Education)

University Careers and Labor Market Outcomes

Gender: Male

Age: 45 to 49 years

Region: Urban

State: UF São Paulo

University Careers: ECONOMICS

Multivariate Ranking of University Careers by Labor Market Outcomes

Simulate Reset

Rank		Salary Rank	Working Hours Rank	Occupation Rate Rank	Social Security Coverage Rank
1	MEDICIN	1	41	1	5
2	ODONTOLOGY	7	14	2	43
3	TRANSPORTATION	3	17	14	6
4	CIVIL ENGINEERING	5	44	3	28
.....
45	TOURISM	36	32	43	34
46	PHYSICAL EDUCATION	42	15	47	37
47	PHILOSOPHY	47	7	48	35
48	RELIGION	48	21	46	46

You-Index (Higher Education)

Labour Earnings (R\$ monthly)

Estimated Model

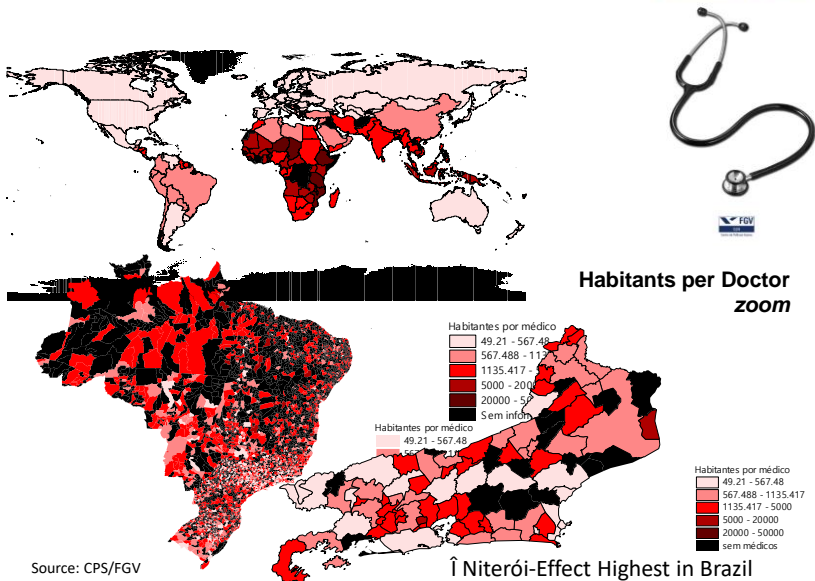
Source: CPS/FGV from microdata of Census 2010/IBGE.

Previous Scenario	Actual
Gender: Masculino	Gender:
Age: 45 a 49 anos	Age: 45 a 49 anos
Region: Urbana	Region: Urbana
Formation:	Formation:
State: UF São Paulo	State: UF São Paulo

<http://www.cps.fgv.br/cps/bd/censo/universidade.eng/index.htm>

Specific Careers & Public Policies - Medicin

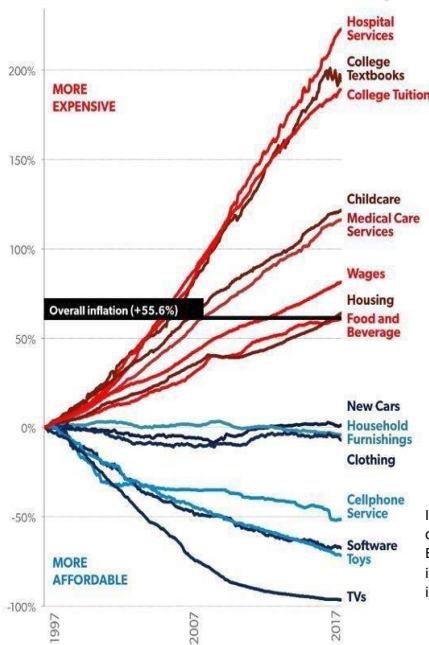
Escassez de Médicos



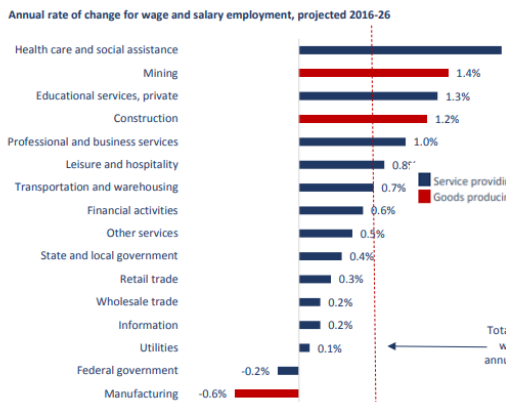
The main problem Mean is the geographical distribution of Doctors

Price changes (Jan. 1997–Dec. 2017)

Selected US Consumer Goods and Services, and Wages



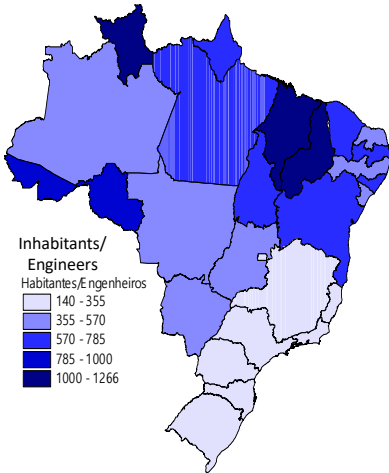
Retrospectively, the cost diseases of services
->in particular health and higher education plus a prospective rise in occupation in these áreas given demand rise



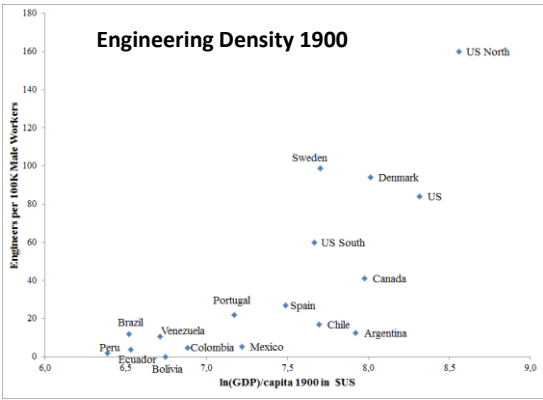
In Brazil population with a university degree grows at 4,8% per year against 0,8% of overall population.
Education Expenses Income-Elasticity (among people with University degree) is 1,91 (elastic) and the odds of having this expenses is affected both by individual and family income

Number of inhabitants* by Engineers

*within working age population
by Unit of Federation (UF)



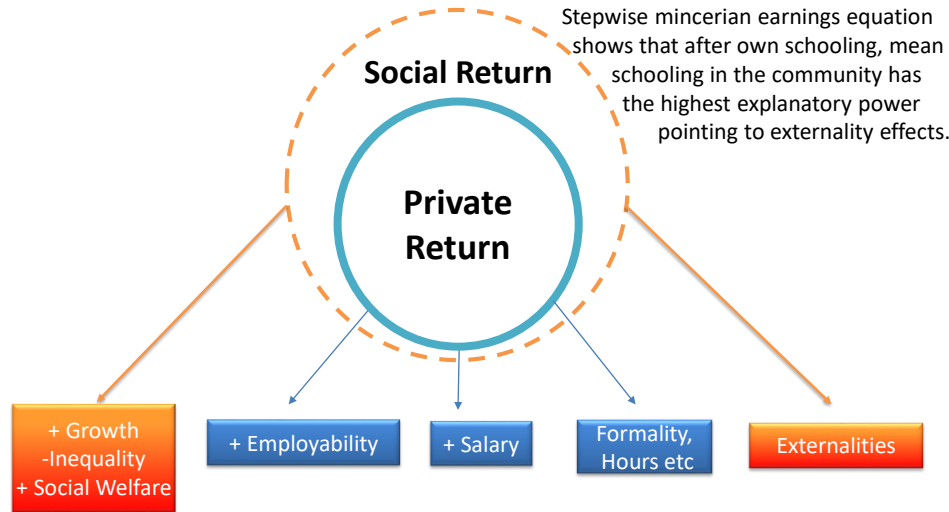
THE KEY: DIFFERENCES IN ABILITY TO
ADOPT AND ADAPT NEW
TECHNOLOGIES



Source: Maloney and Valencia, 2015

Inferences across Latin American Countries provinces suggests that a doubling the density of engineers is associated with a 60% rise in GDP (similar result across U.S. States)

Returns from Education

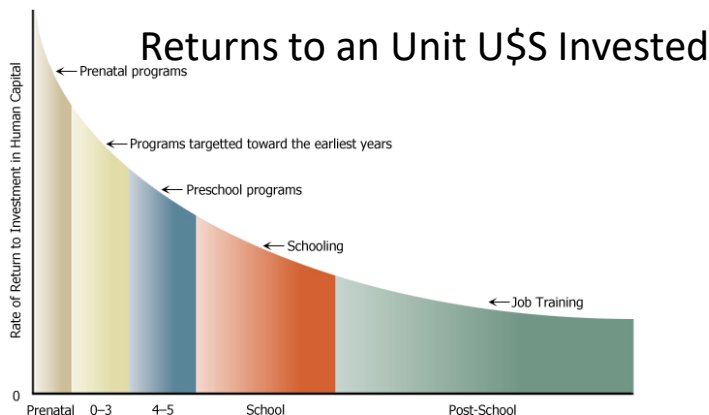


How they are measured and perceived in practice?*

*For example, the choice between different university careers regarding salary or understanding the impact of a master's degree versus a pure bachelor's degree

*Early Childhood Education

What is the optimal time of intervention ?



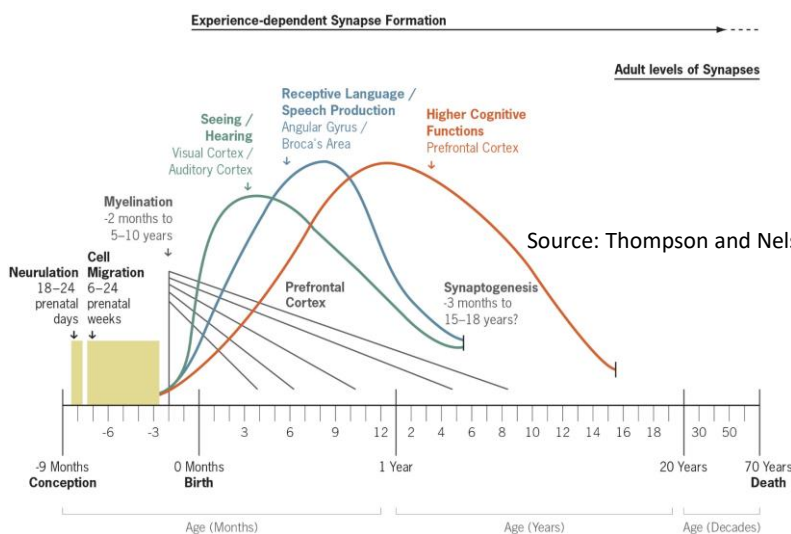
Source: Heckman (2008)

Por que a Taxa Interna de Retorno de Programas Educacionais cai com a Idade?

- 1) Infância fase crucial de desenvolvimento do cérebro e ganhos não cognitivos.
- 2) Crianças tem maior horizonte de tempo para se beneficiar de ações estruturais.
- 3) Crianças são mais pobres em termos de renda e outras dimensões mais estruturais.

Human Brain Development

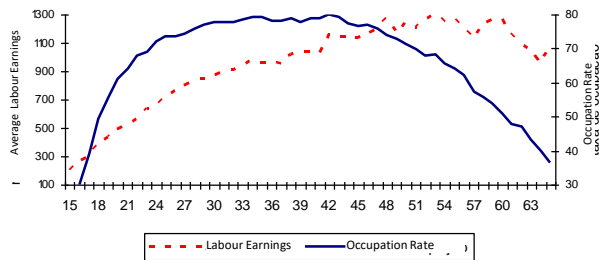
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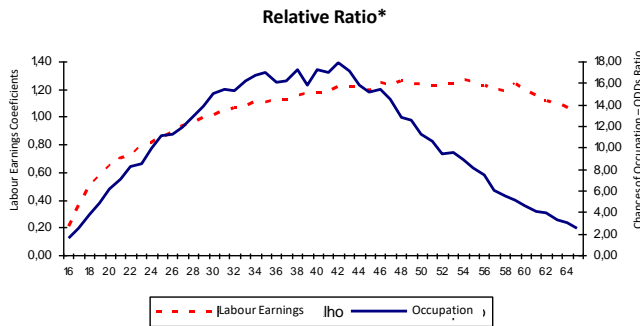
Source: Thompson and Nelson (2001)

current research in developmental neuroscience that is pertinent to the central claims of media accounts of early brain development, (a) scientific understanding of formative early experiences, (b) whether critical periods are typical for brain development, (c) brain development as a lifelong process, (d) **biological hazards to early brain growth,**

Labour Market Outcomes and Life Cycle



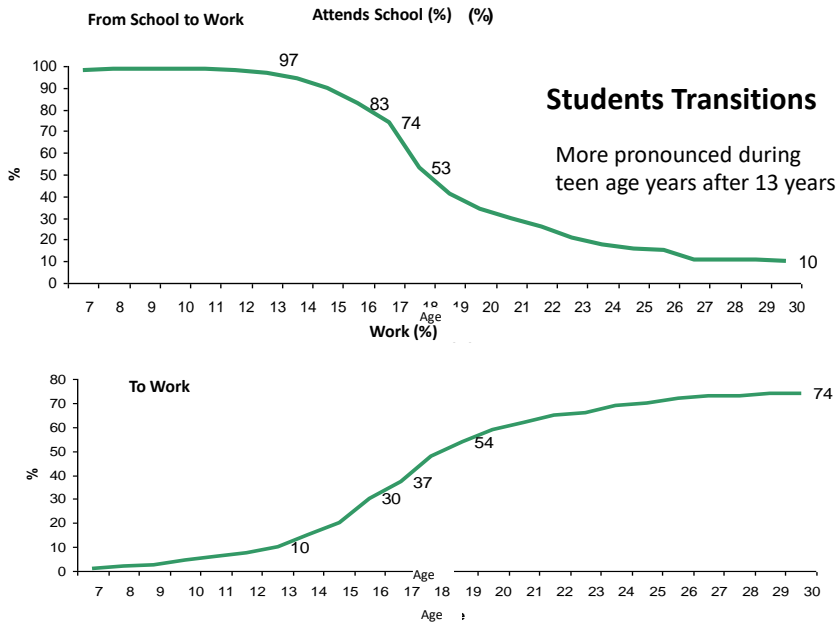
←Simple
Bivariate
Plot
Opened by
Years of Age



←Mincerian
Equation
Coefficients and
Logistic Regression
Odds ratio Plot
Opened by
Years of Age

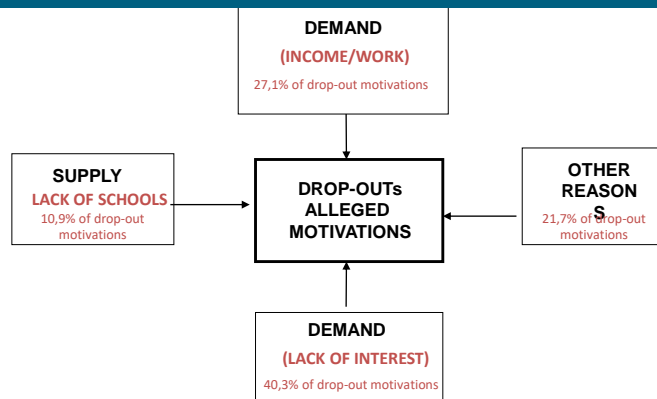
Source: CPS/FGV from PNAD/IBGE microdata

* Basis: 15 years old



Source: FGV Social with PNAD/IBGE microdata

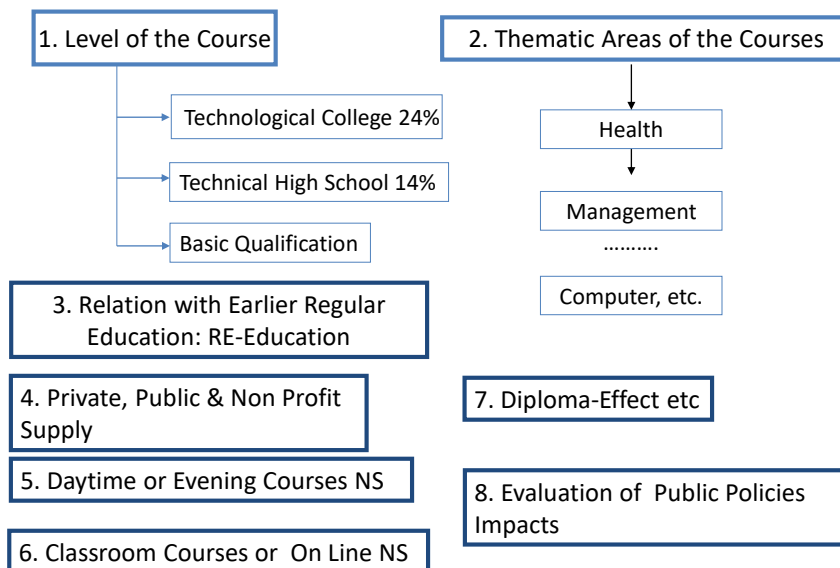
SCHOOL DROP-OUT MOTIVATION (15 to 17 years old)



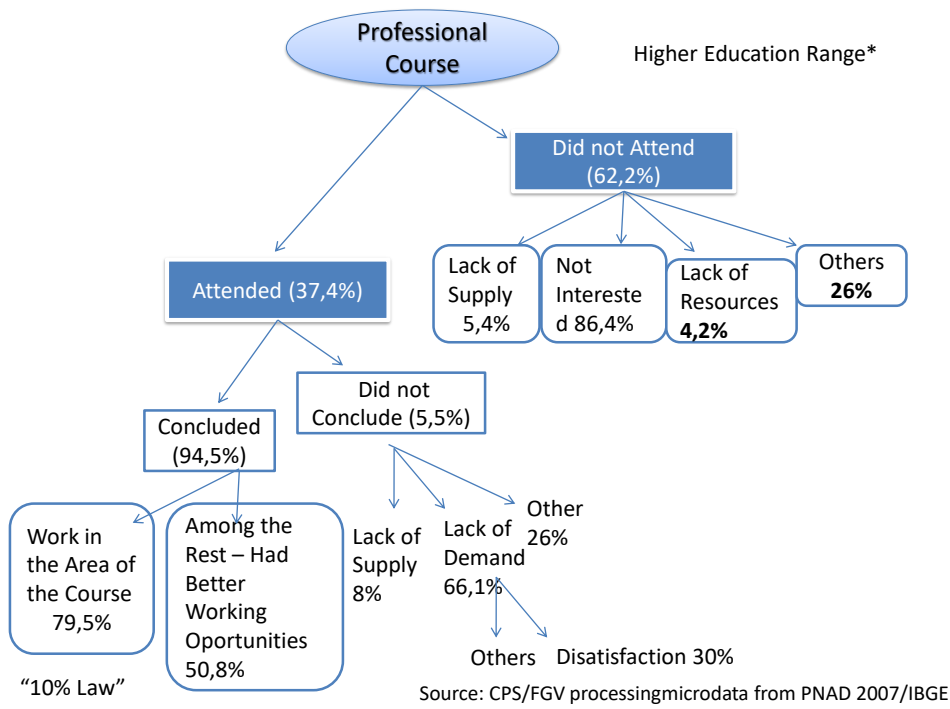
If education generates such a high private return, why do young Brazilians invest so little in it?

Source: FGV Social with PNAD/IBGE supplement microdata

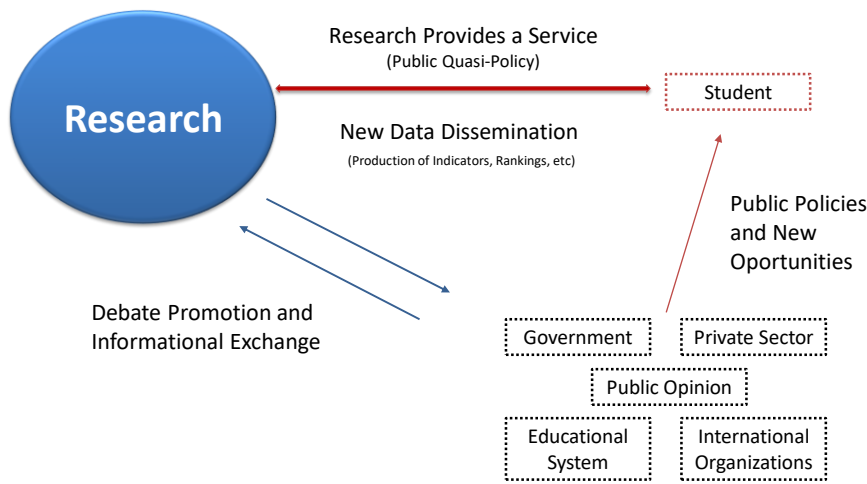
What is the Premium Courses Attributes?



Source: CPS/FGV

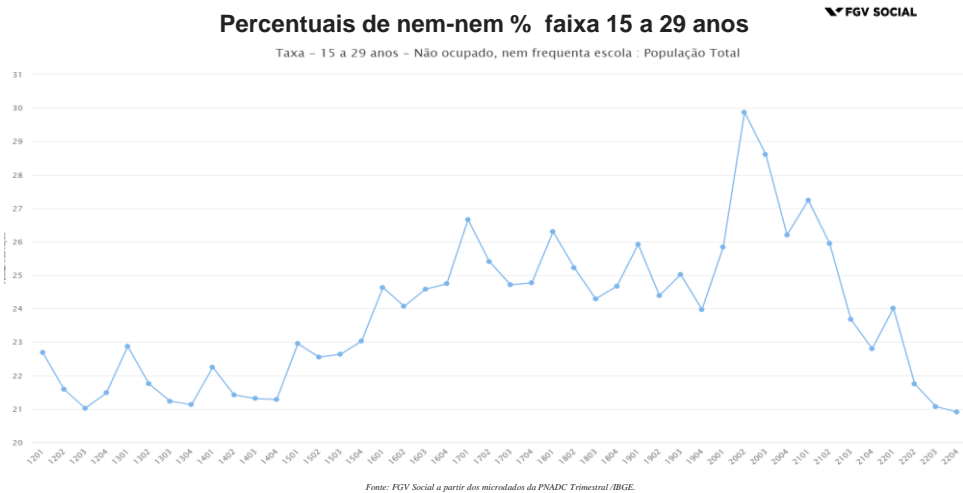


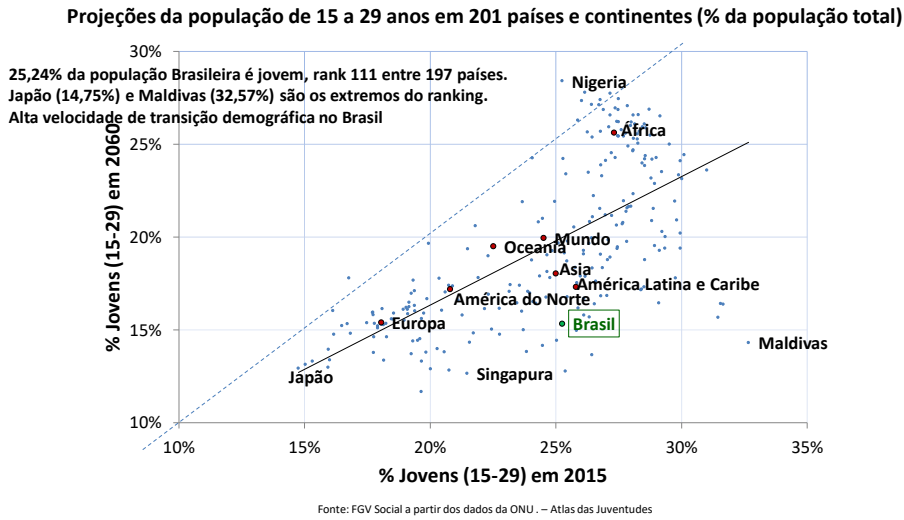
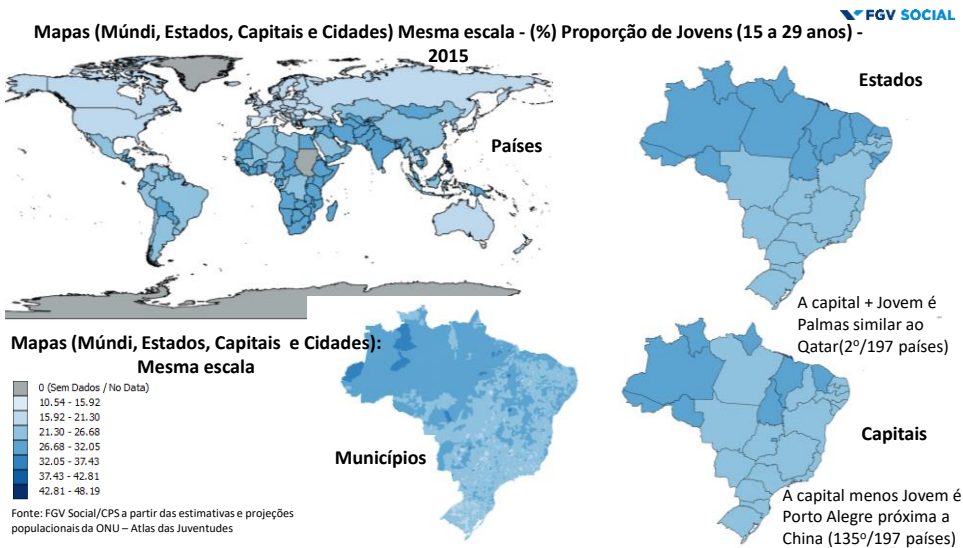
Direct and Indirect Impacts of Research On Education and Productive Inclusion



Policy Proposals

- **Knowledge** – Provide information on the supply, demand and return of regular and professional education for potential students, companies and managers. The use of interactive internet devices, such as mobile applications (APPs) with games characteristics, in the case of young people, allows us to adapt to the context of each one and motivate them.
- **Certification** – Investment in the formal recognition of talents and skills acquired during the professional exercise, the so-called on-the-job training.
- **Train +Workers (and -Unemployed)** – Change the scope of the unemployed to the employed group. Split public costs with the worker and the company that employs it, in terms of dividing the cost of the course itself or exploiting the working time And leisure, such as making use of part of holiday period. This would make it possible to better reconcile the effective joint demand of all actors involved in the process.
- **Bolsa Jovem 2.0** – Extending the age range of Bolsa Familia beneficiaries, including their role in the choice of vocational courses and direct receipt of benefits, which are not necessarily monetary. Experiences in the states.
- **Circulation** – Flexibility in the design of courses aimed at young people, given the need for these to circulate and their consequent tendency towards greater drop-out of the courses initially chosen. Emphasize the offer of modular and short duration courses with the option of taking advantage of credits already taken in other courses, while valuing the search for higher professional levels.





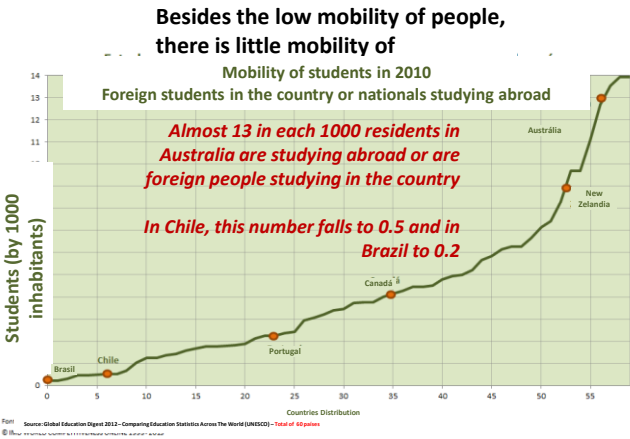


Immigrants in Brazil and in the World

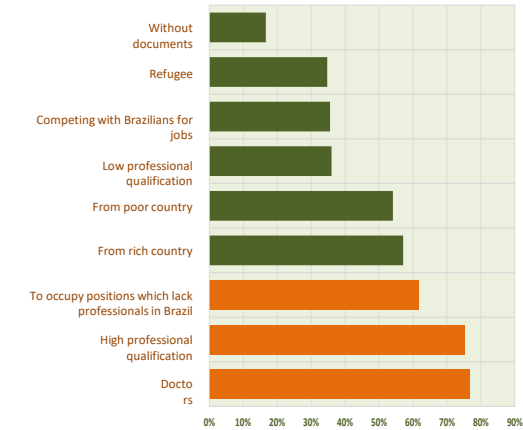
Brazil need **5 times** more immigrants to reach South-America mean, **10 times** more immigrants to reach the World mean and **50 times** more immigrants to reach the North America and Oceania mean

Region	Population (by million)	Immigrants (by million)	Percentage of Immigrants within Population
World	6909	214	3,1
Africa	1033	19	1,9
Asia	4167	61	1,5
Europe	733	70	9,5
North America	352	50	14,2
South America and Caribbean	589	7	1,3
Oceania	36	6	16,8
Brazil	196	0,6	0,3

Source: United Nations, Department of Economic and Social Affairs, Population Division (2009) and PNAD (2009)



Percentage of individuals favorable to Immigration by type of Immigrants



Policy Proposals (Education and Labor - Youth)

- **Knowledge** – Provide information on the supply, demand and return of regular and professional education for potential students, companies and managers. The use of interactive internet devices, such as mobile applications (APPs) with games characteristics, in the case of young people, allows us to adapt to the context of each one and motivate them.
 - **Life Skills and Non Cognitive Human Capital** – Financial Literacy, Foreign Languages, CIT courses. To also recognize previous learning flaws. **Talent Attraction & Professional Education, Public-Private Interaction in Education**
- **Certification** – Investment in the formal recognition of talents and skills acquired during the professional exercise, the so-called on-the-job training (Apprenticeship Law).
- **Train +Workers (and -Unemployed) Demand driven courses** – Change the scope of the unemployed to the employed group. Split public costs with the worker and the company that employs it, in terms of dividing the cost of the course itself or exploiting the working time And leisure, such as making use of part of holiday period. This would make it possible to better reconcile the effective joint demand of all actors involved in the process.
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