

* H E

I M M I G R A T I O N

*Immigrants in Brazil and in the World

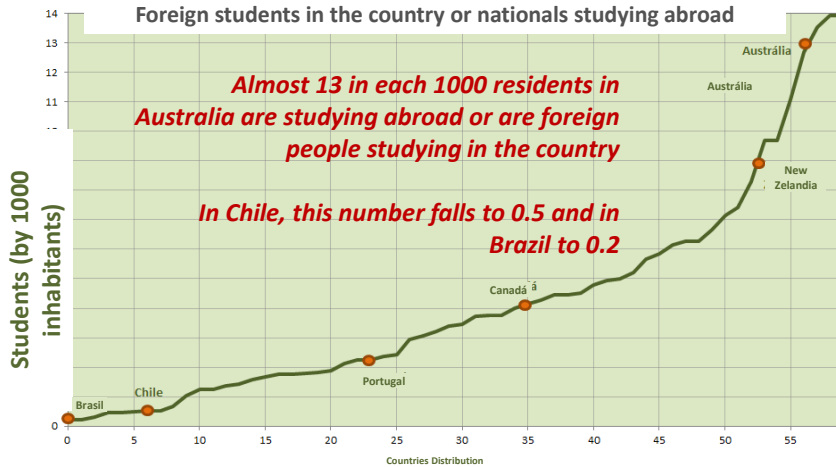
Brazil need **5 times** more immigrants to reach South-America mean, **10 times** more immigrants to reach the World mean and **50 times** more immigrants to reach the North America and Oceania mean

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

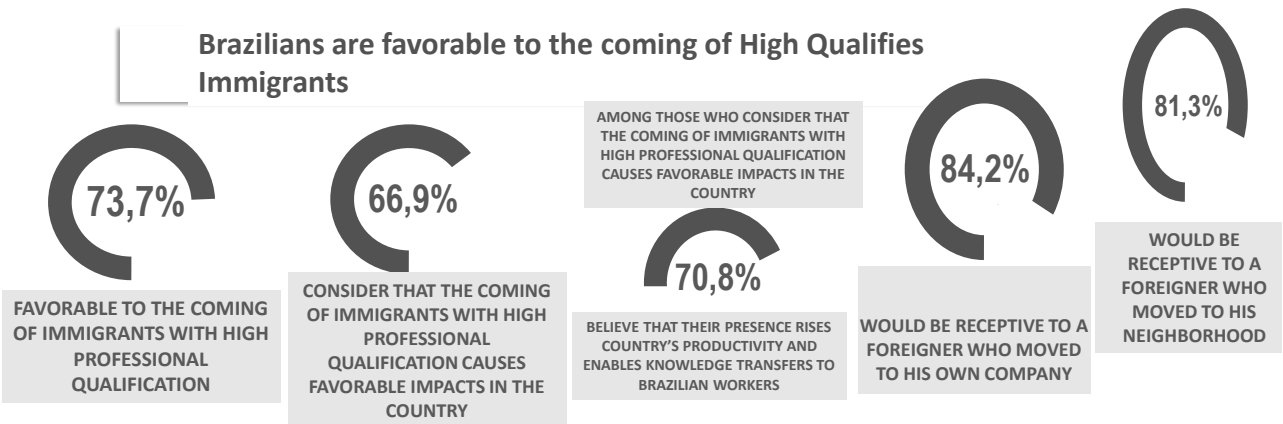
Source: United Nations, Department of Economic and Social Affairs, Population Division (2009) and PNAD (2009)

Besides the low mobility of people, there is little mobility of knowledge

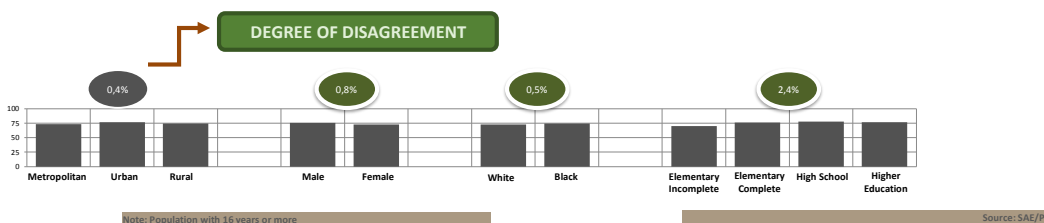
Mobility of students in 2010



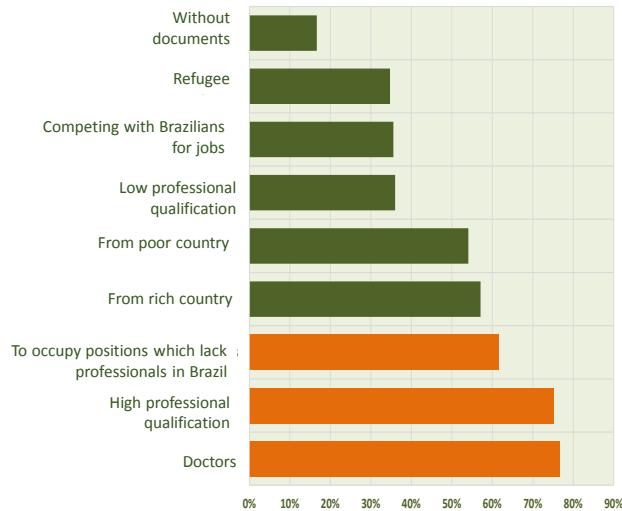
Brazilians are favorable to the coming of High Qualifies Immigrants



FAVORABLE TO THE COMING OF IMMIGRANTS WITH HIGH PROFESSIONAL QUALIFICATION



Percentage of Brazilians favorable to Immigration by type of Immigrants



NOTE: Population with 16 years or more

SOURCE: SAE/PR and IPEA/SIPS-Immigration; Brazil, 2013.

Intention to Move to Another Country

WorldView:

Brazil was 29% in 2017, (in 2010 was 12%) (number 32 in 118 countries), 141,6% increase the 7th highest: **Impact of the Crisis?** World was 15,52% in 2017 (in 2011 was 12,66 %) 22,6% increase

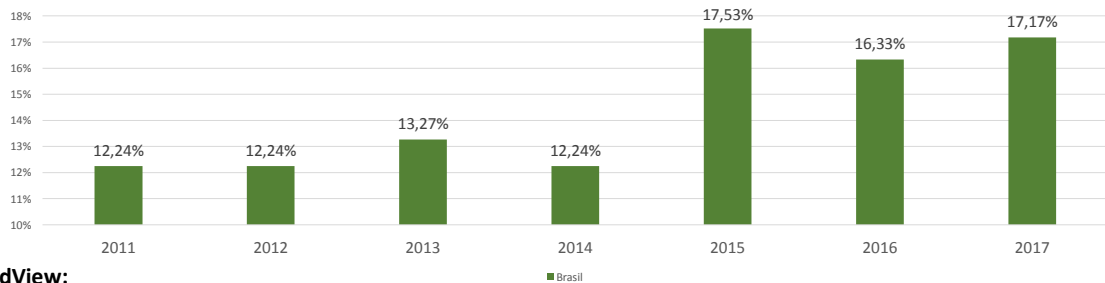
Level 2017 top countries:

1	Sierra Leone	74%
2	Liberia	70%
3	Haiti	64%
4	Albania	62%
5	Ghana	51%
6	Dominican R	50%
7	El Salvador	50%
8	Kosovo	50%
9	Nigeria	48%
10	Armenia	45%
11	Honduras	44%
12	Iraq	41%
13	Moldova	41%
14	Venezuela	41%
15	Uganda	38%
32	Brazil	29%

Growth 2011-17 in percentage points

1	Venezuela	28%
2	Albania	20%
3	Kosovo	19%
4	Kuwait	19%
5	Italy	19%
6	Sierra Leone	18%
7	Brazil	17%
8	Liberia	17%
9	Bahrain	15%
10	Bosnia and Herz	14%
11	South Africa	13%
12	Afghanistan	12%

Intention to Move to Another City – Brazil (Internal Migration)



WorldView:

Brazil was 17,17% in 2017, (in 2011 was 12,24%) (number 53), 40,2% increase

World was 15,52% in 2017 (in 2011 was 12,66 %) 22,6% increase

20 top countries are from Africa

1	Liberia	54%
2	Sierra Leone	54%
3	Congo (Kinshasa)	52%

Bottom countries

111	Uzbekistan	4%
110	Azerbaijan	5%
109	Singapore	6%

Change of Profile: Higher incomes and Bigger cities But still a single young men

Overall 17,17%, (in 2011 was 12,24%)

Males 18,18%, (in 2011 was 12,37%)

Youth 21,21%, (in 2011 was 14,43%)

20% richest 20,20% (in 2011 was 10,31% - across the mean)

Single 19,39%, (in 2011 was 14,29%).

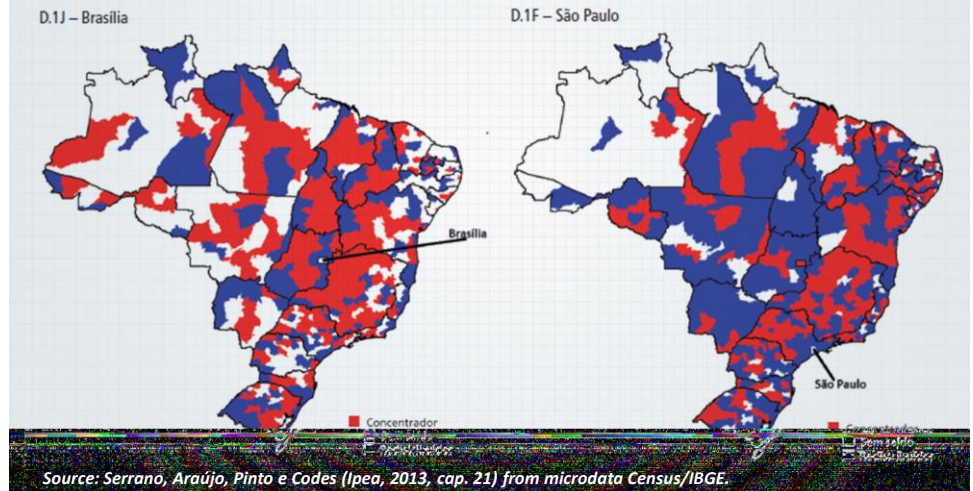
Bigger cities 17,2%, (in 2011 was 11,22% - across the mean)

Probability of migration by period and School Levels 1986-2010 (%)

School Levels	1986-1991	1995-2000	2005-2010
Low	7,8	6,8	5,0
Medium	8,6	7,7	6,2
High	8,9	8,5	7,8
Total	7,9	7,1	5,7

Internal migration Flows

Classification of migration flows from selected microrregions



Migration of Talents:

*EDUCATION QUALITY (PRIVATE RETURNS) AND MIGRATION (MOBILITY)

Is it the Labor Market or the Educational System that generates local private returns to schooling?

EPGE/FGV - Santos, Cavalcanti and Brotherhood (2017)

We provide a new education quality index for states within a developing country using 2010 Brazilian data. This measure is constructed based on the notion that the financial returns obtained from an additional year of schooling can be seen as being derived from the value that market forces assign to this education. We use migrant data to estimate returns to schooling of individuals who studied in different states but who work in the same labor market. We find very heterogeneous educational qualities across states: the poorest Brazilian region presents education quality levels that are approximately equal to one-third of the average of all other regions, a gap three times larger than the one suggested by standardized test scores. We compare our index with standardized test scores, educational outcome variables, and public expenditure per schooling stage at the state level, producing new evidence related to education in a large developing country. We conduct an education quality-adjusted development accounting exercise for Brazilian states and find that human capital accounts for 26%-31% of output per worker differences. Adjusting for quality increases human capital's explanatory power by 60%. <https://sites.google.com/site/czrsantos/EducQuality.pdf?attredirects=0>

Is it the Labor Market or the Educational System that generates local private returns to schooling?

➤ 3 models for returns to schooling estimation:

- (1) separately Mincerian equation for each state, using both migrant and non-migrant workers;
- (2) use only migrant individuals who work in São Paulo;
- (3) use only migrant individuals that work in São Paulo correcting for bias of selection (Heckit Model);

Table 1: Returns to schooling estimates

	Model 1	Model 2	Heckit Model
Maranhão	0.1016 (0.0007)	0.0397 (0.0044)	0.0328 (0.0042)
Piauí	0.1017 (0.0009)	0.0311 (0.0033)	0.0231 (0.0031)
Ceará	0.0932 (0.0006)	0.0455 (0.0032)	0.0368 (0.0030)
Rio Grande do Norte	0.0915 (0.0008)	0.0435 (0.0058)	0.0376 (0.0057)
Paraíba	0.0956 (0.0008)	0.0386 (0.0035)	0.0310 (0.0034)
Pernambuco	0.0895 (0.0006)	0.0439 (0.0024)	0.0351 (0.0023)
Alagoas	0.0938 (0.0010)	0.0457 (0.0036)	0.0373 (0.0034)
Sergipe	0.0951 (0.0011)	0.0491 (0.0059)	0.0393 (0.0057)
Bahia	0.0926 (0.0004)	0.0429 (0.0016)	0.0335 (0.0016)

Minas Gerais	0.0816 (0.0003)	0.0834 (0.0017)	0.0746 (0.0017)
Espírito Santo	0.0848 (0.0006)	0.1123 (0.0090)	0.1023 (0.0090)
Rio de Janeiro	0.0871 (0.0004)	0.1371 (0.0050)	0.1312 (0.0048)
São Paulo	0.0850 (0.0003)	0.0850 (0.0003)	0.0820 (0.0003)
Paraná	0.0749 (0.0004)	0.0705 (0.0020)	0.0614 (0.0019)
Santa Catarina	0.0656 (0.0004)	0.1117 (0.0085)	0.1026 (0.0084)
Rio Grande do Sul	0.0856 (0.0004)	0.1125 (0.0080)	0.1046 (0.0079)
Mato Grosso do Sul	0.0797 (0.0010)	0.0709 (0.0063)	0.0635 (0.0062)
Mato Grosso	0.0684 (0.0011)	0.0720 (0.0103)	0.0644 (0.0106)
Goiás	0.0760 (0.0006)	0.0916 (0.0085)	0.0813 (0.0083)

➤ Results of Model (1) are consistent with the idea that skilled labor is scarce in lower income states, so labor market offers a high reward for education in those regions

➤ When using only data for individuals who work in the same labor market, Model (2) presents an improved measure of education market as valued by labor market

Standard errors in parentheses. All estimates are significant at one percent.

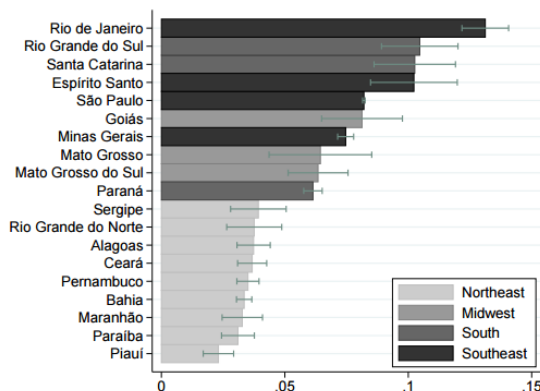
Source: <https://sites.google.com/site/czrsantos/research>

Is it the Labor Market or the Educational System that generates local private returns to schooling?

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- **Problems in Model (2):** (i) However, if migrants are positively self-selected, São Paulo's wage premiums might be underestimated because it is obtained using only non-migrant data; (ii) If the decision to work in São Paulo is determined by variables that are correlated to individuals' years of schooling, estimation by OLS produces biased and inconsistent estimates
- **Heckit Model corrects the selection bias by increasing SP premiums in comparison to other states** (see Heckman, *Sample selection bias as a specification error*, *Econometrica*, 1979)

Figure 2: Heckit estimates and 95% confidence intervals



➤ Results of Model (3) show that after controlling for migration selection issues, if we compare two individuals who have studied in Rio de Janeiro, work in São Paulo, and have the same observable characteristics, except for the fact that one individual has one more year of schooling than the other, it is expected that the earnings of the more educated individual are 13.1% higher than the other's

Source: <https://sites.google.com/site/czrsantos/research>