



# Main challenges for youth in Brazil

Youth and productivity

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SBE

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## Introduction

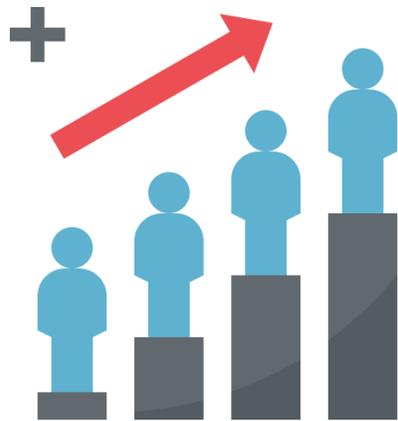
- Two facts are observed from the Brazilian population projection. First, a rapid increase in the participation of the elderly in the total population. Second, a record number of working age population over the next fifteen years.
- The country faces this demographic shift before it becomes a rich country. The combination of a high proportion of economically active population in total and high labor productivity are the two key factors to reach the club of rich countries.
- Investment in human capital is a necessary (but not sufficient) condition to reach the per capita income level of the richest countries, and hence, to overcome the middle-income trap in which the country is located.
- The rapid qualification of the workforce depends on the improvement of educational indicators. However, this is not what has occurred. Between 2009 and 2018, Brazil's grades in PISA in mathematics were stagnant. The lack of progress in this period was not Brazil's prerogative, but we are almost unique in lack of progress from such low starting point. It should be highlighted that in this period, public spending on basic education increased considerably.

## Introduction

- The lack of progress in educational quality indicators has an effect on the productive inclusion of a substantial fraction of the working-age population.
- It is shown here that young people who do not complete High School, earn much less in the labor market (due to low labor productivity), and have a smaller participation in the labor force (a problem mainly related to women).
- As shown in other presentations, there is a strong correlation between the education of parents and their offspring. However, parents' schooling is also strongly correlated with work productivity by channels other than educational. Young people with complete higher education, living in households headed by people with complete higher education, earn way more than young people with the same level of education but living with poorly educated household heads.

## Introduction

- Not overcoming the problem of social mobility, therefore, prevents Brazil from overcoming the middle-income trap. The low human capital problems of the current youth cohort that prevents full productive insertion also prevent Brazil from becoming a rich economy.
- The demographic bonus will pass. The country that was once “[the country] of the future” will be an old and poor country in no time. And with low social mobility. Avoiding this destiny necessarily involves the productive inclusion of the children of the poorest, which will only be possible with a radical transformation in the way knowledge is transmitted in public schools and social policies that complement the role of the school. Such a strategy will require an unprecedented improvement in the efficiency of the public machine.
- This presentation seeks to show, in the form of graphs, the association between social mobility, workforce training, productivity and demographics. This is done from the perspective of the challenges of youth.

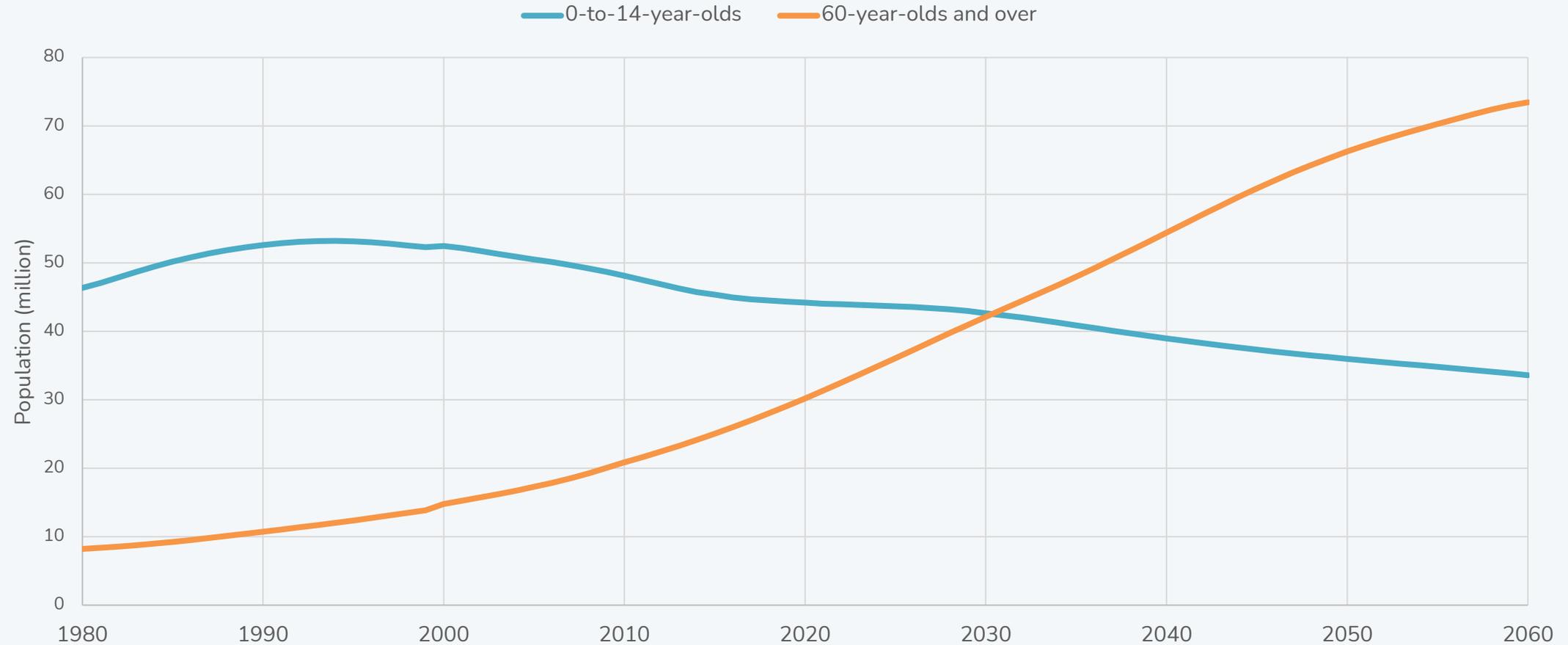


## 01. Youth and demographics

End of the demographic bonus and dependency index

# Challenges to increasing productivity and youth

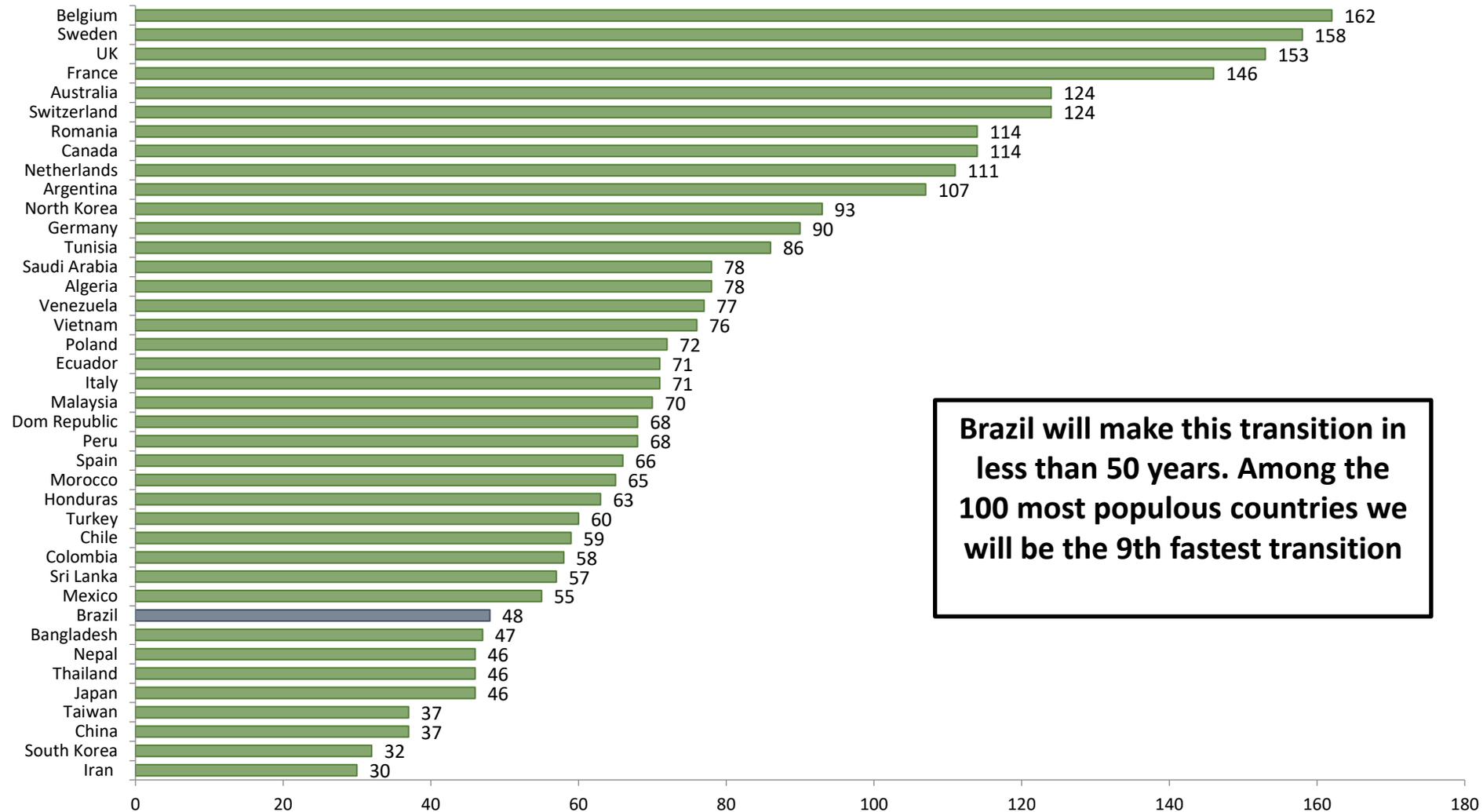
Population projection of children (0-14) and the elderly (60+) in Brazil



Source: Open Social/IMDS. Estimates produced based on IBGE/Population Retroprojections 2000-1980, 2010-2000 and Population Projections 2010-2060.

# COMPARATIVE PERSPECTIVE DEMOGRAPHICS

**Transition time (in years) from 10% to 30% of the share of the population aged 65 years or more in total**

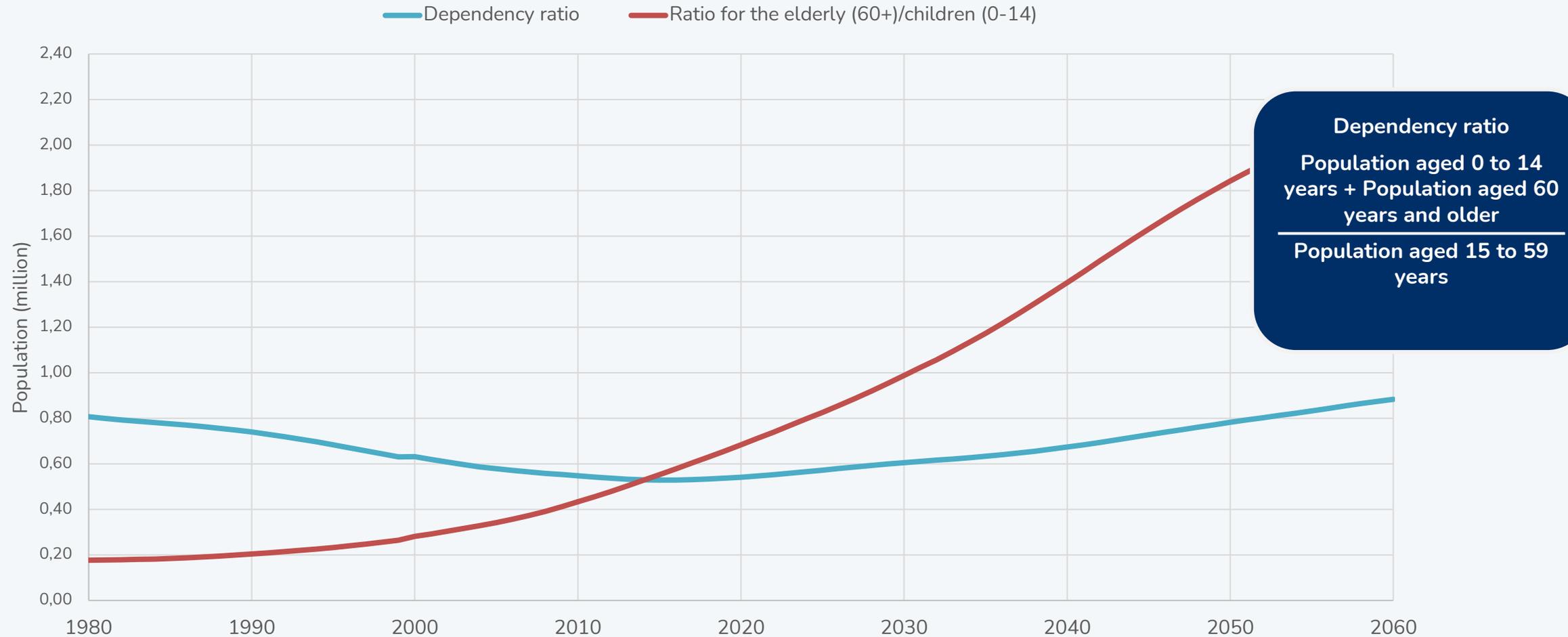


**Brazil will make this transition in less than 50 years. Among the 100 most populous countries we will be the 9th fastest transition**

Source: United Nations, Population Division – World Population Prospects: The 2017 Revision, Elaboration: Tafner (2022).

# Challenges to increasing productivity and youth

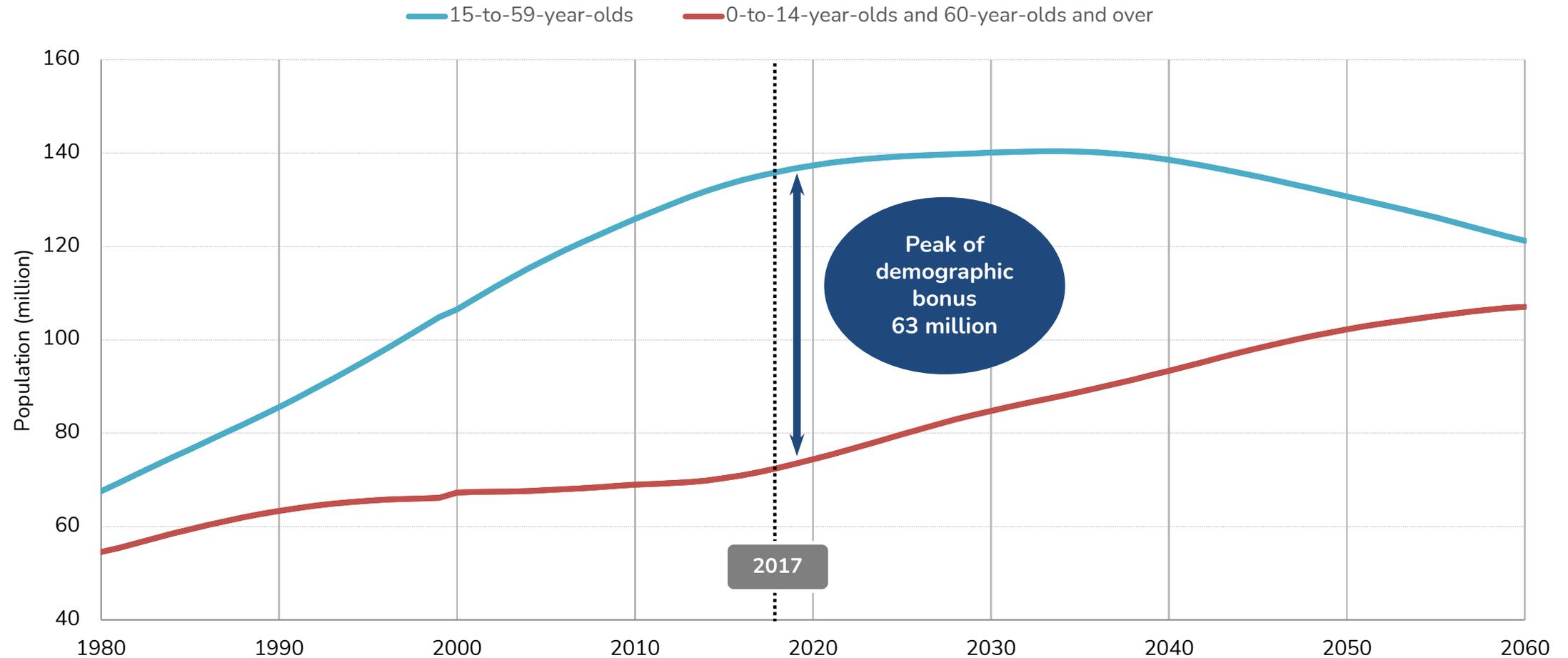
Population projection of economic dependence in Brazil



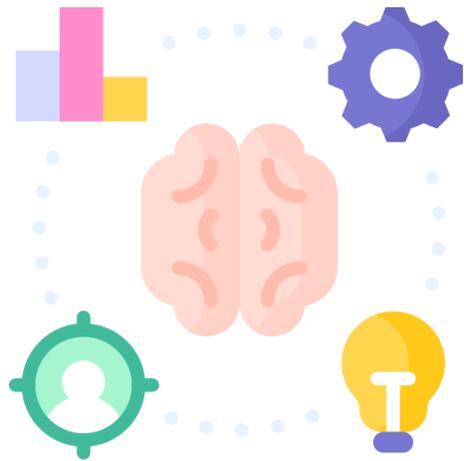
Source: Open Social/Imds. Estimates produced based on IBGE/Population Retroprojections 2000-1980, 2010-2000 and Population Projections 2010-2060.

# Challenges to increasing productivity and youth

Population projection of adults (15-59) and children (0-14) and elderly (60+) in Brazil



Source: Open Social/Imds. Estimates produced based on IBGE/Population Retroprojections 2000-1980, 2010-2000 and Population Projections 2010-2060.

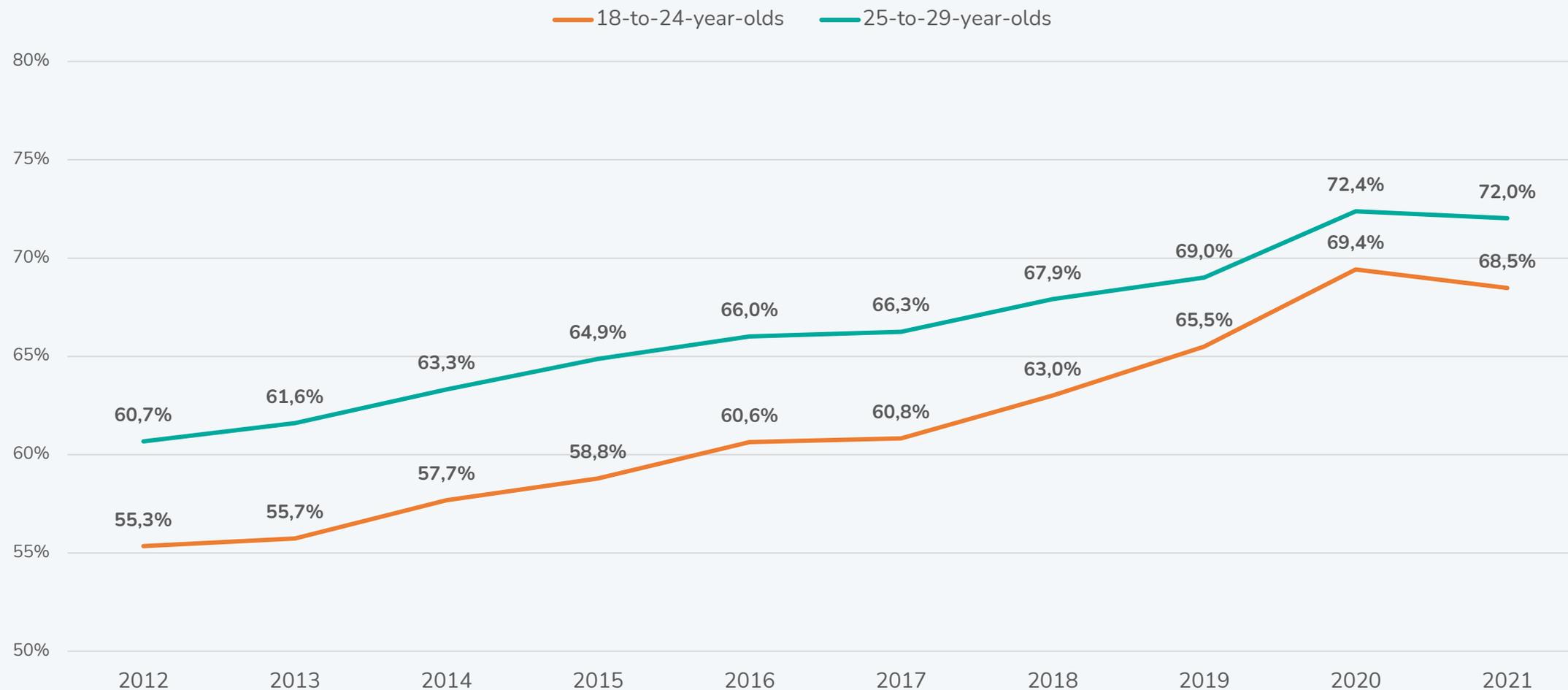


## 02. Capacity Building

Level of schooling, quality of education and international comparisons

# Capacity building

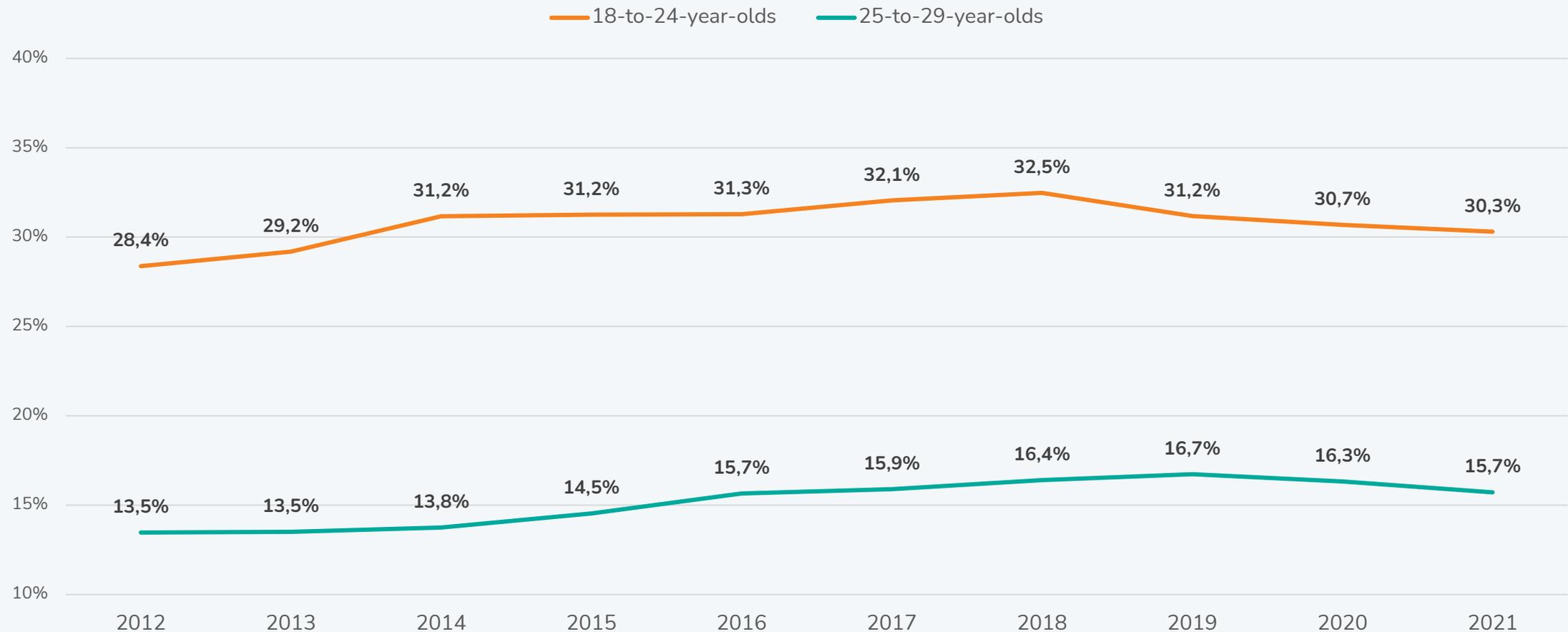
Percentage of young people who completed basic education



Source: Oppen Social/IMDS. Estimates produced based on the PNAD C Annual Visit 1 (2012 to 2019) and Visit 5 (2020 and 2021).

# Capacity building

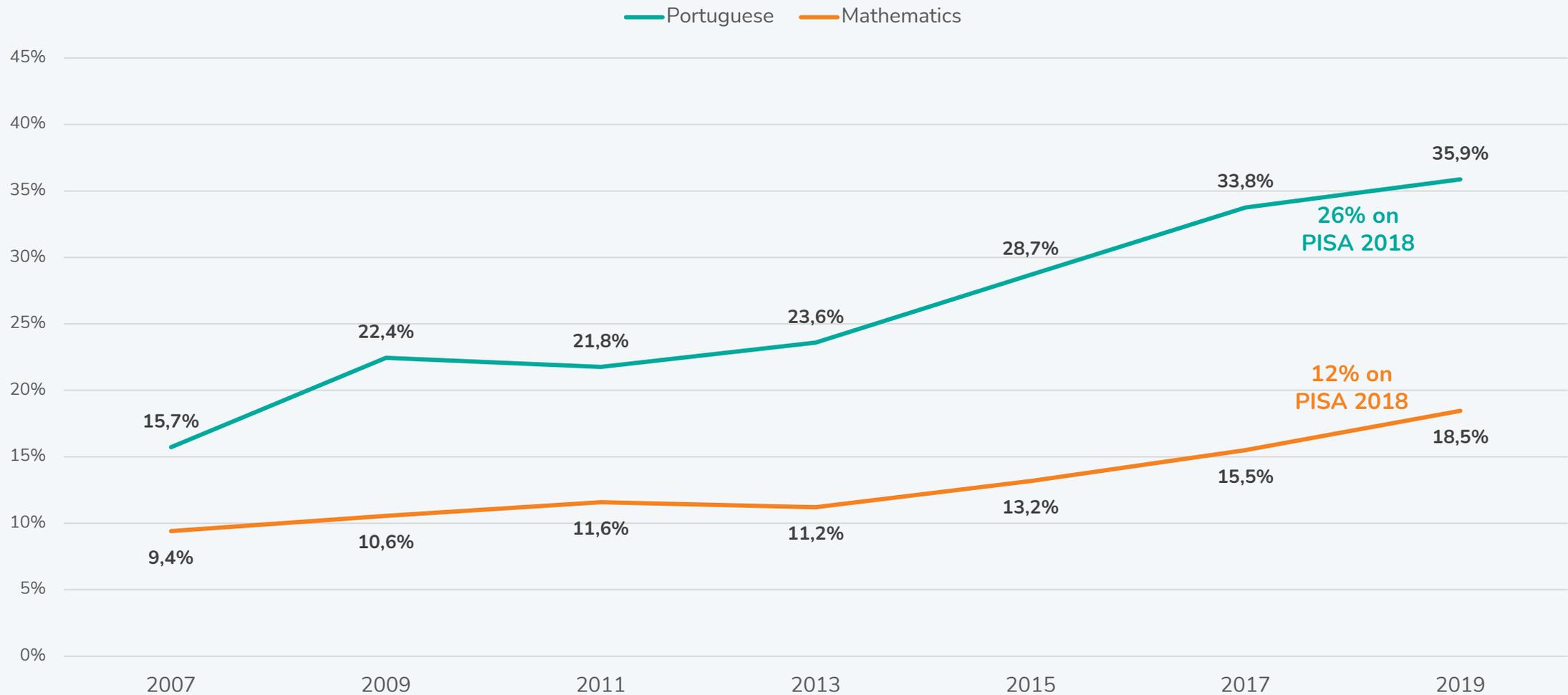
Percentage of young people attending Higher Education, among those who completed Basic Education



Source: Oppen Social/IMDS. Estimates produced based on PNAD C Annual Visit 1 (2012 to 2019) and Visit 5 (2020 and 2021).

# Capacity building

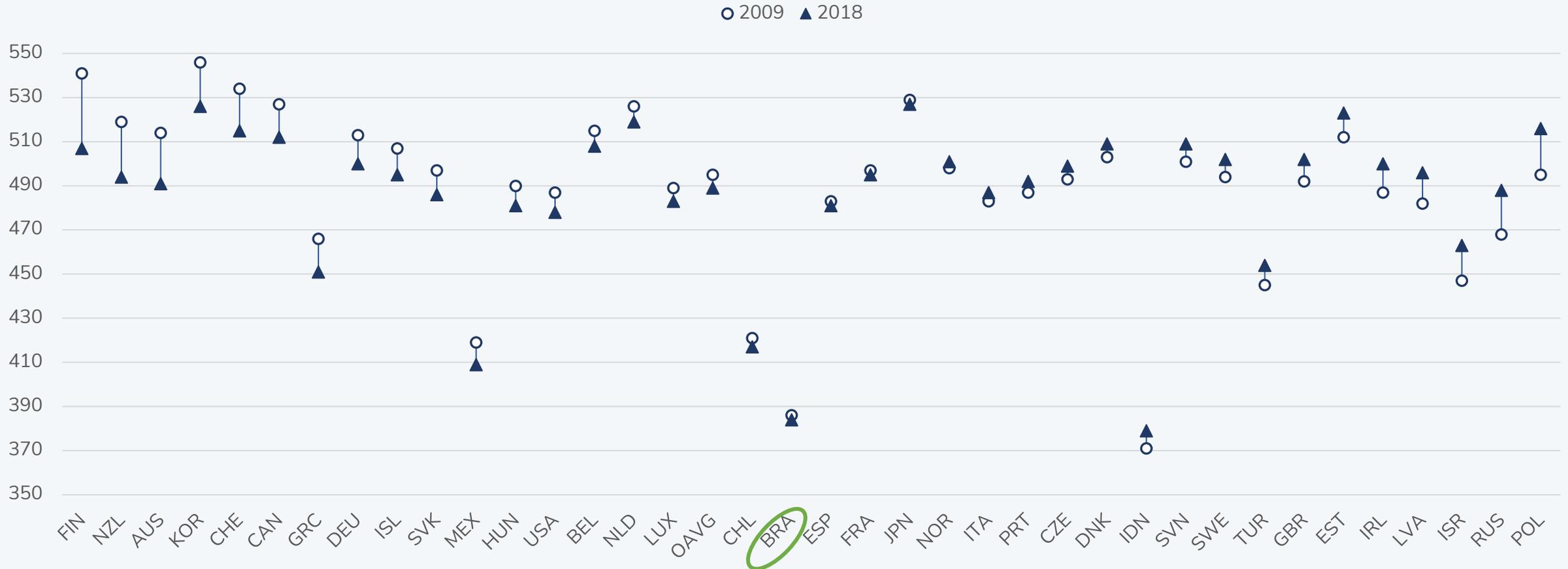
Percentage of 9th grade students with Adequate Proficiency in Saeb



Source: Open Social/IMDS. Estimates produced based on Saeb/Inep (2007 to 2019).

# Capacity building

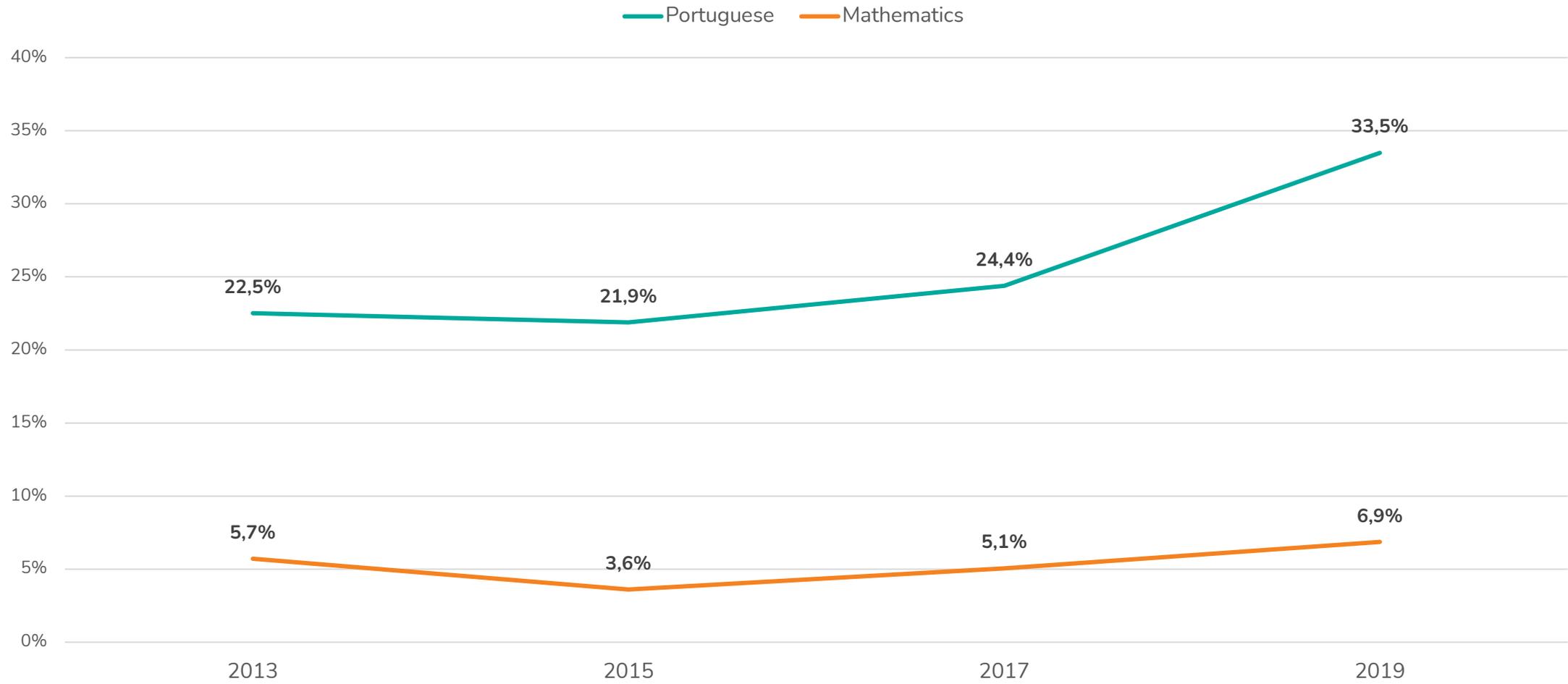
Performance of 15-year-old students in Mathematics (PISA)  
Countries ordered by difference between 2018 and 2009



Source: Prepared based on OECD Data.

# Capacity building

## Percentage of 3rd year High School students with Adequate Proficiency in Saeb



Source: Open Social/IMDS. Estimates produced based on Saeb/Inep (2007 to 2019).

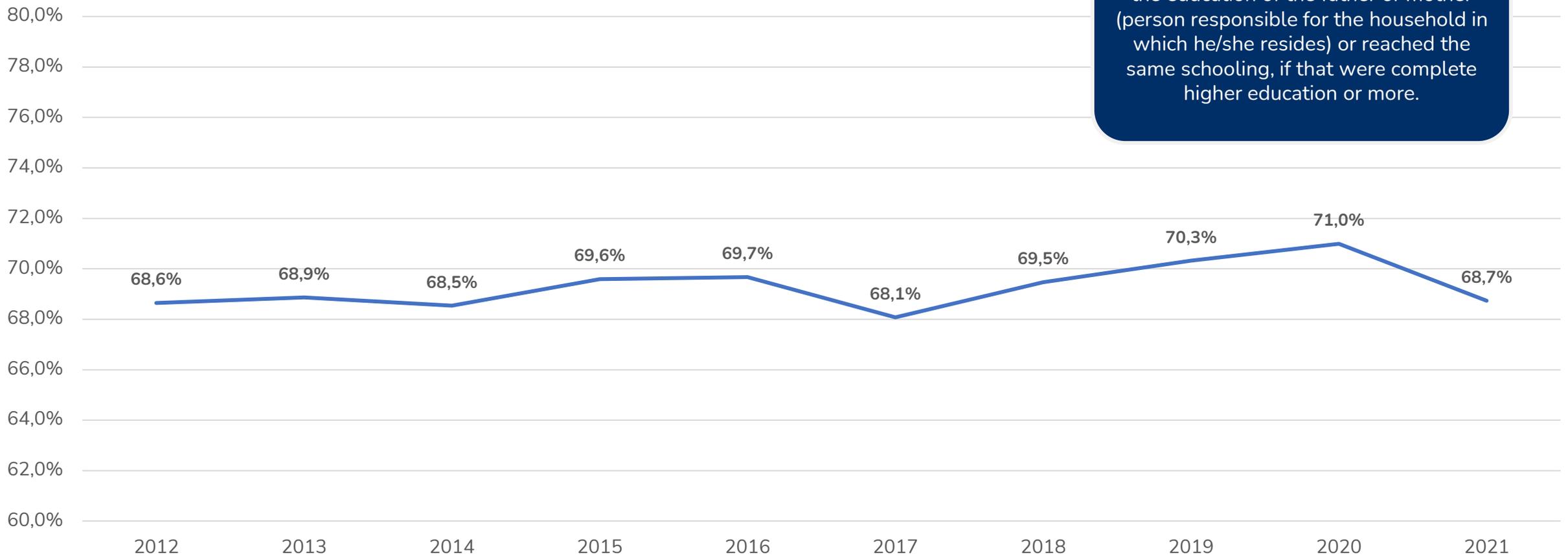


## **03. Social mobility**

Intergenerational mobility, access and characterization of youth employment

# Social mobility

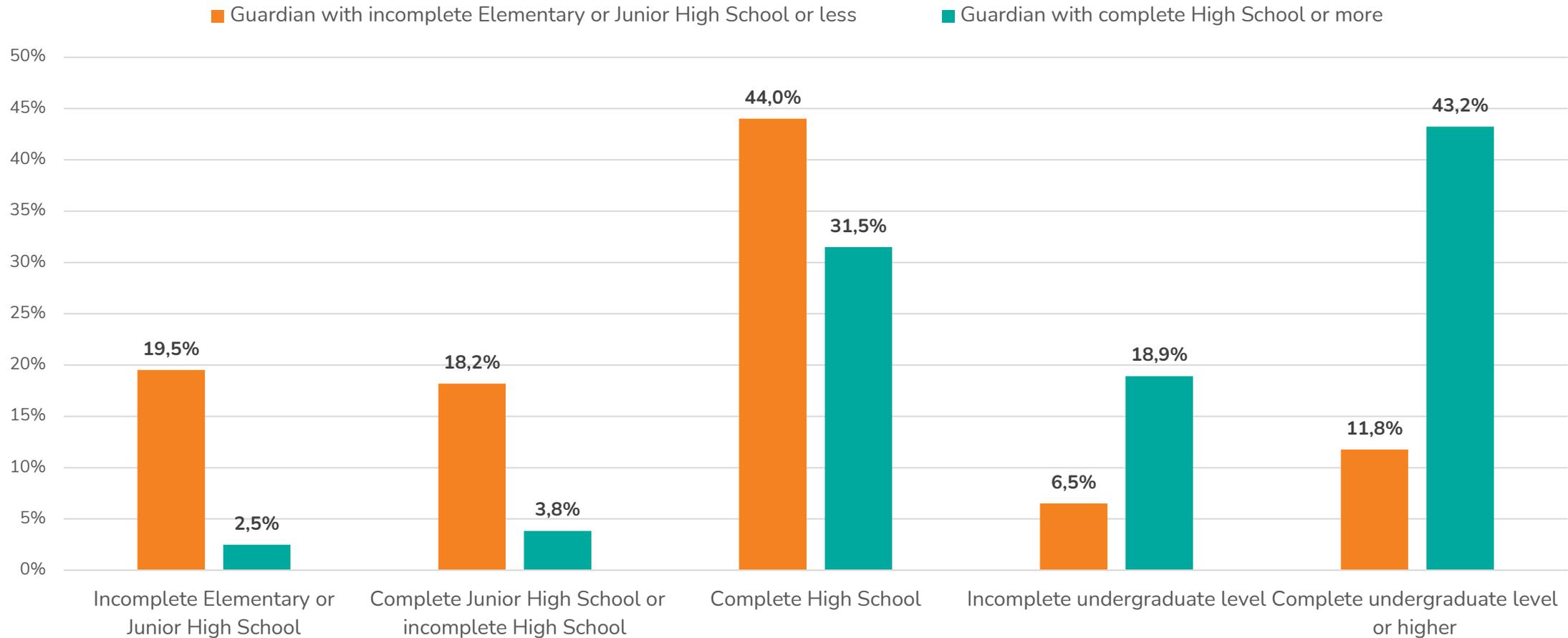
Upward educational mobility - weak (%)  
Young people aged 25 to 29 years (2021)



Source: Oppen Social/IMDS. Estimates produced based on the PNADC Annual Visit 1 (2012 to 2019) and Visit 5 (2020 and 2021).

# Social mobility

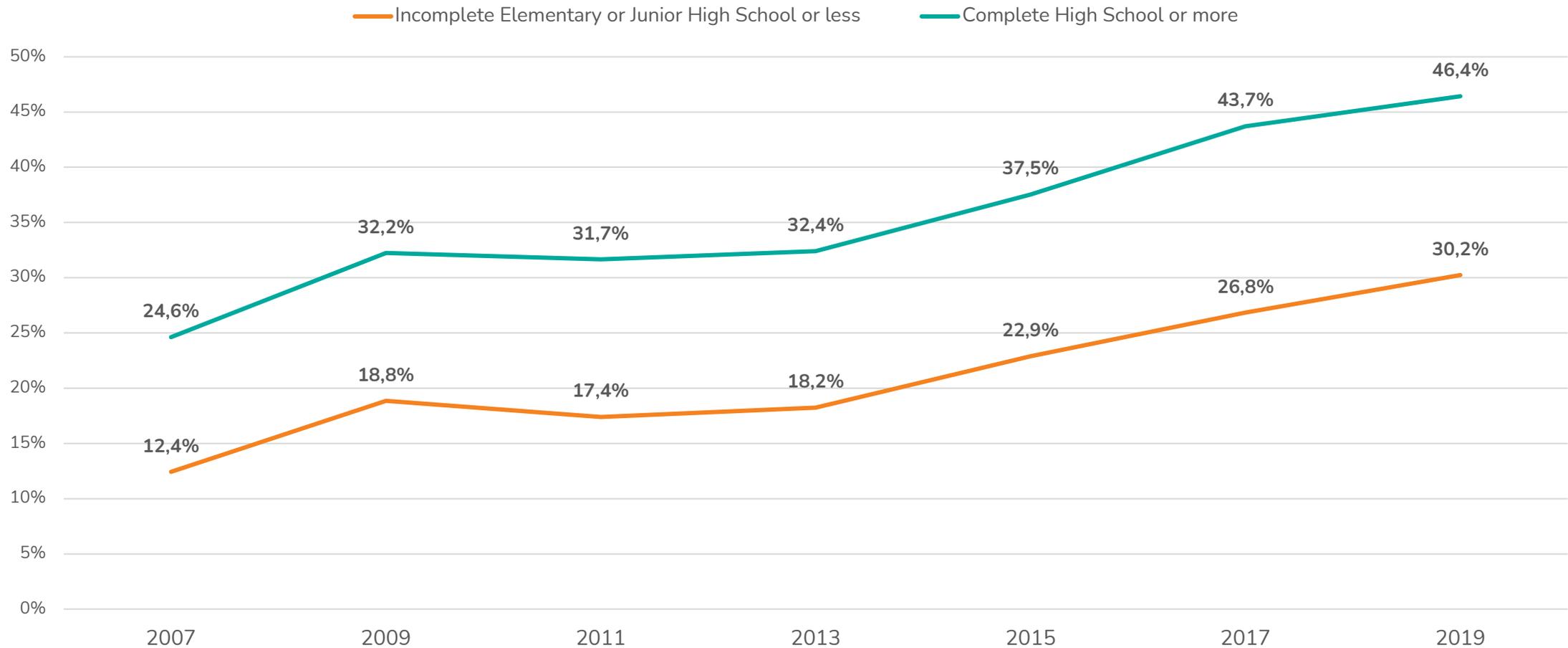
Distribution of young people aged 25 to 29 years by higher level of education achieved according to the education of the guardian (2021)



Source: Oppen Social/IMDS. Estimates produced based on the Annual PNADC Visit 5.

# Social mobility

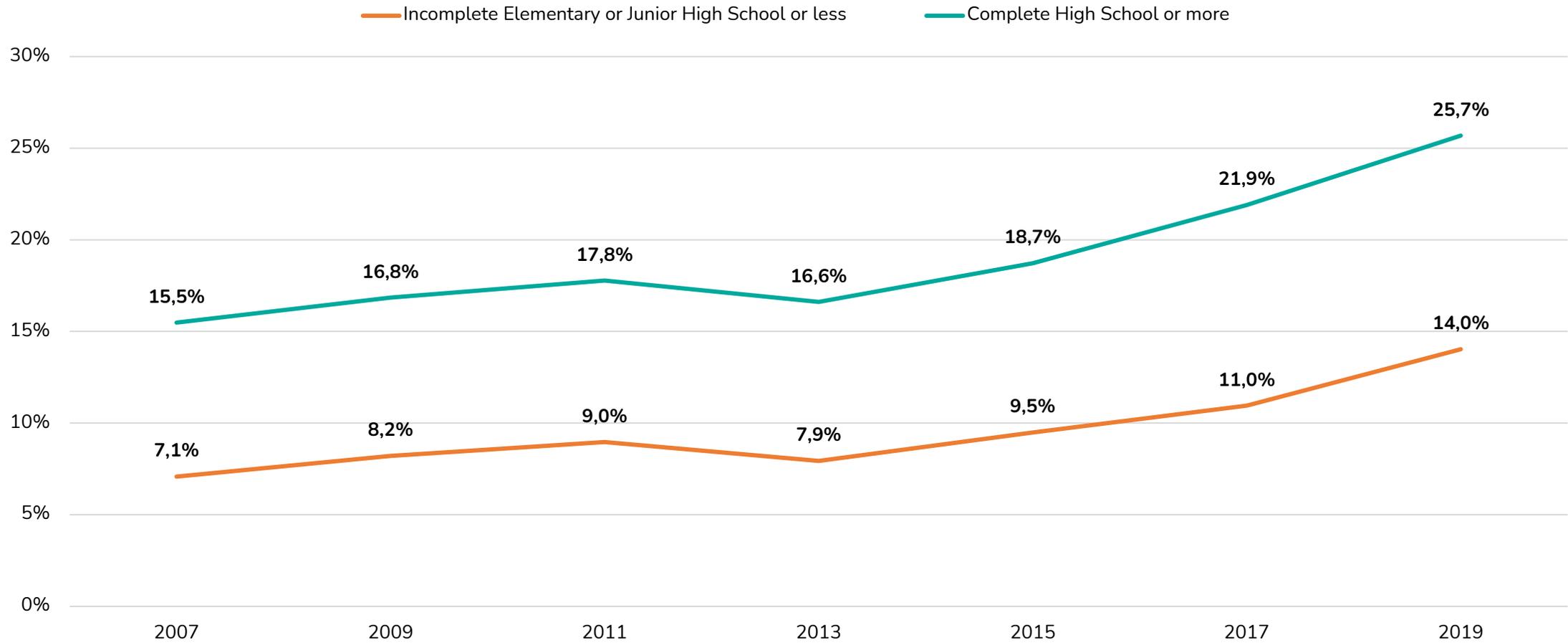
## Percentage of 9th grade Junior High School students with Adequate Proficiency in Portuguese on the Saeb by mother's schooling



Source: Open Social/IMDS. Estimates produced based on Saeb/Inep (2007 to 2019).

# Social mobility

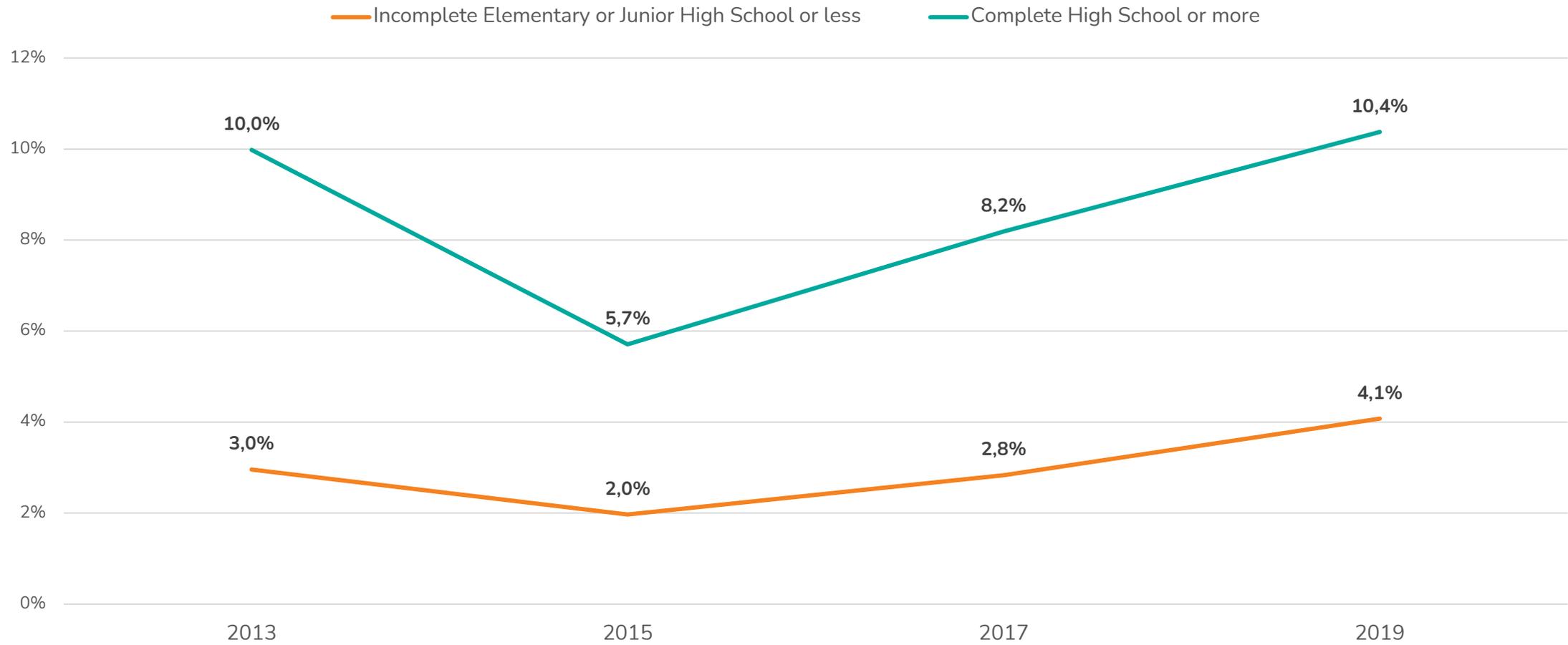
## Percentage of 9th grade students with Adequate Proficiency in Mathematics on the Saeb by mother's schooling



Source: Open Social/IMDS. Estimates produced based on Saeb/Inep (2007 to 2019).

# Social mobility

Percentage of 3rd year High School students with Adequate Proficiency in Mathematics on the Saeb by mother's schooling

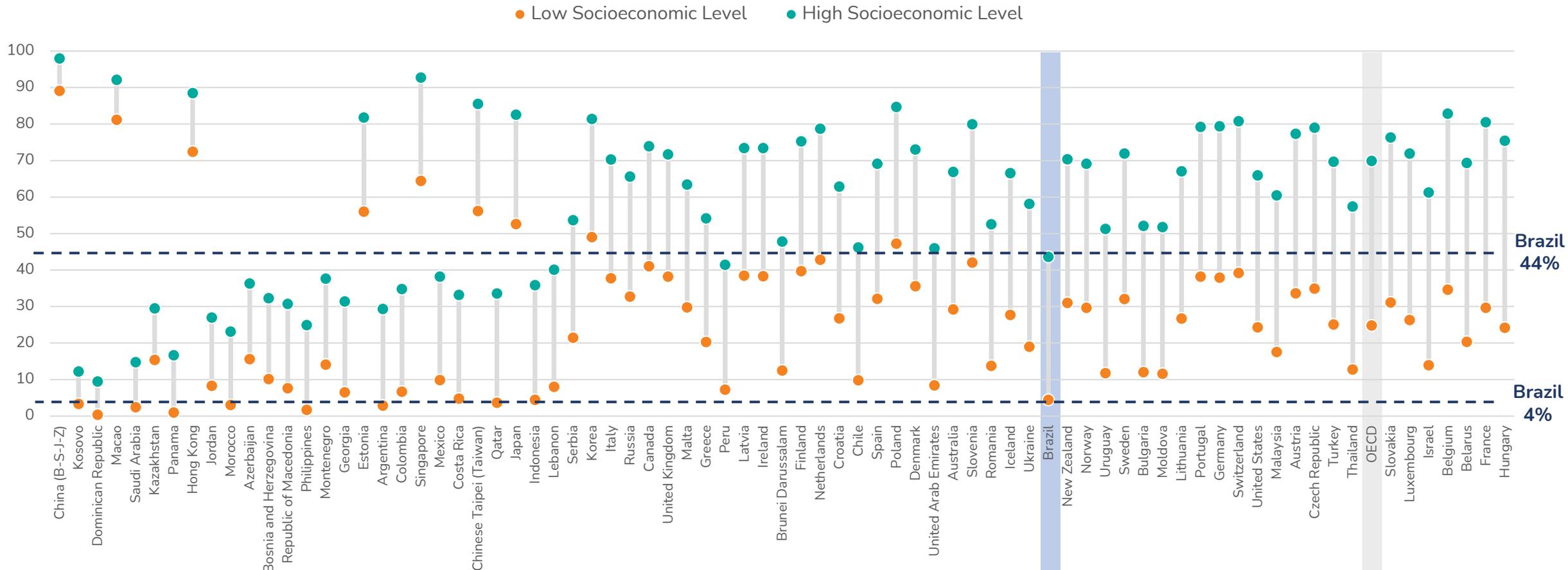


Source: Open Social/IMDS. Estimates produced based on Saeb/Inep (2007 to 2019).

# Social mobility

## Percentage of 15-year-old students with adequate learning in Mathematics (PISA 2018)

Countries ordered by the difference between High and Low Socioeconomic Level

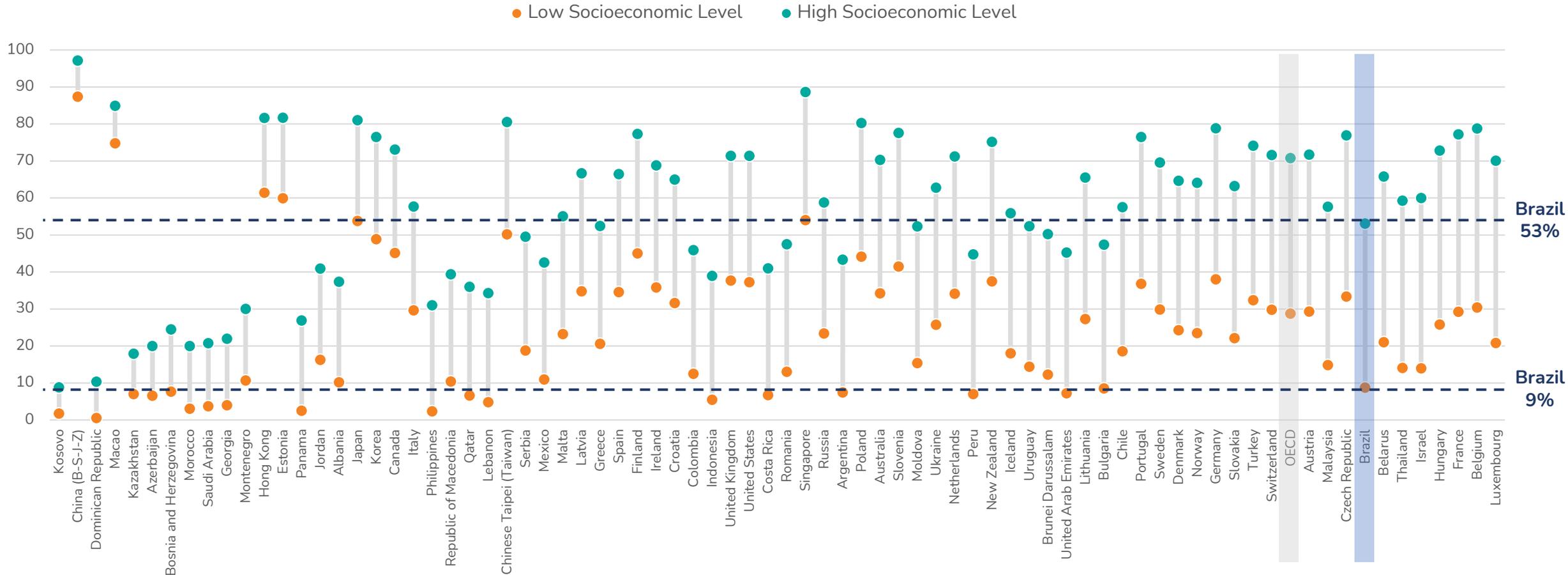


Source: Prepared from QEdU.

# Social mobility

## Percentage of 15-year-old students with adequate learning in Science (PISA 2018)

Countries ordered by the difference between High and Low Socioeconomic Level



Source: Prepared from QEdU.



## **04. Productive insertion**

Access and characterization of  
youth employment

# Productive insertion

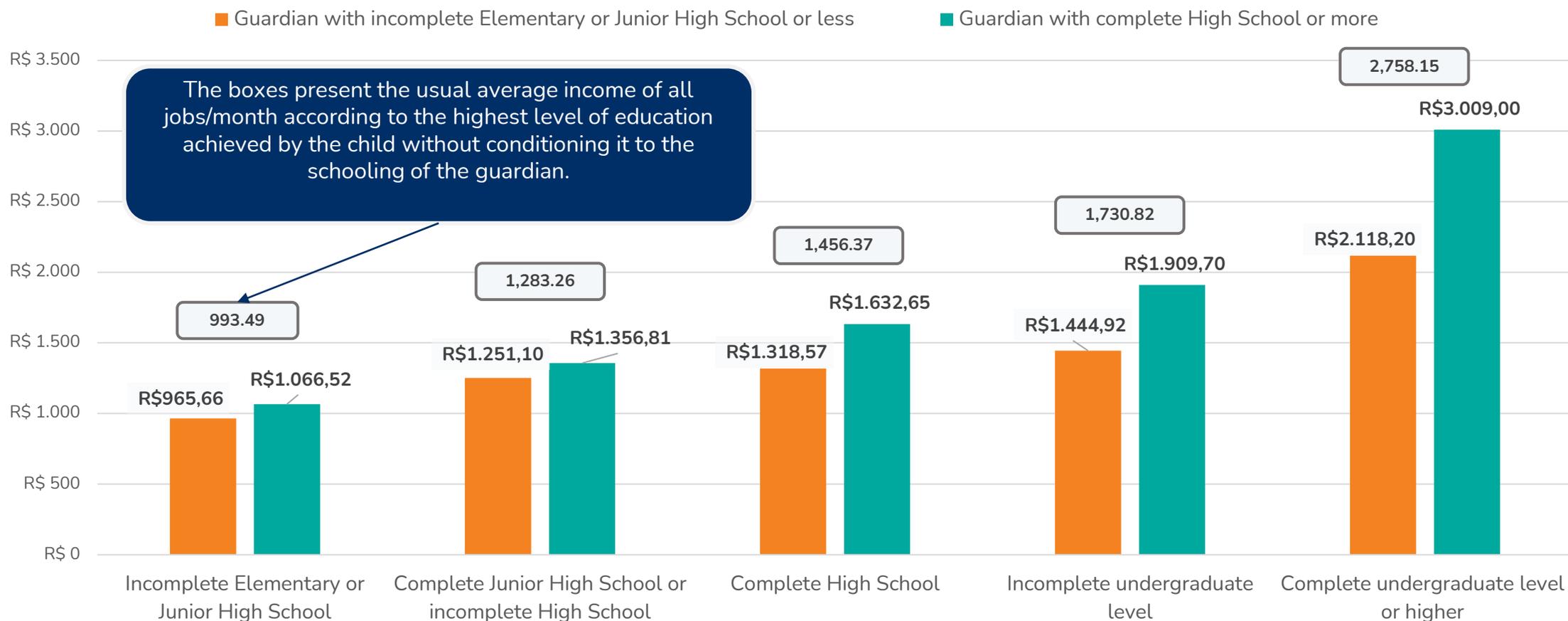
## Young population aged 25 to 29 years in 2021

Highest level of education achieved	Men		Women		Total	
	Population	Sample	Population	Sample	Population	Sample
Incomplete Elementary or Junior High School	1,165,237	1,800	839,658	1,320	2,004,895	3,120
Complete Junior High School or incomplete High School	1,544,599	1,983	1,216,444	1,650	2,761,042	3,633
Complete High School	3,362,396	4,284	3,504,801	4,559	6,867,196	8,843
Incomplete Undergraduate Studies	877,424	1,092	844,659	1,140	1,722,083	2,232
Complete Undergraduate Studies or higher	1,532,106	1,705	2,070,680	2,690	3,602,786	4,395
<b>Total</b>	<b>8,481,761</b>	<b>10,864</b>	<b>8,476,241</b>	<b>11,359</b>	<b>16,958,002</b>	<b>22,223</b>

Source: Open Social/IMDS. Estimates produced based on the Annual PNADC Visit 5.

# Productive insertion

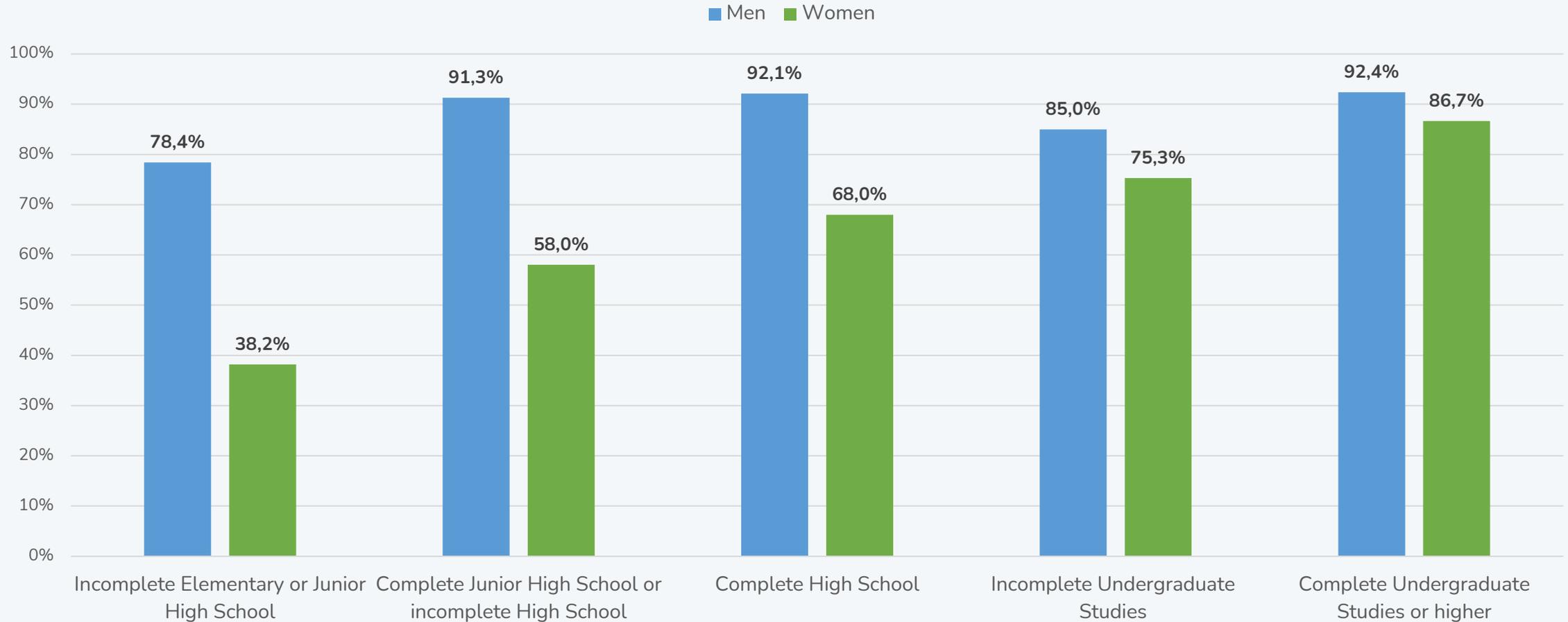
Average habitual income of all jobs/month of young people aged 25 to 29 years according to the highest level of education achieved according to the education of the guardian (average 2018 to 2021)



Source: Open Social/IMDS. Estimates produced based on the PNADC Annual Visit 1 (2012 to 2019) and Visit 5 (2020 and 2021).

# Productive insertion

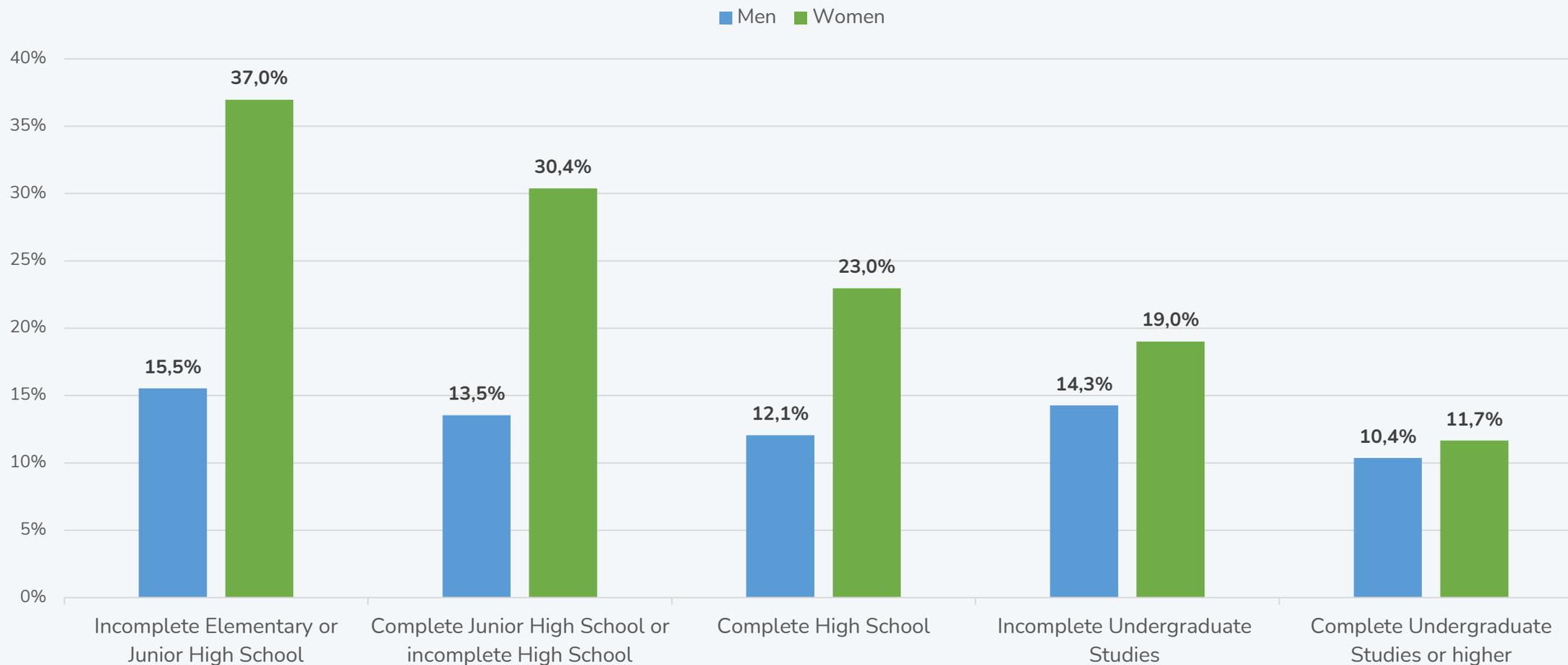
Percentage of young people aged 15 to 29 in the workforce by the highest level of education achieved (2021)



Source: Open Social/IMDS. Estimates produced based on the Annual PNADC Visit 5.

# Productive insertion

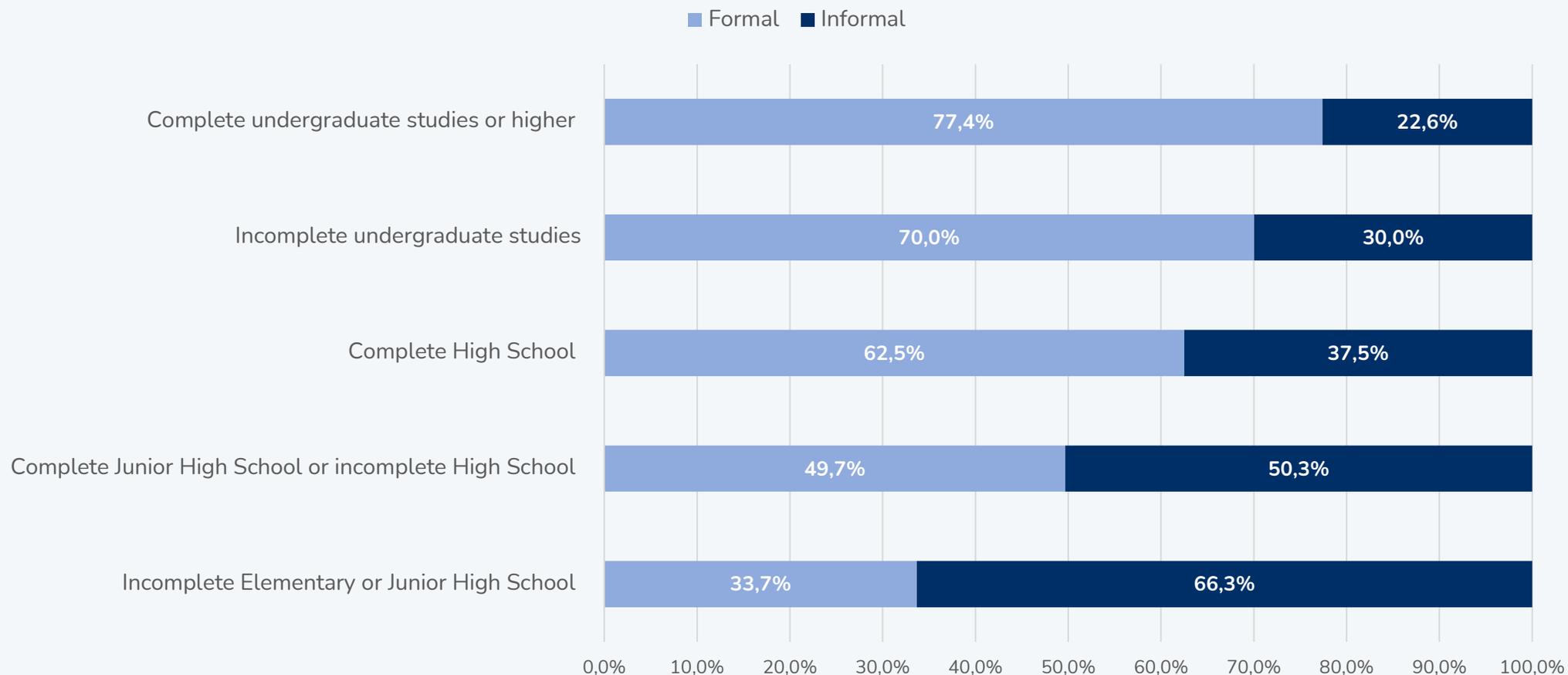
Percentage of young people aged 25 to 29 years unoccupied by the highest level of education achieved (2021)



Source: Open Social/IMDS. Estimates produced based on the PNADC Annual Visit 5.

# Productive insertion

Formality and informality among young people aged 25 to 29 years occupied according to the highest level of education achieved (2021)



According to IBGE, people were considered to be in the **informal** sector whose position in the occupation was: Employed in the private sector without a signed work permit; Domestic worker without a signed work permit; Auxiliary family worker; and, Employer and Self-employed without CNPJ.

Source: Open Social/IMDS. Estimates produced based on the PNADC Annual Visit 5.

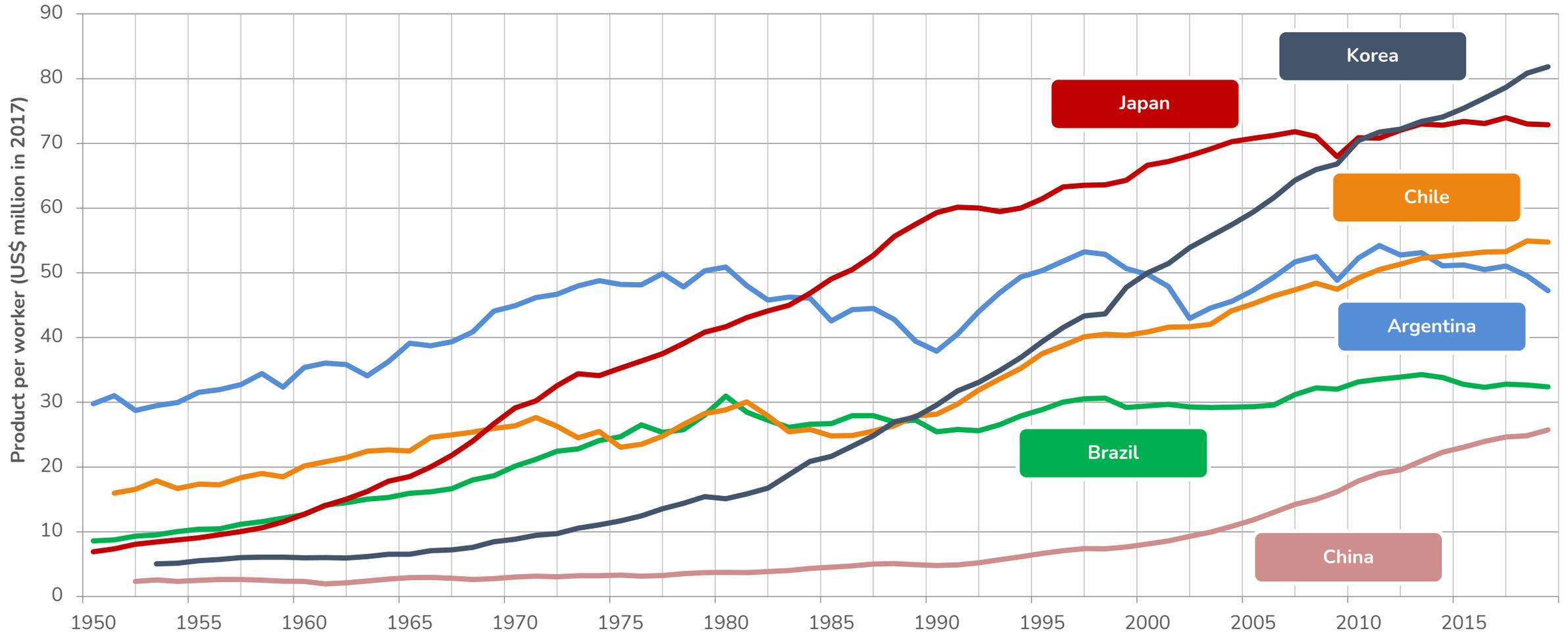


## **05. Productivity Challenges**

Competitive world and the challenges of Brazilian productivity

# Challenges to increasing productivity and youth

Product per worker (US\$ million in 2017) (from 1950-2019)

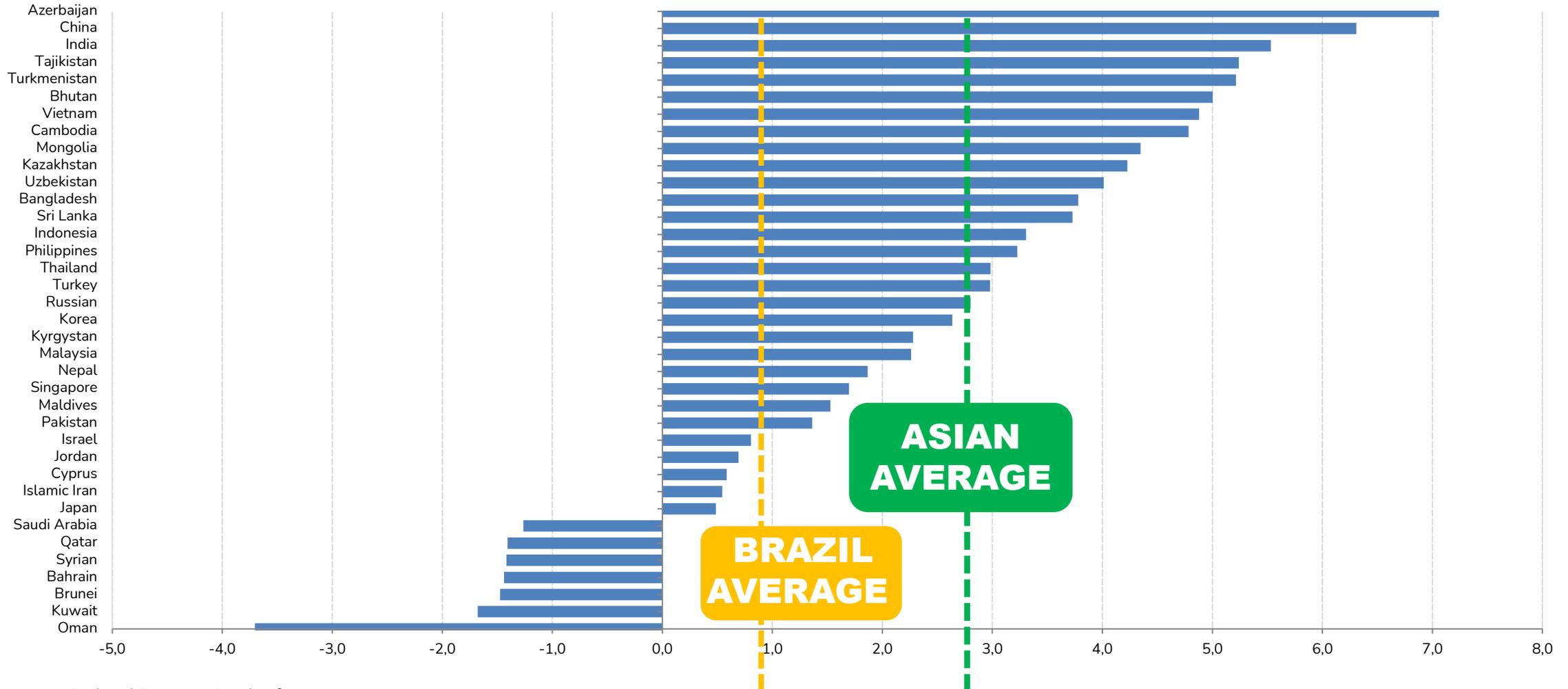


Source: Open Social/IMDS. Estimates produced based on Federal Reserve Economic Data.

# THE PRODUCTIVITY CHALLENGE - HOW ARE WE DOING?

## Average labor productivity growth rate - Asia 2000-2019

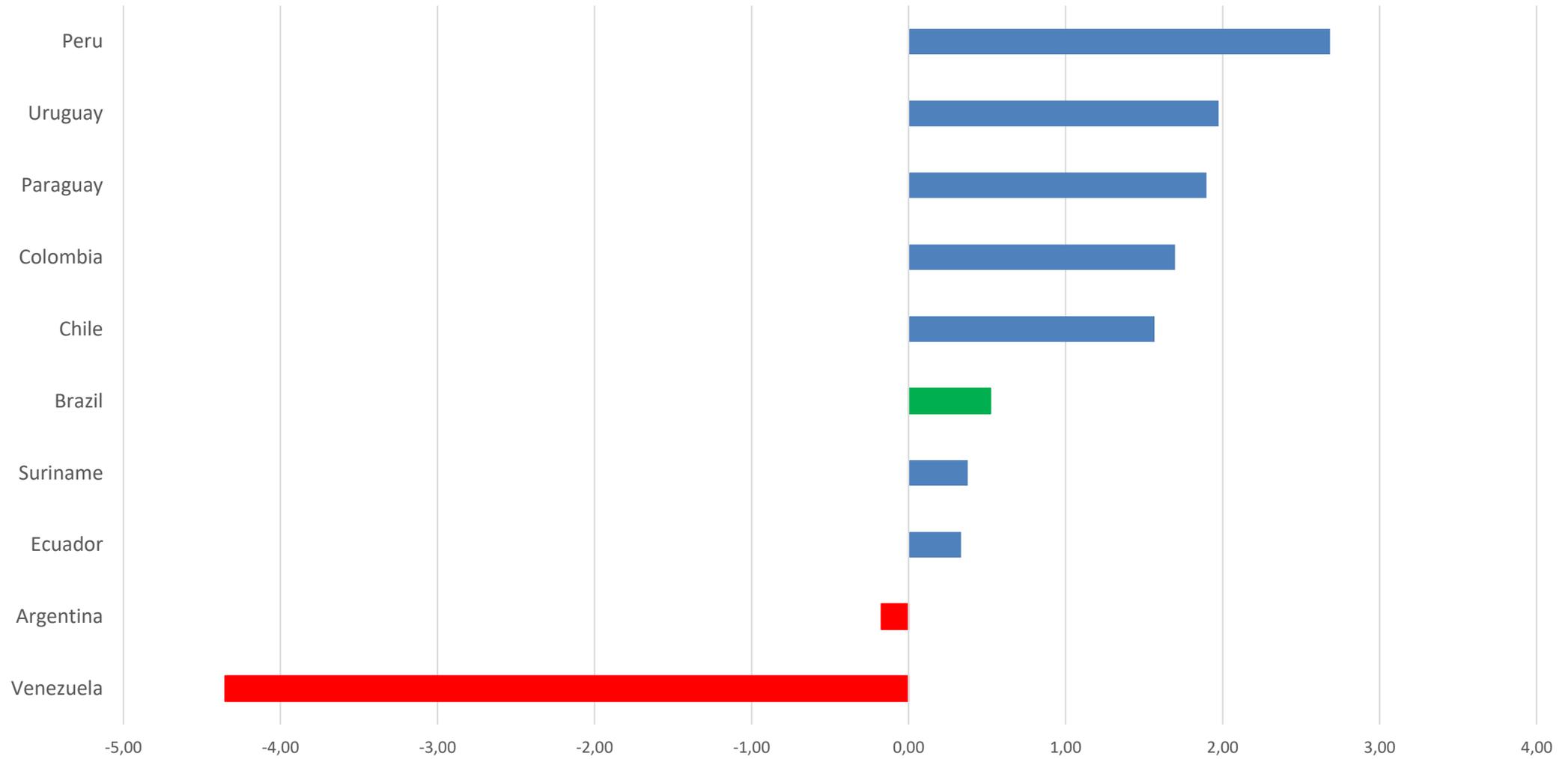
Average productivity evolution of Asian countries (2000-2019)



Source: Federal Reserve Bank of St. Louis  
Preparation: Tafner (2022)

# THE PRODUCTIVITY CHALLENGE - HOW ARE WE DOING?

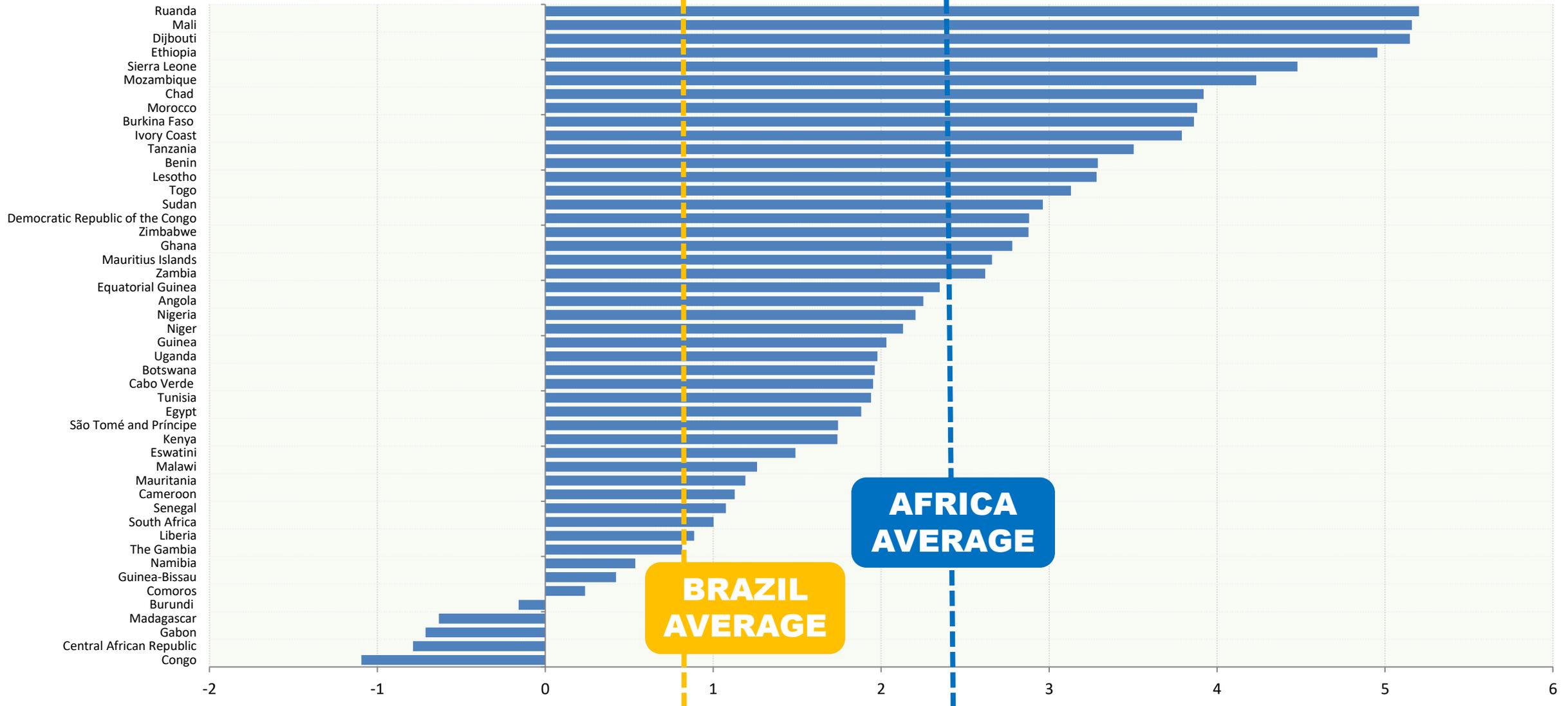
## Average labor productivity growth rate - South America 2000-2019



Source: Federal Reserve Bank of St. Louis  
Preparation: Tafner, 2022.

# THE PRODUCTIVITY CHALLENGE - HOW ARE WE DOING?

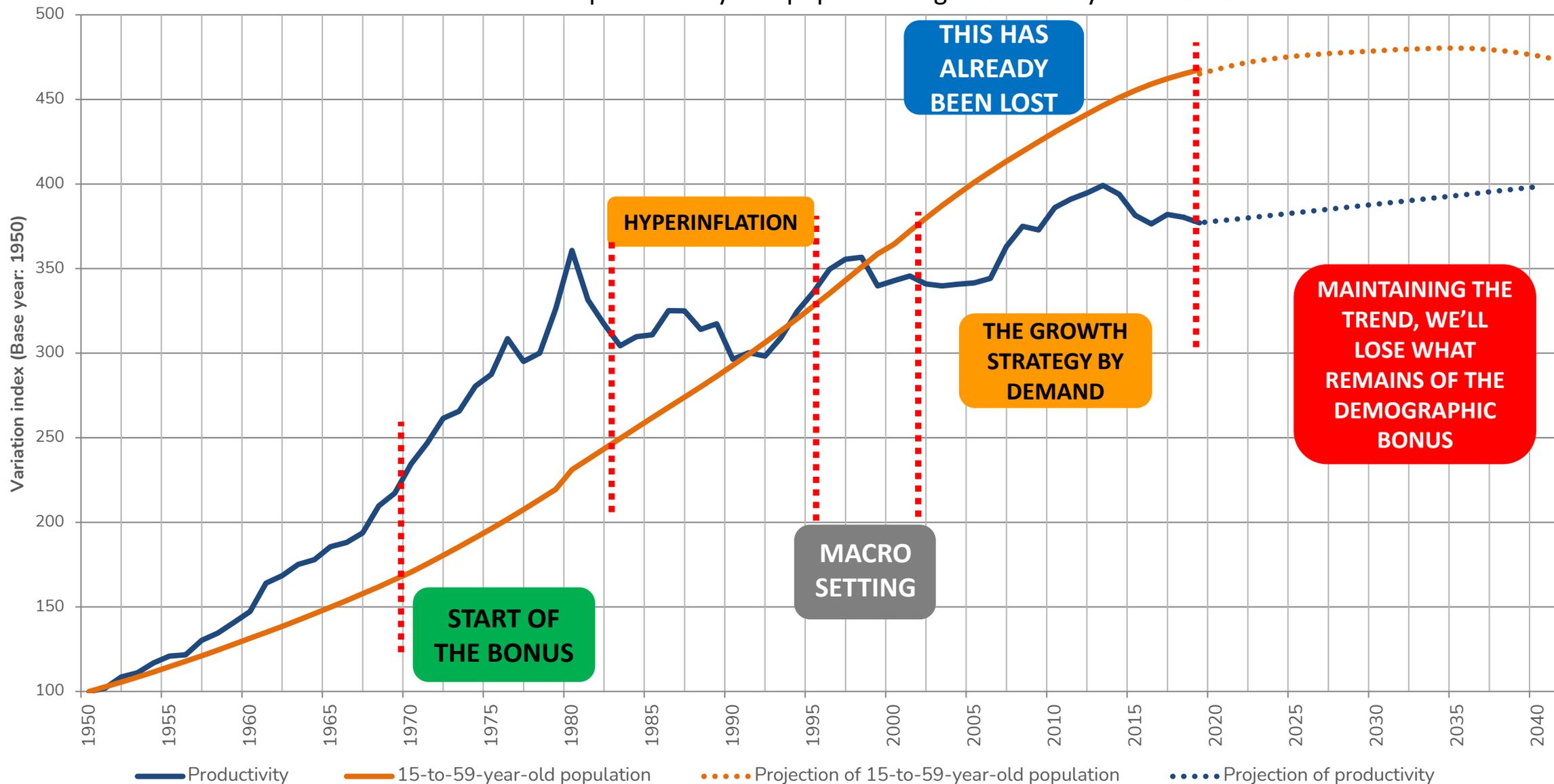
## Average labor productivity growth rate - Africa 2000-2019



Source: Federal Reserve Bank of St. Louis  
Preparation: Tafner, 2022.

# PRODUCTIVITY AND THE WASTED BONUS: A TIMELINE

Number index of productivity and population aged 15 to 59 years in Brazil



Note: Population and productivity in index number. Preparation: Tafner, 2022.



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December 7, 2022

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