INSTITUTE FOR MOBILITY AND SOCIAL DEVELOPMENT

Diagnosis of School Abandonment and Dropout in Brazil[1]

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Summary

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Index of figures

1. Introduction

Education is one of the main driving forces behind the increase in individual and societal productivity, being one of the major explanatory factors in the evolution of salaries throughout one's life (Mincer 1974), in income distribution (Becker 1967), in the difference in productivity between countries (Romer 1990) and in social mobility and intergenerational distribution of poverty (Card, Domnisoru, and Taylor 2018; Chetty et al. 2014).

In Brazil, one of the countries with the largest income inequality in the world[3], differences in educational opportunities are at the heart of the problem (Ferreira, Leite, and Litchfield 2008). Brazilian inequality is not reflected only in the income of individuals, but also in opportunities for access to quality schools and in social ascension opportunities. According to data from the Continuous National Household Sample Survey, PNADC 2019, the chance of a young person aged 20 to 24 from the fifth poorest strata to graduate from High School is only half that of a young person from the fifth richest. The likelihood of a young Black person of the same age group to leave school without having concluded High School is more than 50% higher than that of a young White person.

Although enormous advances of school inclusion are happening in Brazil, from the mid-1990s, the country still had a high average of school dropout, especially from High School. On average, almost 10% of students drop out of school every year in this stage[4]. At the age of 18, only 1 in every 2 Brazilians have finished High School. Even at age 24, the completion rate is still low: only 7 in every 10[5]. The likelihood of a young Brazilian concluding High School is less than that of young Argentines, Chileans, Peruvians, Bolivians, and Venezuelans (Bassi, Busso, and Muñoz, 2015).

Such problems may aggravate with the Covid-19 pandemic. Without the daily bond of the school, without face-to-face classes with teachers and without interactions with colleagues, students are impaired not only in learning, but also in emotional and social development. In addition to the loss of quality in the learning

[3] According to data compiled by the World Bank, in 2019, Brazil was the 9th country with the world's largest Gini index (https://data.worldbank.org/indicator/ SI.POV.GINI).
[4] According to the 2019 INEP School Census.
[5] According to PNADC data.

process, the lack of bonding with the school for over a year sends up a warning light of a concrete threat of increased school dropout rates in Brazil in the coming years, with economic and social consequences that will be felt for decades to come. Such risks are particularly important for young adolescents, already more prone to dropping out, especially for those in situations of social vulnerability and who do not have the necessary digital means to attend online lessons.[6]

Past cases of school closures for various reasons give us a perception of potential learning losses that may come from the prolonged closing of Brazilian schools in 2020 and 2021, especially among students who already had worse school performance before the pandemic[7,8]. Worse than the impacts on learning, however, would be the impacts on dropout. After control of the Ebola outbreak and reopening of schools in Liberia, for example, the enrollment rate among girls fell 17 percentage points (pp), while the likelihood of pregnancy during adolescence increased by 10 pp (Bandiera et al. 2020).

It is not difficult to imagine a scenario in which school dropout among young people also increases in Brazil, either after the restart of face-to-face classes or in the following years.

A possible increase in school dropout in Brazil in the coming years may have lasting consequences. It is well known that school dropout causes both lower productivity and lower lifelong income, as well as a number of other problems for society, ranging from lower aggregate productivity (Moretti 2004), higher crime rates (Lochner and Moretti 2004), higher dependence on social assistance (Oreopoulos and

[6] According to data from PNADC 2019, about 15% of households with the presence of children from 0-14 years of age do not have Internet access. A survey conducted by the Secretariat of Education of the State of Rio de Janeiro revealed that approximately 8% of High School students did not have access to the Internet.

[7] As blizzards (Goodman 2014), earthquakes (Andrabi, Daniels, and from 2020), hurricanes (Priest 2012), summer vacation (Sabates, Carter, and Stern 2021), shootings (Monteiro and Rock 2017), strikes (Jaume and Willén 2019; pink 2021) and Ebola epidemics (Bandiera et al. 2020), the Spanish flu (Meyers and Thomson 2017) and H1N1 (Amorim, Piza, and Lautharte Junior 2020).

[8] Forecasts on learning loss due to closing schools are quite disparate. Some estimates point to losses that would take us back to the levels of learning seen in Brazil in 2015 (Clear, 2020), or losses that go from just over half a year of learning loss (Azevedo et al, 2020) to more than 1 and a half years of learning loss (Andrabi, Daniels, and Das, 2020).

Salvanes 2011), lower civic participation (Milligan, Moretti, and Oreopoulos 2004) to the perpetuation of inequality between generations (Currie and Moretti 2003) [9].

For a long time, the general perception in Brazil was that school dropout already occurred in the first grades of Elementary and Junior High School, caused by factors disconnected from school. Dropout was seen as a natural consequence of poverty and of lack of interest of parents, not a problem that also involved the organization of teaching systems, teacher training or the quality of the teaching offered. More precise subsequent diagnoses showed that parents actually persist in enrolling their children for several years consecutively in Elementary and Junior High School [10]. Using National Household Sample Surveys, PNAD, and Demographic Censuses, researchers such as Sérgio Costa Ribeiro, Phillip Fletcher and Ruben Klein showed, in the late 1980s and early 1990s, that the biggest problem of the initial years was not dropout or school abandonment, but repetition and failure (Fletcher and Ribeiro 1988; Klein and Ribeiro 1991; Ribeiro 1991; Fletcher 1997; Fletcher and Ribeiro 1996). The problem of dropout did not reside in the lack of interest of parents in the early years, but rather in the accumulation of repetitions and successive failures, leading to an increase in age-grade distortion and dropout in higher grades.

The leap in quality of the School Census data from the mid-2000s, allows us today, to draw a richer and more detailed panorama of school abandonment and dropout in Brazil. To this end, the main contribution of this paper is to update until the end of the 2010s the characterization of the situation and evolution of school dropout in Brazil[11], mixing the use of the School Census with many years of PNAD and PNADC data. In addition to drawing this picture, the paper shows advances in combating dropout in the last 3 decades and points to correlated factors behind the phenomena of abandonment and dropout in Brazil.

[9] Given that children's schooling is strongly influenced by parents' schooling, it is even possible that the future children of these young people who drop out of school will also be in harm's way.
[10] The origin of the diagnostic error is mainly due to the poor quality of the data of the old School Census, which did not properly capture the difference between dropout, abandonment, failure, and repetition. We explain the differences between these concepts in the 3rd chapter of this paper.
[11] For diagnostic references on school dropout, see Klein and Ribeiro, 1991; Fletcher, 1997; Leon and Menezes-son, 2002; Rios-Neto César, and Riani, 2002; Golgher and Rios-Neto, 2005; Portela et al, 2012.

This paper does not aspire to point out the causal factors of school dropout in Brazil, nor to indicate possible responses to mitigate or solve the problem. In the other two papers of this series, we go more deeply to the roots of the problem, analyzing causal evidence of factors behind the dropout phenomenon, pointing out successful experiences to combat dropout documented in the literature.

This paper is divided as follows:

In the first part, before we go deeper into the framework of school dropout in Brazilian High Schools, we make a brief description of the databases (Section 2) and the concepts used (Section 3). Although related, concepts such as abandonment and dropout are different. The most accustomed reader with such definitions can simply skip such sections and start reading the diagnosis of the current situation.

In the second part of the paper, we present an overview of the situation of dropout and school abandonment in 2019, before the Covid-19 pandemic (Section 4), the inequality of completion of studies (Section 5) and the evolution over the last 3 decades (Section 6). The analysis includes comparisons between states, networks, and socioeconomic clippings. We examine the age profile of High School graduates in Brazil, and inequalities in relation to the likelihood of completion of studies.

The third part of the paper correlates school dropout with other variables (Section 7). In this section, we only exposed such correlations without stopping to identify or isolate the causal impact of one variable on another. The last section completes the paper.

2. Databases

Before we analyze the situation of school dropout, it is important to familiarize ourselves with the databases used throughout this paper: the School Census, PNAD and PNADC. This section briefly describes these bases.

2.1 PNAD and PNADC

PNAD is the main Brazilian household survey. Started in 1967 with quarterly periodicity, it began to collect information on general characteristics of the population, work, income, housing, and education with an annual periodicity between 1970 and

2015, when it was discontinued and replaced by continuous PNAD (PNADC)[12]. PNADC began in 2012 and consists of a rotating panel of households, with quarterly periodicity. The household is interviewed one month and leaves the sample for the following two months. This sequence is repeated 5 times, allowing for a one-year follow-up of the household.

PNAD and PNADC contain information on how many years of study a person has, what course they attended, the duration of the course, what the highest prior course was that they attended, what highest grade/year they previously concluded was, among other questions. Aside from charactering an individual's schooling, PNAD and PNADC have a lot of information on the characteristics of individuals and household income, which allows us to disaggregate High School completion rates by clippings of race, and per capita household income.

In addition to the frequency of data collection, there are some other methodological differences between the two surveys. PNADC has a larger sample than PNAD, in addition to some differences in relation to the definition of certain concepts, such as active-age population, paid work, work in production for self-consumption, and restrictions on a worker's temporary leave (Ottoni and Barreira 2016). There are no reasons to suspect that such differences would impair the analyses considered herein. Therefore, in the following analyses, we will always use both databases so we can have complete temporal series up to 2019[13].

2.2 School Census

Annually, the Census collects information on all schools, directors, teachers, and students in Brazilian basic education, whether of public or private network. Data collection is coordinated by the National Institute of Educational Studies and Research Anísio Teixeira, INEP, in a collaborative regime with state and municipal education secretariats.

The School Census has two stages. First, networks inform the initial registration of students, as well as information on school infrastructure and characteristics of

[12] In 2004, PNAD covered the rural area of the Northern Region.
[13] All temporal series graphs that use PNAD and PNADC feature the two series. Between 2012 and 2015, therefore, the graphs feature both these series.

directors and teachers. This first filling in begins on the last Wednesday of May, which is considered the Census reference date, and usually extends to the end of July. Information collected should reflect the situation of enrollment on the reference date of the Census.

The second stage usually occurs between February and March of the following year and should reflect the situation in which the students were at the end of the year. At that moment, schools need to inform if students were still at school at the end of the year, whether they transferred or remained, and whether they passed or failed. [14]

3. Concepts: Performance and school flow

For a long time, due to methodological problems, the School Census data did not allow precisely to calculate how many students repeated grades, how many were promoted to the next grade and how many dropped out between one year and the next. Repeating students, for example, were erroneously computed as dropout students, leading to misleading conclusions on the phenomenon of repetition and dropout in Brazil (Klein and Ribeiro 1991; Ribeiro 1991)[15]. This panorama changed only after the Profluxo model (Klein and Ribeiro 1991; Fletcher and Ribeiro 1988; 1996; Fletcher 1997), which allowed quantifying the size of school dropout in Brazil more precisely.

Essentially, the problem of the ancient methodology of the School Census derived from some confusion about the concepts of school abandonment and school dropout, or, generally, between what today is called performance and school flow. This section aims to clarify the definition of the two concepts, and to show how they can be calculated from the data of the School Census and the PNAD. We begin with the concept of school flow.

[14] At this time, schools should inform the final situation of all students enrolled at the school at the end of the year, but these enrollments may not coincide with the registrations on the last Wednesday of May because of transfers between schools. Students transferred must contain information from the final situation of the registration completed by the school that received them after the Census reference date (Inep, 2021).

[15] Basically, many schools sent students home with low grades and with no chance of passing before the end of the year. Although many of these students repeat the same grade the following year, they were counted as dropouts according to the old criteria of the School Census (Golger 2015; Klein and Ribeiro 1991; Soares and Lima 2002).

3.1 School flow or transition rates

School flow, also called transition rates, is composed of pass, repeat and dropout indicators. These are obtained by comparing students' enrollments between one t year (base year) and the following (t + 1) year.

The first reliable indicators of school transition rates in Brazil were calculated comparing the schooling of different cohorts in demographic surveys, such as PNAD, applying Profluxo model methodology (Fletcher and Ribeiro, 1988, 1996; Klein and Ribeiro, 1991; Fletcher, 1997)[16]. Quite succinctly, what the model does is basically compare the schooling of children from different cohorts, those who are in and those who are out of school. Although the model is quite suitable for calculating transition rates in the early years, the hypotheses that support it[17] do not seem adequate for the High School students[18].

As transition rates compare enrollments between two years in a row, longitudinal data (resulting from the follow-up of a set of individuals over time) end up being more suitable for this calculation. With the improvements introduced in the School Census as of 2007, today it is possible to follow students' trajectory in the transition between one year and the next[19], thus facilitating the calculation of school flow indicators. Every year, INEP calculates the transition rates, comparing enrollments in the first stage of the School Census of a given year, with enrollments of the first stage of the previous year. This process is achieved by comparing students from one

[16] Demographic survey databases also allow to calculate other indicators useful for school flow analysis, such as the proportion of those who concluded the grade, the proportion of young people out of school, the probability of progression in the grade and the average schooling of the cohort. For more details, see Golger (2015); Golger and Rios-Neto (2005); Rios-Neto, César, and Riani (2002) and Rios-Neto (2015).

[17] So that dropout and repetition rates can be calculated by means of such comparisons, it is necessary to assume that once having dropped out the student does not return to school. It is also necessary that each year of schooling also correspond to one more year of study. These two hypotheses are very reasonable for students in their early years, but are not so for those in High School, since there are students who sometimes go back to school and others who attend Youth and Adult Education, EJA, in which it is possible to advance schooling by more than one grade a year. André Golger (2015) presents a didactic and succinct explanation of the Profluxo model.

[18] Thus, we do not apply the Profluxo model in this paper.

[19] School Census microdata, disidentified at the student level, were public and could be accessed through the site https://www.gov.br/inep/pt-br/areas-de-atuacao/pesquisas-estatisticas-e-indicadores/censo-escolar/resultados when this paper was written.

year and the other[20] (INEP 2017). Depending on the students' enrollment situation in both databases, the student can be ranked in four main situations[21]:

1. Passed: if the student of year/grade/stage k in year t is enrolled in year/grade higher than k in year t+1. For students of the 3rd year of High School, the student is considered having passed if he was considered approved or graduated in the 2nd stage of the Census of year t[22], or if he enrolls in the 4th year of High School (in technical courses) or in subsequent professional education.
2. Repeating: if the student of year/grade k in year t is enrolled in t+1 in a stage equal to or lower[23] than k.
3. Dropped out: student enrolled in year t that is not enrolled in year t+1, except for graduates of the last year of High School[24].
4. Transferred to EJA: student enrolled in year t in regular education that in year t+1 enrolls in EJA (the equivalency program).

[20] The process of comparison between enrollments in the following two years begins by the exclusion of duplicate students through the verification of several identification variables such as: student code at the base of the School Census, CPF, number of the new 32-digit birth certificate, NIS, among other information. Subsequently, the bases are linked using information such as the student's name, the parent(s)' name, date of birth, municipality of birth and municipality of residence. Information from one year to the next are classified by the similarity in these fields through algorithms such as phonetic simplification and calculation of Levenshtein's distance.

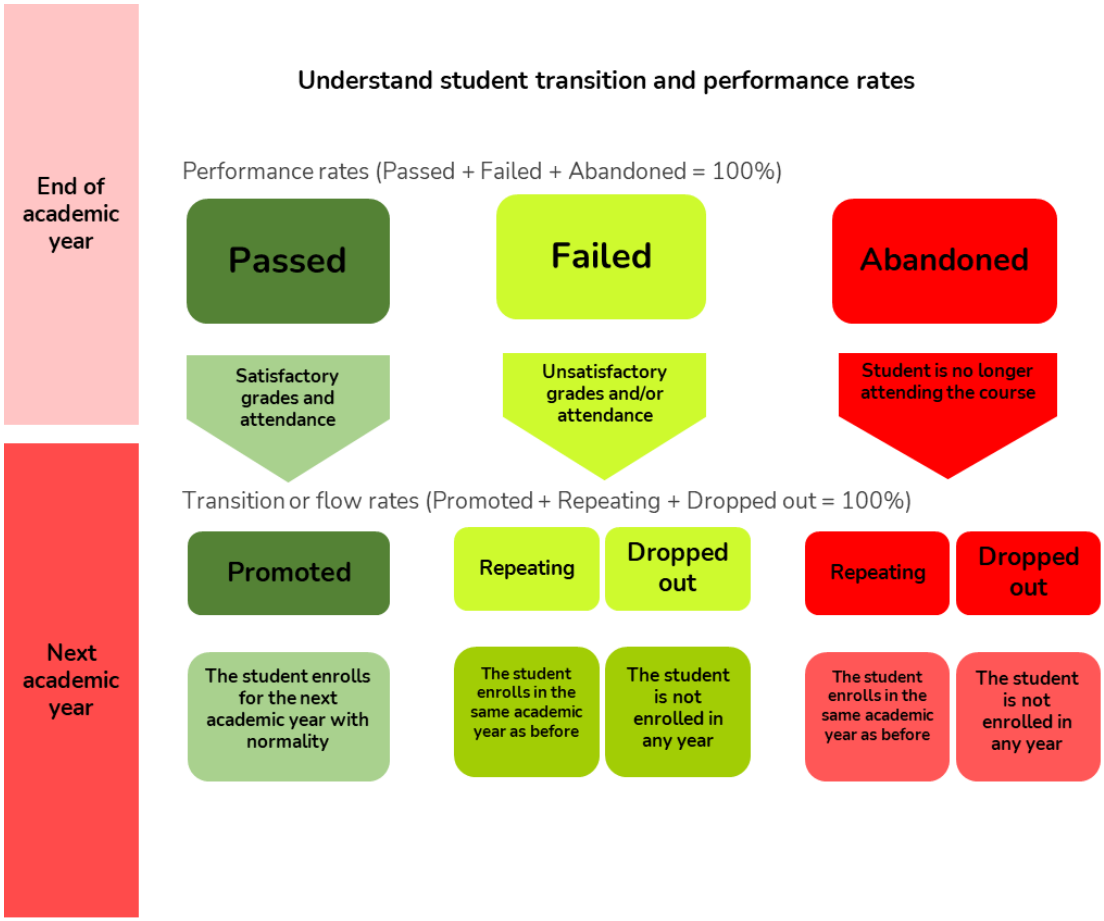
[21] Young students and those who were out of school the previous year because they had dropped out at some point are identified in another variable and are not classified in any of the four listed categories. Exceptional situations, such as the transition between non-sequential phases to sequential ones, and vice versa, whose frequency in the School Census database is quite low, are treated on a case-by-case basis. For more details, see INEP (2017).

[22] Filled out between February and March of the following year.

[23] Although rare, enrollment in a previous phase is a possibility.

[24] 3rd year of High School for most students.

Figure 1 – Details of the construction of transition and performance rates



Source: Revista Nova Escola, 2012 (http://revistaescola.abril.com.br/politicas-publicas/entenda-taxas-transica-escolar-rendimento-alunos-689317.shtml)

Note: Reproduced from the QEdu Academia site, https://academia.qedu.org.br/censo-escolar/taxa-de-rendimento/, access on December 6, 2021.

From these classifications, INEP calculates **rates of promotion, repetition, and dropout** by dividing the number of students in each of the situations in year t+1 by the total number of students in year t.[25] School flow rates are calculated for each municipality, network,[26] state and region per year/grade.

3.2 School Performance

Performance indicators relate to the student's situation at the end of the year, which is informed to INEP by the schools in the second stage of the School Census. School performance is composed of passing, failing, and abandonment rates.

[25] New students and students in exceptional transition cases between serial and non-serial grades/years are excluded from the base. In this way, promotion, repetition, dropout, and migration to EJA (youth/adult equivalency education) rates always add up to 100%.
[26] Municipal, State, Federal and Private.

In the second stage of the School Census, the school has 5 possible situations for the student: a) he may have been transferred to another school (through formal transfer documentation) [27]; b) he may be deceased[28]; c) he may no longer be attending classes (without having been transferred), which is characterized as abandonment; d) he may have failed (due to grades or absences); or e) may have passed. [29]

School performance, therefore, only depicts a student's situation at the end of a given year, regardless of what occurred with his enrollment the year before. Although these rates bear some resemblance to promotion, repetition, and dropout rates, they are not equivalent, as they forego comparison with the enrollment of the previous year.

To form the basis of calculation of performance rates, the initial enrollments[30] are considered, plus the net balance of formal transfers, minus the deceased[31]. If a school receives and formally admits a student, the school needs to inform the final situation. All students included in the basis of calculation, therefore, necessarily need to be classified either as passed, failed, or as having abandoned. The respective rates therefore add up to 100%.

There is no rigid concept in INEP guidelines to characterize the final situation of the student. The student who passes, for example, is the one with satisfactory attendance and grades. But each teacher makes his evaluations, corrects them, and records the grades according to their own criteria. On the other hand, what characterizes abandonment is not the percentage of absences, but the student's attendance at school at the end of the academic year, for final tests, for example. The student is considered having abandoned when he is no longer attending classes at the end of the academic year even though he may have fulfilled the legal minimum of 75%

[27] Transferred students have information on the final enrollment situation declared in the school where they were admitted, and not in the original school.
[28] Deceased students or those that for some reason do not have information on their final situation are excluded from the base, thus becoming part of the statistics of the non-response rate.
[29] It is possible that the student is transferred to another school without formal transfer documentation. In this case, the student remains linked to his school of origin and his situation in the school of origin can be considered one of abandonment.
[30] Enrolled in the first phase of the School Census.
[31] Other students without final enrollment information, such as those transferred and not admitted, are also removed from the performance rate tally.

of classes[32]. Unlike what happens in the calculation of transition rates, there is a degree of subjectivity in the classification of the final situation of the student, which is up to the teacher. Which, consequently, affects the calculation of performance rates.

3.3 Similarities and differences

It is important to note that although similar, performance and flow indexes are distinct. In general, students that pass end up being promoted, students that fail end up repeating or evading, and the student who leaves the school ends up repeating or dropping out, but there are exceptions.

A student may have passed at the end of the year but might give up studying at the school and drop out the following year. In that case, we have a student who passed and dropped out. Abandonment occurs throughout the academic year, whereas dropout is characterized in the transition between one academic year and the next. It is possible for the student to abandon the school for a year, but enroll the following year in the same grade, constituting an abandonment and a repetition.

Abandonment is also different from failure due to absences. It is possible that the student fails to attend classes in the final months of the year, having attained the minimum attendance required of 75% of classes. In this case, the teacher can classify the student as having abandoned the school. This same student, if he is not present for the last bimester exams and fails to get the overall grade required by the school, can be considered as having failed by the teacher. On the other hand, if he already has a high enough average to pass at the end of the year, he can be seen as passing, even though he had abandoned classes in the final months of the year. The inverse case is that of a student who is present at school at the end of the year but was absent for more than 25% of classes. In such a case, the student would not have abandoned school, but would fail the year due to absences.

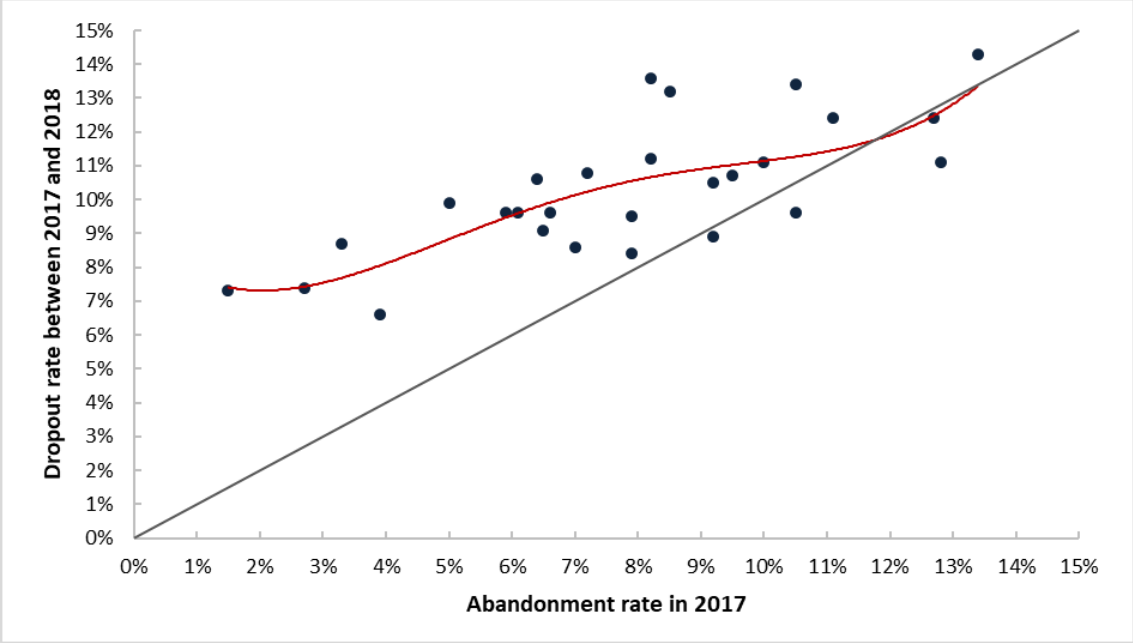
Even the relationship between passing and being promoted is not automatic. Passing, for example, is nothing more than permission for the student to study in the higher grade/year the following year. A student who passes in one school may choose

[32] According to the Law of Guidelines and Bases (Lei de Diretrizes e Bases - LDB - Law No. 9,394, 1996) the student cannot be approved if he has been absent for more than 25% of the total classes planned for the academic year.

to repeat the grade/year when transferring to another more demanding school. The reverse can also occur. The student can fail in one school but can transfer to another school that agrees to enroll him in the next grade/year, thus getting a promotion.[33]

Figure 2 shows the relationship between abandonment and dropout, by Unit of the Federation, in High Schools public network between 2017 and 2018. For 23 of the 27 states, the dropout rate is greater than the abandonment rate. The discrepancy between the two indicators is greater for the states with a lower abandonment rate and decreases as the abandonment rate increases. Figure 3 shows the evolution of abandonment and dropout rates in Brazil over the years, from 2007 to 2017[34]. Although both indicators have fallen over the years, the decrease in abandonment is more accentuated than that of dropout.

Figure 2 – Abandonment rate, 2017, and dropout rate, 2017/2018 – Brazil, public network, by Unit of the Federation



Source: Own elaboration, based on INEP's performance and transition data tabulated by IMDS.

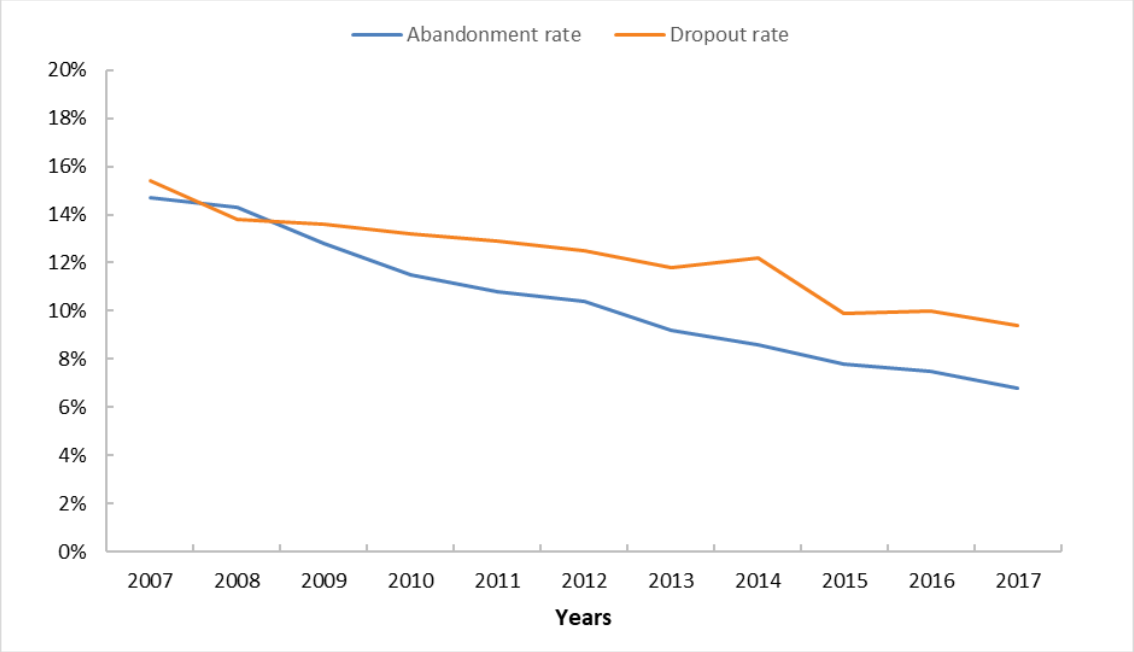
[33] LDB (Law No. 9,394, 1996) states that the classification per grade/year can be done by evaluation of the school, regardless of previous schooling.

[34] Dropout is always tallied during the transition between two academic years. In this way, for the year 2007, for example, dropout is equivalent to the proportion of students enrolled in 2007 that were not enrolled in 2008.

Note: each circle represents one of the Federation Units. The red line represents a non-parametric local regression showing the relationship between the abandonment rate and the dropout rate.

Figure 2 and Figure 3 show that lower abandonment rates, either by comparison over time, or by comparison between states in the same year, are not accompanied by equivalent falls in dropout. One of the possibilities that would explain such a phenomenon is the existence of a group of students who can remain until the end of the year but who end up deciding to dropout during the transition. A typical case that could be behind this phenomenon is that of a student in school delay, who has already repeated a year/grade previously, and who has hopes of passing. Upon failing, however, he decides to drop out of school and not enroll the following academic year. Students who abandon school throughout the academic year may be contacted by teachers, by the school board, or by their peers, but these efforts can be more difficult during the summer vacation and the following enrollment period.

Figure 3 – Evolution of abandonment and dropout rates – Brazil, public network



Source: Own elaboration, based on INEP's performance and transition data tabulated by IMDS.

Note: Dropout rates refer to the transition between the year shown in the chart and the following year. Example: For the year 2007, the abandonment rate refers to the rate at the end of 2007, while the dropout rate refers to the transition between 2007 and 2008.

4. The current state of abandonment and school dropout in Brazil

In 2009, the Brazilian Congress approved an important amendment in the Federal Constitution (FC). Through Constitutional Amendment No. 59 (EC 59), Article 208 of the Brazilian Constitution began to define compulsory education in Brazil from 4 to 17 years of age, judicially guaranteeing universal access to education from early childhood to youngsters up to the age of 17[35].

[35] Since 1996, item II of the same article predicted the universalization of High School in Brazil but did not provide for the mandatory attendance of young people of up to 17 years of age in school. The two things may seem synonymous, but they are not. One thing is to universalize High School, regardless of the age of students. The old text was compatible, for example, with young people leaving school at age 15, and graduating from High School years later. This is different from obliging students to remain in school up to the age of 17. It is possible that the 17-year-old student might still be in Elementary or Junior High School. With the new wording of Article 208, this student must remain in school, even if he would just prefer to be working.

The National Education Plan (NEP), based on Article 208 of the FC, traced as a goal the universalization of school services for the entire population of 15-to-17-year-olds, raising net enrollment in High School up to 85%[36] by 2024. NEP, therefore, advocated not only ensuring the permanence of young people in school, but correcting the age-grade lag, by also raising the proportion of 15-to-17-year-olds who attend the right phase for their age, which is High School.

However, ten years after the Constitutional Amendment, Brazil is still far from guaranteeing the universalization of High School or the obligation of education until the age of 17. CA 59 was (relatively) effective in expanding access to pre-school at 4 and 5 years of age. According to PNADC data, in 2019, 93% of children from 4 to 5 years of age were in pre-school, against 75% in 2009. Among youngsters, however, the path has been much slower. One out of every ten young people aged 15 to 17 was out of school in 2019. Of the 15-year-olds, 4.6% were out of school. Of the 16-year-olds, it was 9% and at age 17, 13.4%. The net High School enrollment rate was 71.4%, far from the NEP target of 85% for 2024.

4.1 Abandonment and dropout per grade/ year

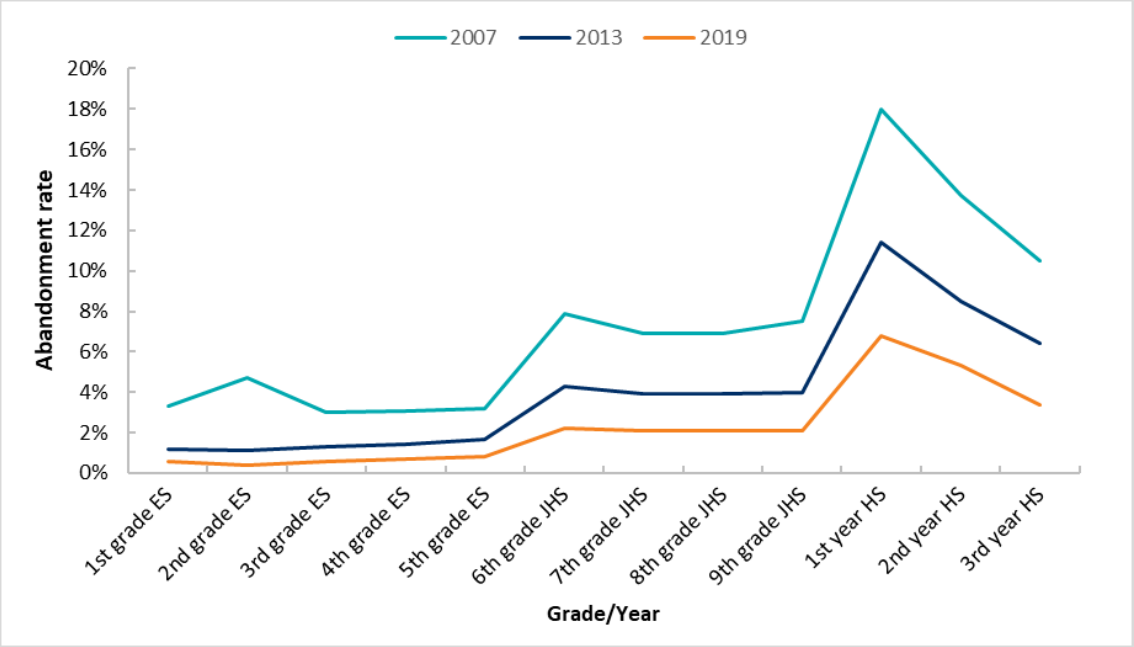
Figure 4 shows abandonment rates per year/grade of Elementary and Junior High School, and High School, in 2007, 2013 and 2019, according to performance and transition data from INEP[37]. Abandonment in 2019 is low for the early grades of Elementary and Junior High School, although it is not equal to zero, and climbs to just under 2.5% over the final grades. It is in High School that one finds the highest abandonment rates, especially in the 1st year, when more than 6% of the students abandon school. Abandonment falls in the 2nd and 3rd year of High School but remains above the rates observed for the final grades of Elementary and Junior High School.

It is possible to see that there was significant improvement in relation to abandonment rates in every grade of Elementary and Junior High School, and of High School. The abandonment rate in the 2nd grade of Elementary school, which was 4.3%, fell more than ten times, to 0.4% in 2019. In 2007, the grades of greater abandonment were those of transition: the 6th grade, in the transition from Elementary School (the

[36] The net enrollment rate is the proportion of 15-to-17-year-olds enrolled in the referred-to stage.
[37] The available data allow us to build the grade between 2007 and 2019.

initial grades) to Junior High School (the final grades), and the 1st year of High School. Since then, abandonment in the 6th grade fell to the same level as the other final grades of Junior High School, to around 1.9%. But the alarming rate of abandonment in the 1st year of High School still perdures. On average, 6% of students leave school at the end of the 1st year of High School (although much lower than in 2007, when it reached 17.5% of students enrolled).

Figure 4 – Abandonment rate by grade/year of Elementary and Junior High School and High School – Brazil, public network



Source: Own elaboration, based on INEP's performance data tabulated by IMDS.

Note: ES stands for Elementary School; JHS for Junior High School; and HS for High School.

As seen earlier, dropout rates in Brazil are often greater than abandonment rates[38], possibly because of the students who decide to dropout during the transition between one grade and the next. Figure 5 shows dropout rates per grade/year[39]

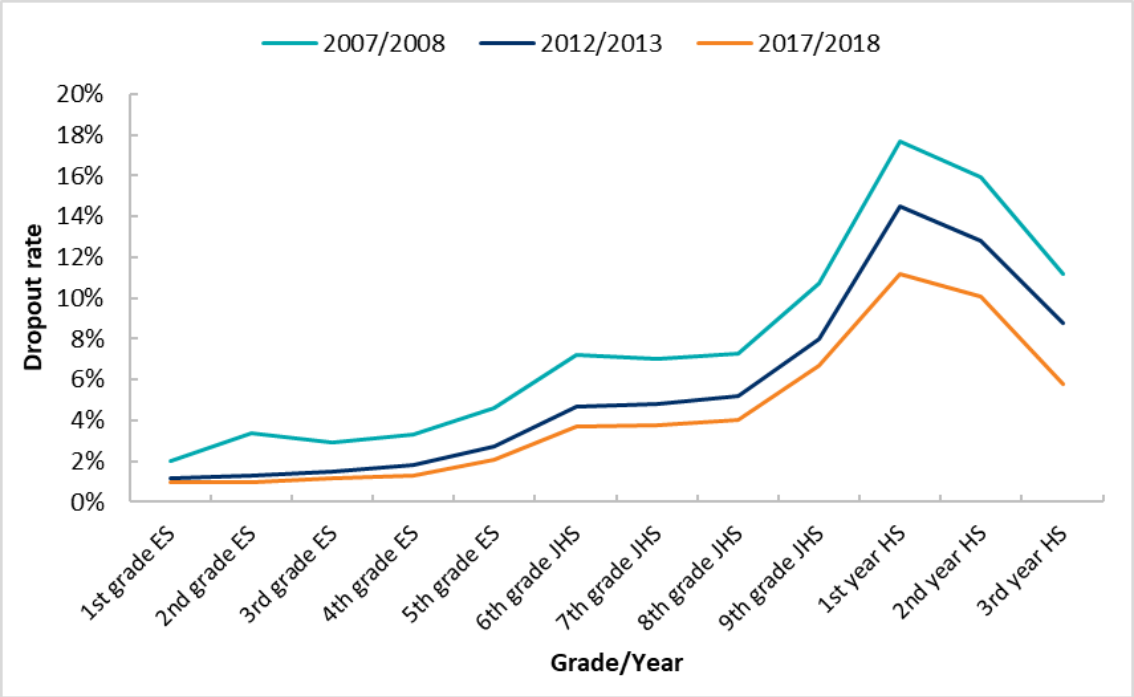
[38] Although, as we have seen, there is no impediment to abandonment rates being larger than dropout rates.

[39] The dropout rate is calculated in the transition between one grade and the next. Thus, for the first year of Elementary School, it is the percentage of students enrolled in 1st grade of Elementary School, in year t, which are not enrolled in year t+1.

between 2007/2008, 2012/2013 and 2018/2019[40], for all regular education[41] students. The dropout between 2017/2018 is 1.3% in the first 4 grades of Elementary School and rises to 2.1% in the transition between Elementary School and Junior High School, from 5th to 6th grade. Dropout remains at around 3.5% between 6th and 8th grade, and rises again, to 6%, in the transition between the 9th grade of Junior High School and the 1st year of High School. In the first two years of High School, however, dropout reaches a peak, at 10.3% and 9.4% of students at the end of the 1st and 2nd year, respectively. For students who can go on to the 3rd year of High School, dropout is relatively lower, at 5.2%[42].

[40] The data available allow us to build the data series between 2007/2008 and 2018/2019.
[41] That is, including students from all age groups, provided they are not attending the equivalency program Education for Youngsters and Adults (EJA).
[42] In addition to the high dropout rate, the first two years of High School are also characterized by a high failure and repetition rate, and low promotion. Just over 3 out of every 4 Brazilians who get to the 1st year of High School are promoted to the 2nd year. The retention in the 1st year of High School is so great that, in absolute terms, there are more students in the first year of High School than in the 9th grade of Junior High School.

Figure 5 – Dropout rate by grade/year of Elementary, Junior High School, and High School – Brazil, public network



Source: Own elaboration, based on INEP's School Census flow data tabulated by IMDS.

Note: ES stands for Elementary School; JHS for Junior High School; and HS for High School.

The figure also shows a clear reduction in dropout rates between 2007/2008 and 2017/2018. The dropout rate at the end of 4th grade of Elementary School was 3.1% in 2007/2008. In 10 years, it fell to 1.3%. At the end of the 6th grade, 6.6% of students dropped out in 2007/2008, reaching 3.5% in 2017/2018. Advances can also be seen in High School. In 10 years, dropout at the end of the 1st year of High School went from 16.4% to 10.3%. In the 2nd year, dropout fell from 14.8% to 9.4%, while in the 3rd year dropout decreased to almost half of the initial value: from 10.1% to 5.2%.

4.2 Abandonment and dropout by states

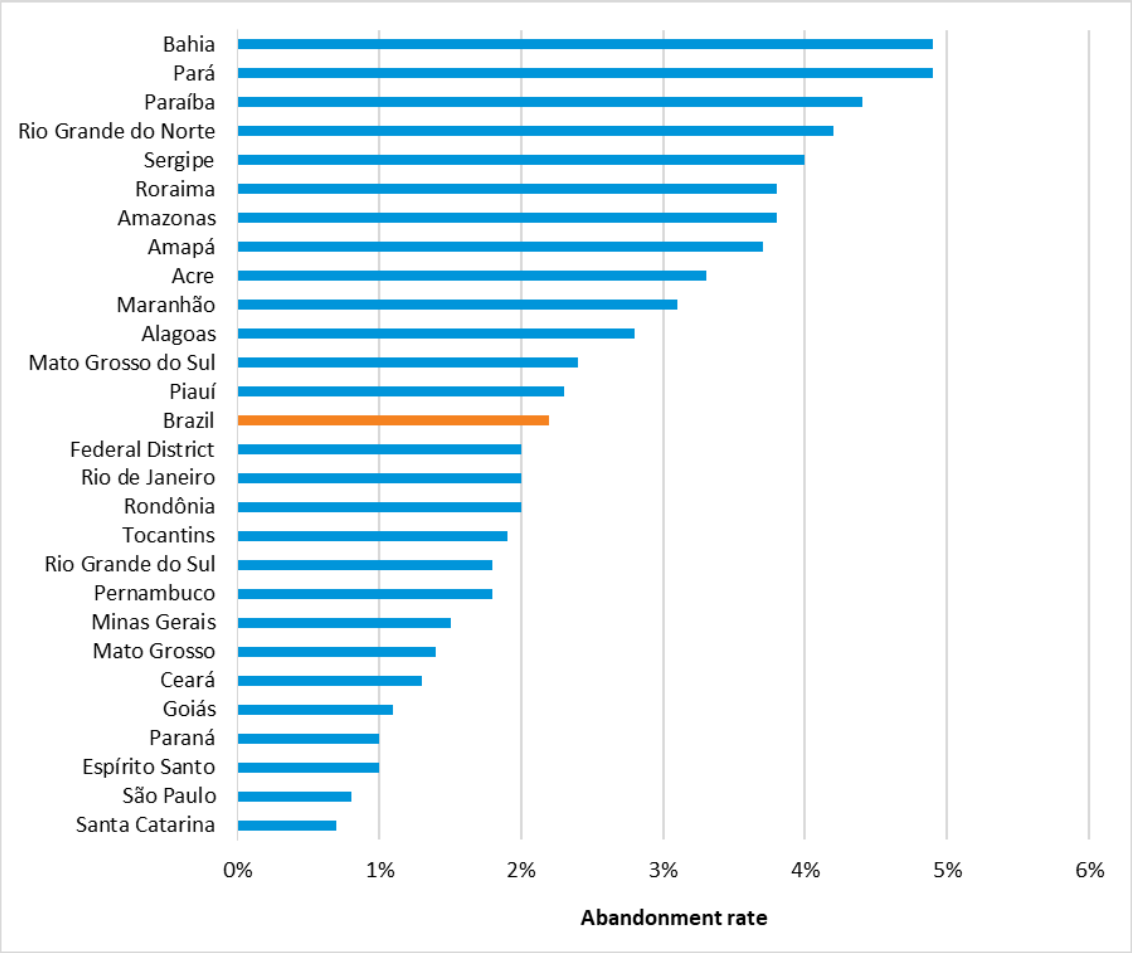
The rates of abandonment and dropout are quite different depending on the state where the student studies. In the years of Junior High School, the highest abandonment rates in 2019 are in Pará and Bahia, where the average abandonment rate reaches almost 5% (Figure 6). Paraíba, Rio Grande do Norte and Sergipe are next among the highest abandonment rates. At the other end of the scale, Santa Catarina,

São Paulo, Espírito Santo, and Paraná stand out as being where abandonment is less than 1%.

In 2019, the state with the highest average rate of abandonment over the three years of High School was also Pará, where 11% of the students left school each year (Figure 7). In relation to dropouts, between 2017 and 2018[43], 14.3% of young Paraenses in High School dropped out of High School (Figure 8). For the young Pernambucano, the chance of abandoning High School was the lowest in Brazil, only 1.5%, or 7 times less than that of a young Paraense, while the chance of dropping out was practically half of what he would have had he studied in Pará, at 7.3%. In this respect, the national champion in 2017/18 was the state of São Paulo, with an average of 6.6% of school dropout (Figure 8).

[43] Last year with data available on dropout.

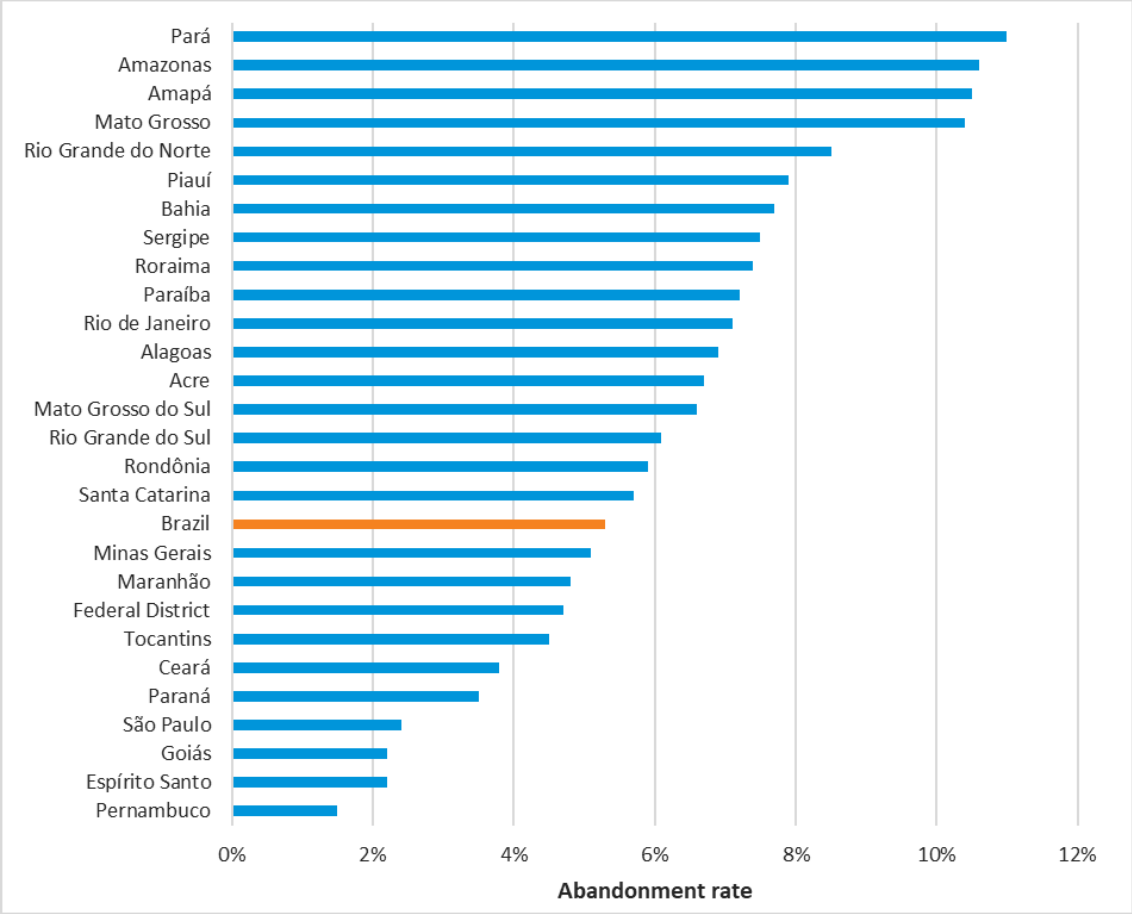
Figure 6 – Abandonment rate in the grades of Junior High School – Brazil, public network, per Unit of the Federation, 2019



Source: Own elaboration, based on INEP's performance data tabulated by IMDS.

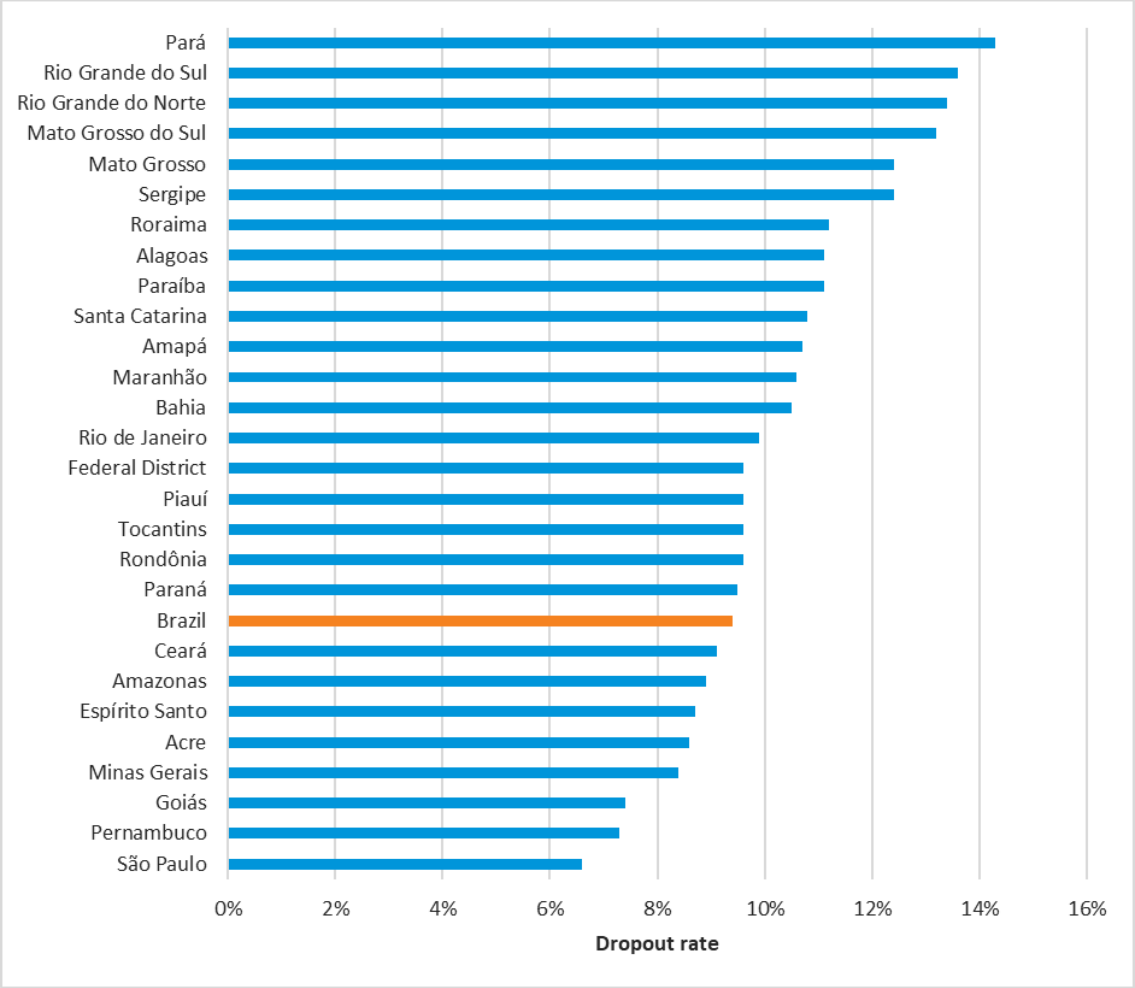
The list of states with the highest and lowest abandonment and dropout rates has little correlation with state per capita income. In the list of the 5 states with the highest dropout rates, for example, we have Pará, followed by Rio Grande do Sul, Rio Grande do Norte, Mato Grosso do Sul and Mato Grosso. On the opposite side, with the lowest dropout rates, are São Paulo, Pernambuco, Goiás, Minas Gerais, Acre, and Espírito Santo. In common, these states have good SAEB/Prova Brasil learning averages (Figure 9) and low rates of age-grade distortion (Figure 10 and Figure 11).

Figure 7 – Abandonment rate in High School – Brazil, public network, per Unit of the Federation, 2019



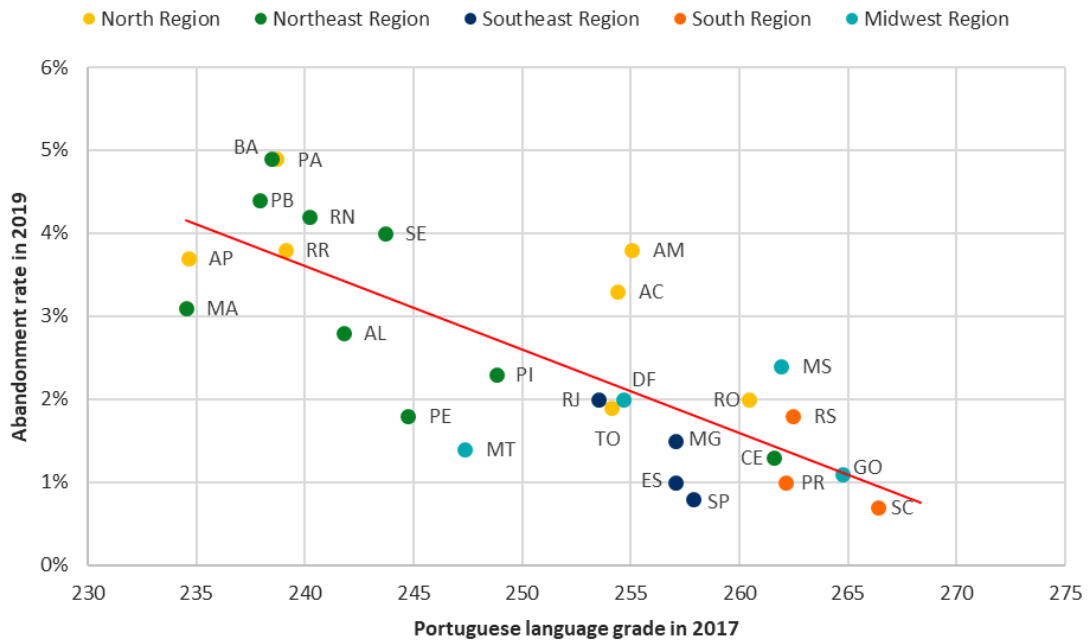
Source: Own elaboration, based on INEP's performance data tabulated by IMDS.

Figure 8 – High School dropout rate – Brazil, public network, per Unit of the Federation, 2017/2018



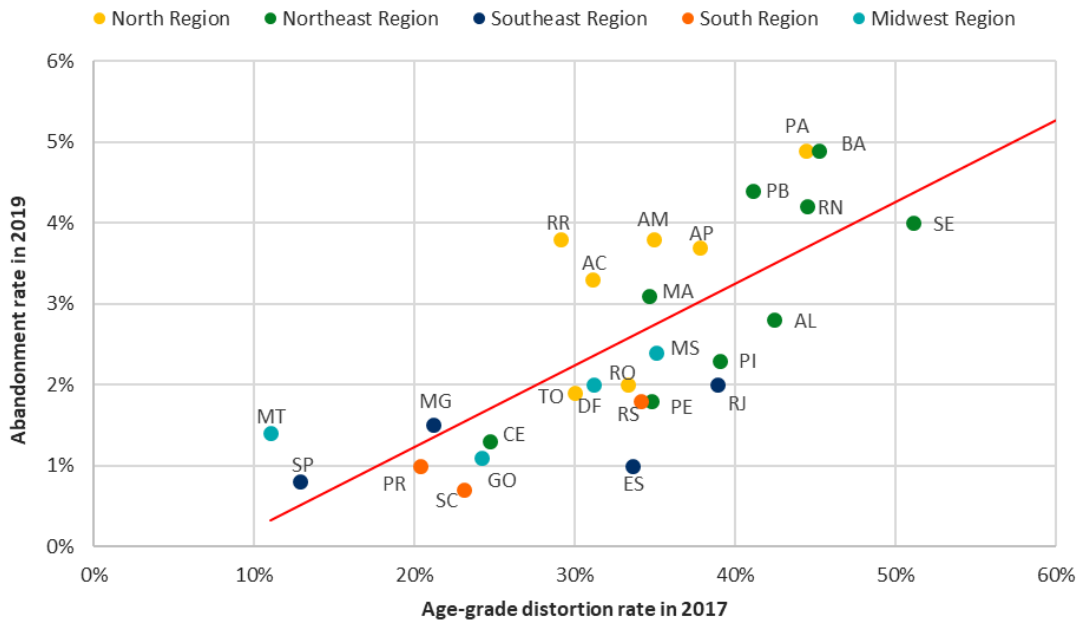
Source: Own elaboration, based on INEP's School Census flow data tabulated by IMDS.

Figure 9 – Relationship between learning, measured by the Portuguese language grade on the 2017 Prova Brasil for the 9th grade of Junior High School, and the 2019 abandonment rate for the grades of Junior High School – Brazil, public network, per Unit of the Federation



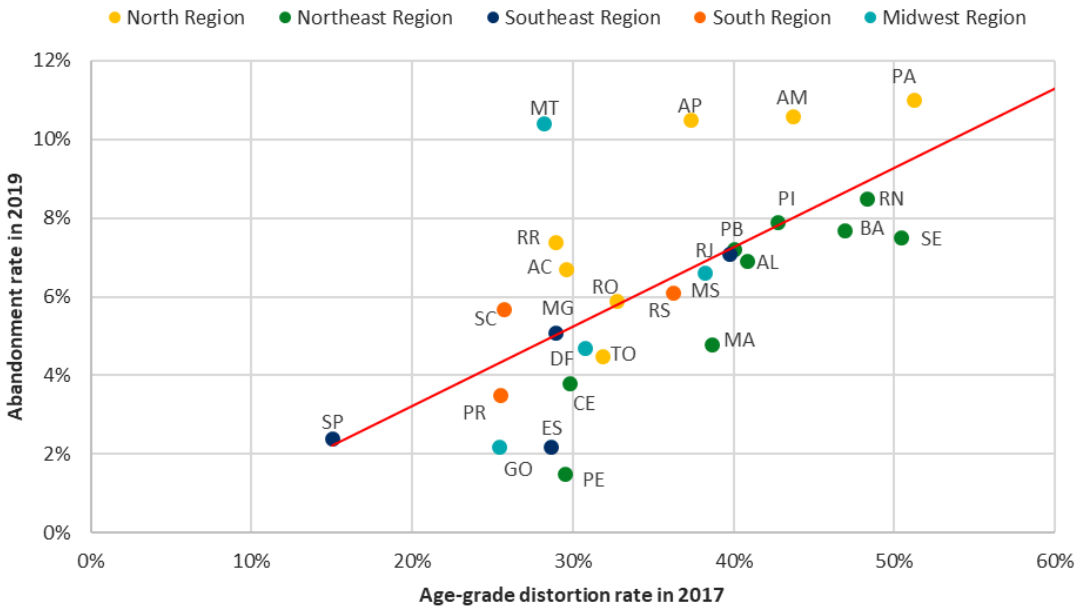
Source: Own elaboration, based on Prova Brasil data and on INEP's performance data tabulated by IMDS.

Figure 10 – Relationship between the 2017 age-grade distortion rate and the 2019 abandonment rate in the grades of Junior High School –Brazil, public network, per Unit of the Federation



Source: Own elaboration, based on INEP's performance data tabulated by IMDS.

Figure 11 – Relationship between the 2017 age-grade distortion rate and the 2019 abandonment rate in High School – Brazil, public network, per Unit of the Federation



Source: Own elaboration, based on INEP's performance data tabulated by IMDS.

5. Inequalities in Elementary and Junior High School and High School completion

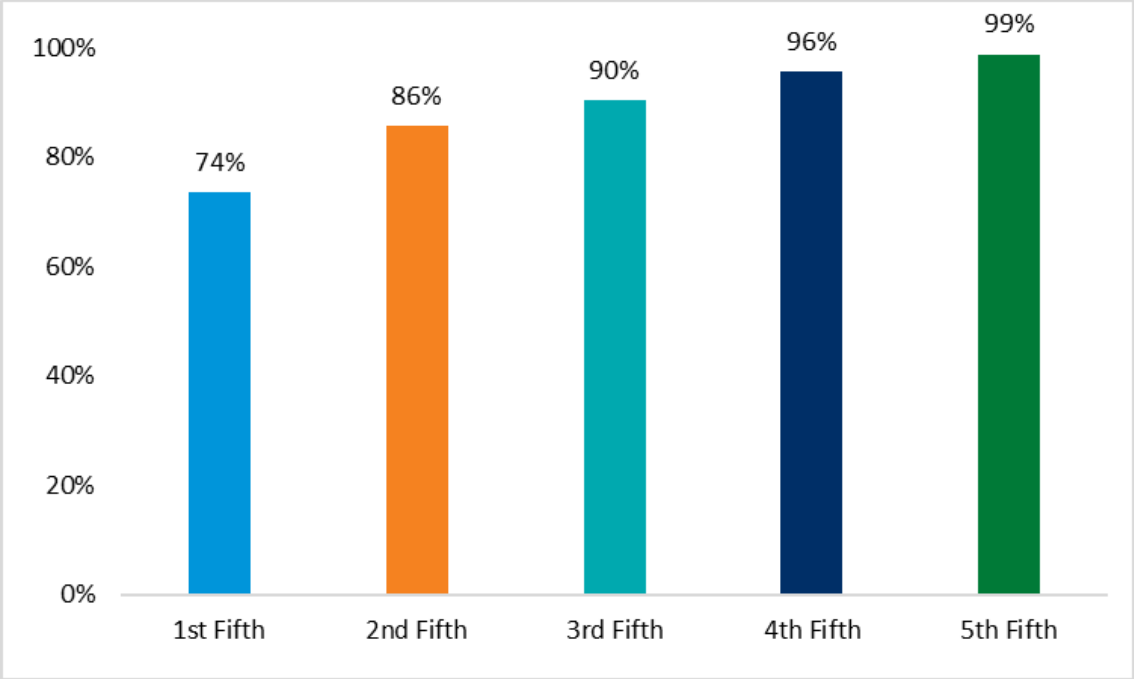
5.1 Per capita household income

Figure 12 shows the inequality of the completion of Elementary and Junior High School, per fifth of per capita household income for 20-to-24-year-olds in 2019. While virtually every youngster of this age group from the richest fifth of the population concludes Elementary and Junior High School, 1 out of every 4 youngsters from the poorest fifth is left by the wayside without completing this phase. Figure 13 shows the same for High School. Among the richest quintile, almost 95% have completed High School. This rate is more than double the proportion of young people from the poorest quintile of the Brazilian population, around 45%.

Another way of seeing this disparity is to look at the proportion of out of school 20-to-24-year-olds who had not completed High School, as shown in Figure 14. More than 45% of young people out of school from the poorest quintile did not complete High School in 2019. Among the richest young people, only 5% are in the same

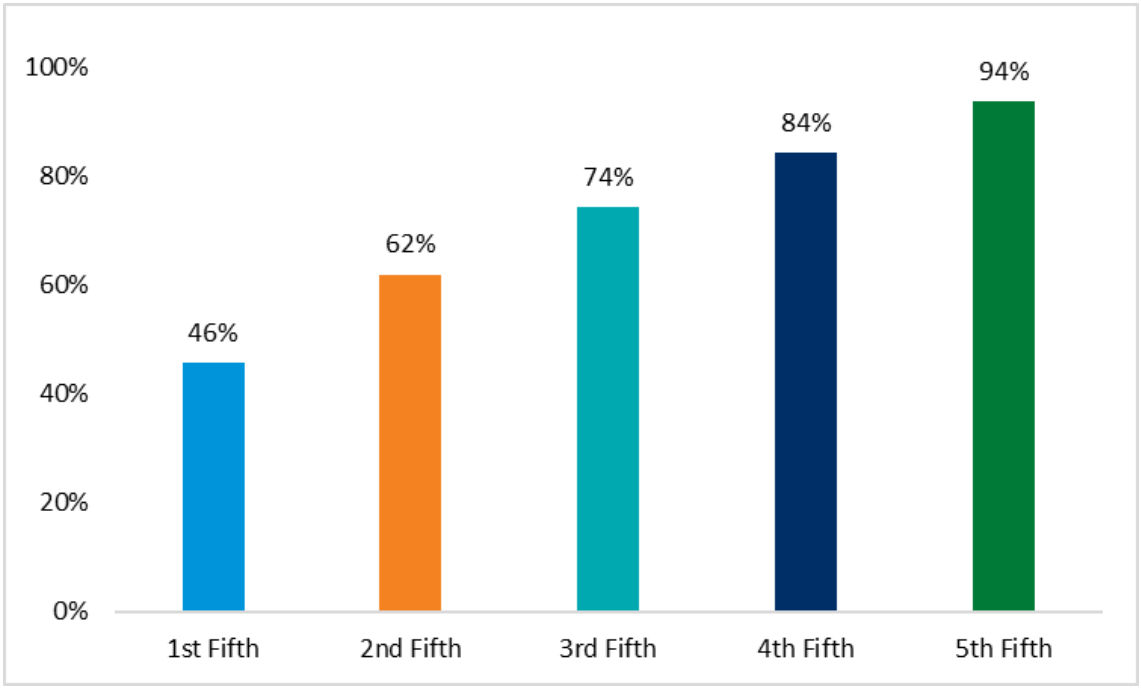
situation. That is, the likelihood of a 20-to-24-year-old having already dropped out of school is 9 times greater among the poorest segment than among the richest.

Figure 12 – Percentage of 20-to-24-year-olds who completed Elementary and Junior High School – Brazil, per fifths of per capita household income, 2019



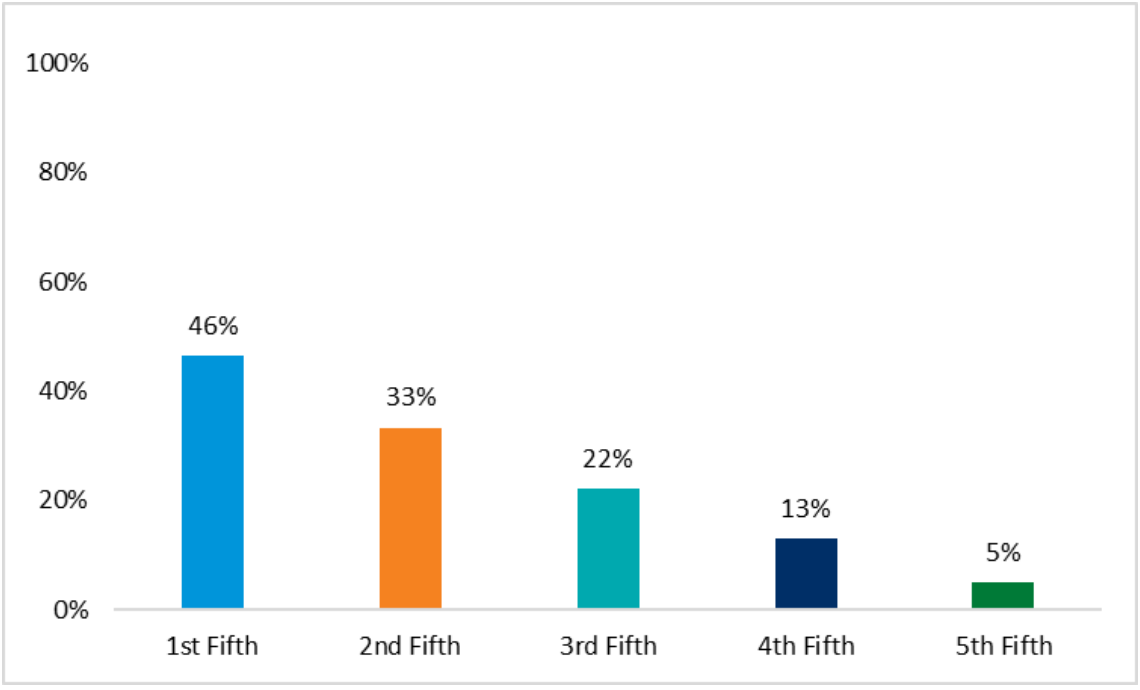
Source: Own elaboration, based on 2019 PNADC data tabulated by IMDS.

Figure 13 – Percentage of 20-to-24-year-olds who have completed High School – Brazil, by fifths of per capita household income, 2019



Source: Own elaboration, based on 2019 PNADC data tabulated by IMDS.

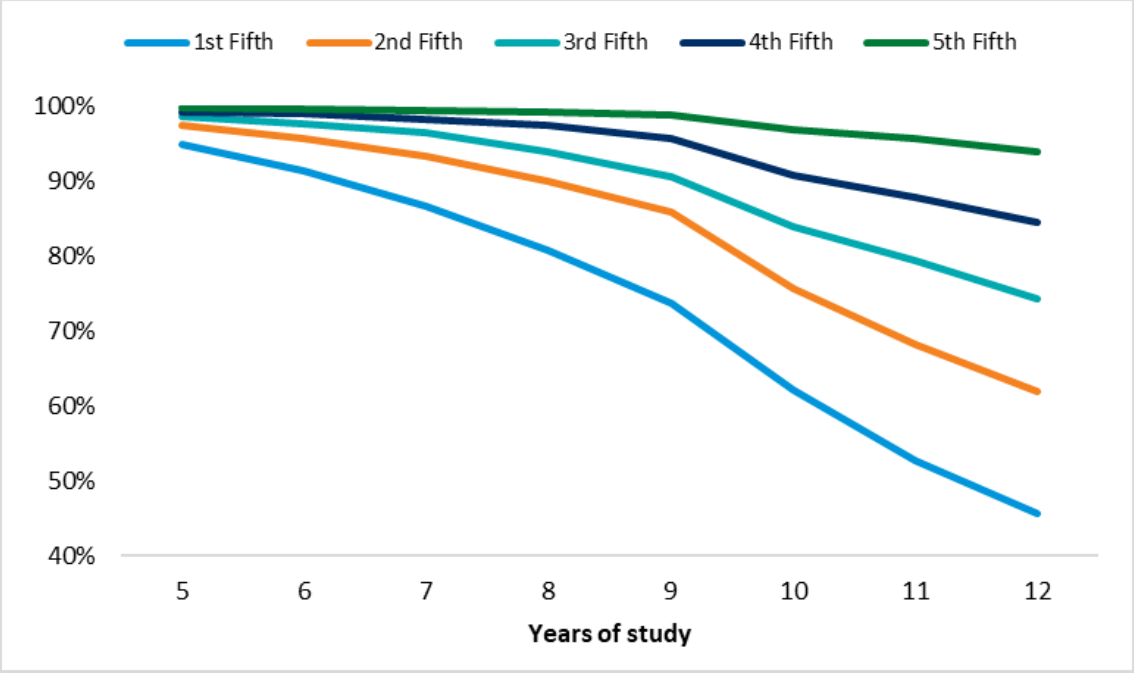
Figure 14 – Percentage of 20-to-24-year-olds who do not attend school and did not complete High School – Brazil, by fifths of per capita household income, 2019



Source: Own elaboration, based on 2019 PNADC data tabulated by IMDS.

The difference between the two groups starts from the first years of study. Only 95% of young people in the poorest quintile, for example, have completed the 5th grade of Elementary School, the same proportion of young people in the richest quintile who have completed High School (Figure 15). At the end of Junior High School, the difference is already large, when 26% of young people from the poorest families are unable to graduate. It is in the transition from Junior High School to High School, and in the first years of High School, however, that dropout begins to accelerate, and the difference increases more intensely. The proportion of young people in the poorest quintile with 9 years of schooling is 74%, and it drops by approximately 10 pp for each additional year of schooling. Only 62% finish the 1st year of High School (10 years of study), 53% complete the 2nd year (11 years of study), and 45% graduate from the 3rd year of High School (12 years of study). In contrast, in the richest quintile, 99% complete Elementary and Junior High School (9 years of study), 97% finish the 1st year of High School, 96% the 2nd year and 94% graduate at the end of the 3rd year of High School[44].

Figure 15 – Percentage of 20-to-24-year-olds who completed each year of study – Brazil, per fifths of per capita household income, 2019



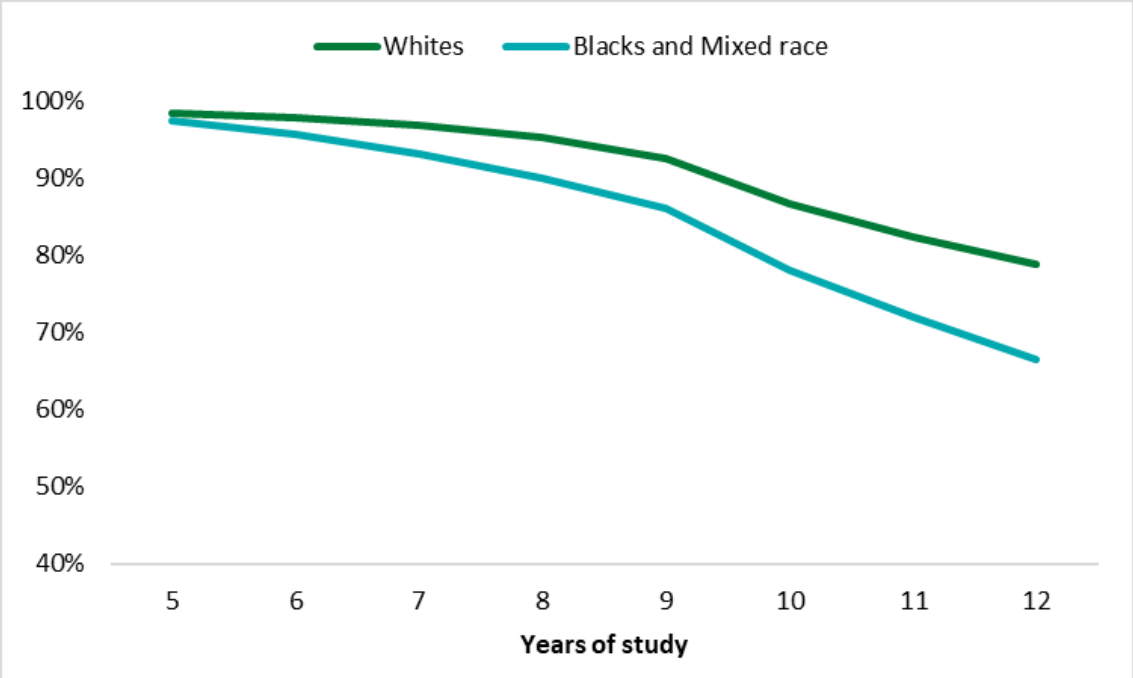
Source: Own elaboration, based on 2019 PNADC data tabulated by IMDS.

[44] A residual number graduate in 4 years, in technical courses.

5.2 Skin color or race

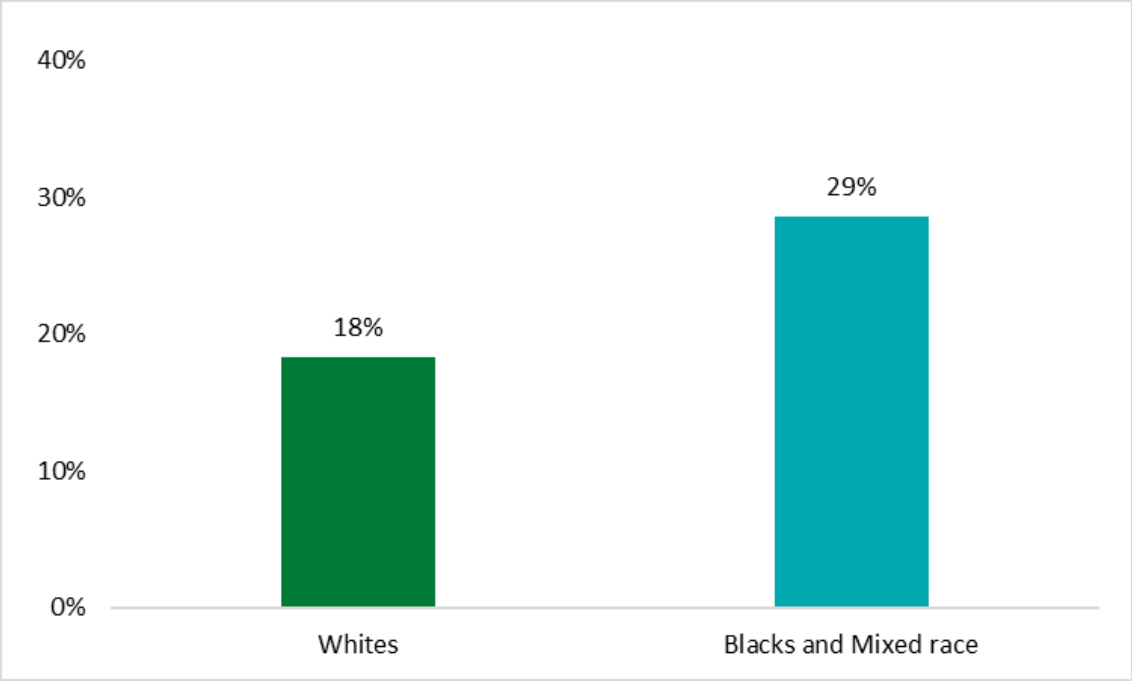
Differences in completed schooling are also evidenced by racial and regional cuts. Differences in schooling by skin color or race are already evident throughout Elementary and Junior High School, and they deepen in High School (Figure 16). Seventy-nine (79%) of White youngsters graduate from High School. This same statistics for the group of Black or Brown students is 66.6%. Twenty-eight percent (28%) of 20-to-24-year-old Blacks and Mixed race people were out of school without having completed High School, against a rate of 18% from amongst the Whites (Figure 17). The chance of a Black or Brown student in this age group being out of school without having completed High School is, therefore, 55% greater than that of a White person.

Figure 16 – Percentage of 20-to-24-year-olds who concluded every year of study – Brazil, by skin color or race, 2019



Source: Own elaboration, based on 2019 PNADC data tabulated by IMDS.

Figure 17 – Percentage of 20-to-24-year-olds who do not attend school and did not complete High School – Brazil, by skin color or race, 2019

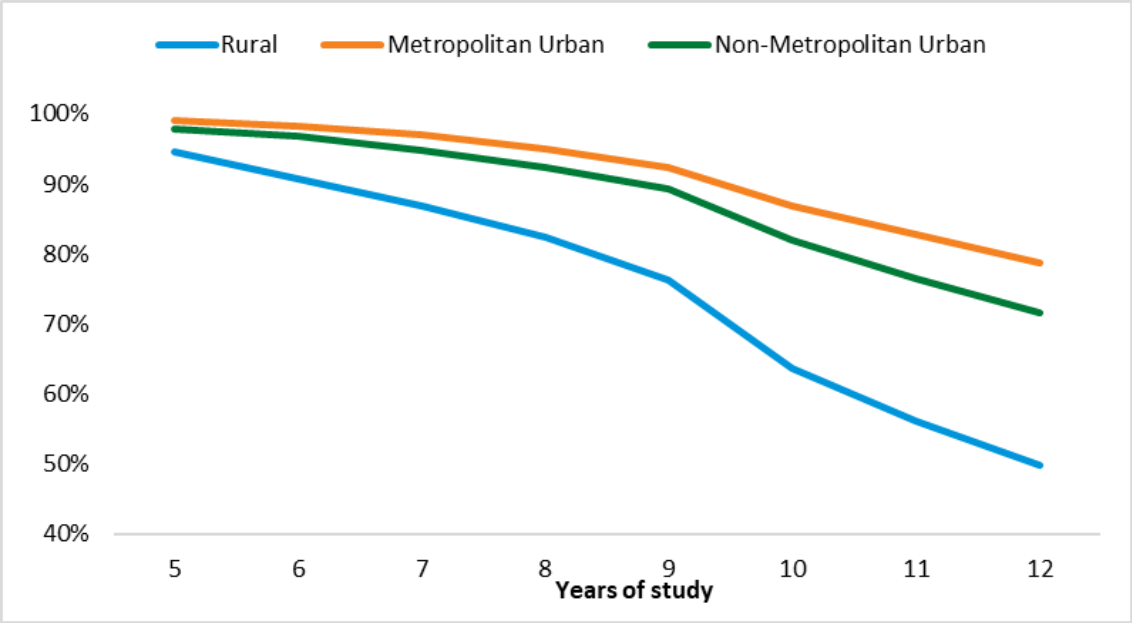


Source: Own elaboration, based on 2019 PNADC data tabulated by IMDS.

5.3 Urban, metropolitan, and rural area

As for the place of housing, we observe higher rates of High School completion in metropolitan urban areas, where 78% of young people complete this stage of studies (Figure 18). In contrast, less than half of the young people complete High School in rural areas. It is in the transition between Junior High School and High School and throughout High School that one observes the greatest drops in complete schooling.

Figure 18 – Percentage of 20-to-24-year-olds who concluded every year of study – Brazil, by area of residence, 2019

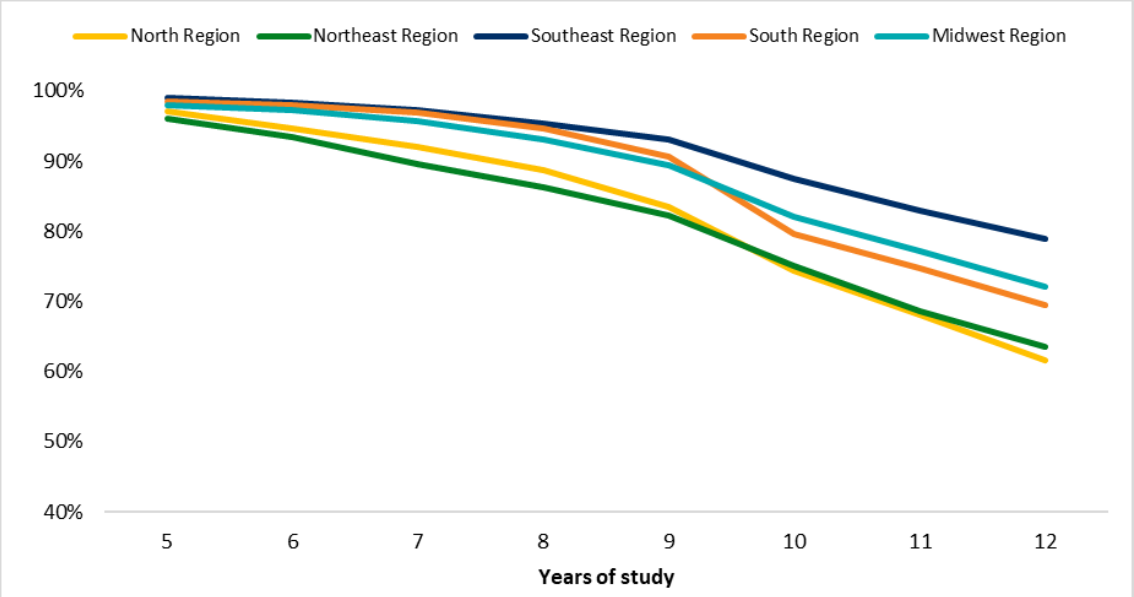


Source: Own elaboration, based on 2019 PNADC data tabulated by IMDS.

5.4 Region

Regionally, the Southeast presents the highest High School completion rates, followed by the Midwest, the South, the Northeast, and the North (Figure 19). The Southeast, South and Midwest regions have similar schooling rates throughout Elementary and Junior High School. However, youngster from the South and Midwest regions are less likely to make the transition to High School. In the comparison between the North and Northeast regions, the proportion of young people who complete the 1st year of High School (10 years of study) is practically the same, but the completion rate of the 3rd year of High School (12 years of study) is slightly higher in the Northeastern region.

Figure 19 – Percentage of 20-to-24-year-olds who concluded every year of study – Brazil, by region of residence, 2019



Source: Own elaboration, based on 2019 PNADC data tabulated by IMDS.

5.5 Public and Private Network

Figure 20 and Figure 21 show abandonment rates in Elementary and Junior High School and in High School, by education network[45]. The rate of abandonment in Elementary and Junior High School today is low both in public networks (federal, state and municipal) and in the private ones, being close to null in the private network (0.1%). Although small, abandonment rates in state and municipal networks (1.3%) are more than 10 times higher than those in the private network.

The abandonment rate gives a leap in public High Schools, reaching 5.5% in state schools and 3.9% in municipal schools. The number contrasts with an abandonment rate of only 0.2% in private schools, a fraction representing only 5% and 3% of the abandonment rates of state and municipal networks, respectively[46]. Still Federal Education Network schools[47] have abandonment rates closer to those of the

[45] Although, constitutionally speaking, High Schools are not within the purview of municipalities, there are a few such schools in Brazil.
[46] There is migration between public and private networks, and it is possible that selective migration of students between one network and the other might explain part of the difference between networks. However, there is no study quantifying this effect.
[47] It is possible and probable that there is self-selection of good students in federal schools, even in those that promote raffles for admission, as the public that signs up for the raffle may be different from

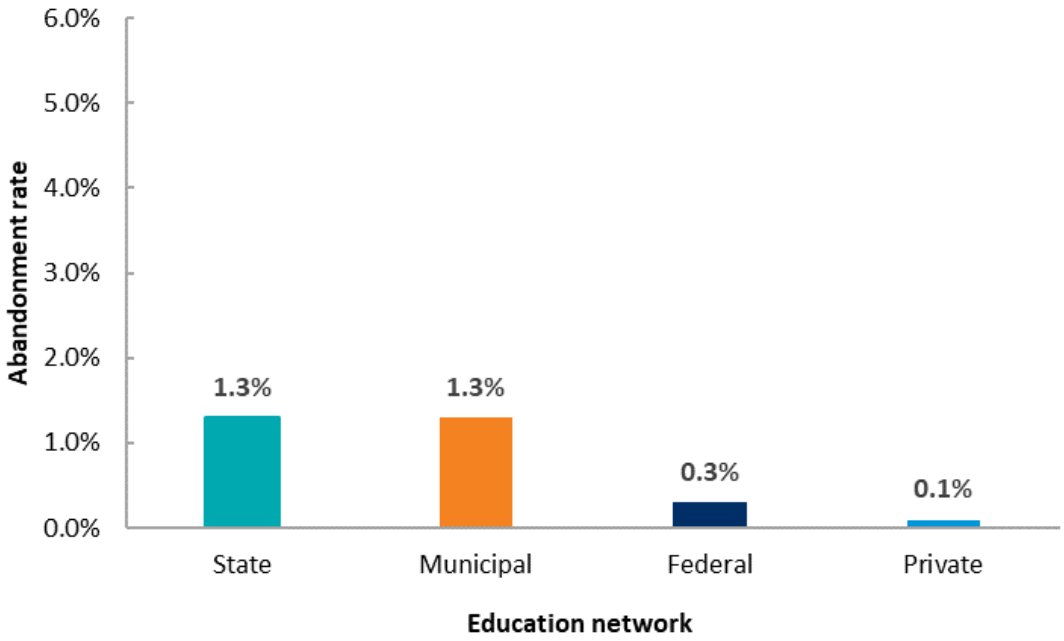
private network than the other public network schools. Only 0.3% and 1.7% of federal students leave school in Elementary and Junior High School and in High School, respectively (Figure 20 and Figure 21).

Average dropout rates are much higher than those of abandonment. In state and municipal networks, 3.2% and 2.5% of students drop out from Elementary and Junior High School, respectively, against 1.7% of private school students and 0.7% of federal education network students (Figure 22). Still in High School, dropout rises to 9.5% in state networks, 7.5% in municipal networks, 3.9% in federal schools and 2.9% in private network schools (less than one-third of state network schools) (Figure 23).

Finally, Figure 24 shows the dropout rate by grade and by education network, between 2017 and 2018. Until 4th grade of Elementary School, public network dropout rates are low and lower than those of the private network. It is as of 5th grade, and especially throughout the grades of Junior High School, that dropout rates of municipal and state networks exceed those of the private network, at approximately 3% to 4%, against less than 2% in the private network. The difference between networks grows even more in the transition from 9th grade to High School, where it reaches 7.8% in municipal networks and 5.8% in state networks, against 2.1% in the private network and 1.1% in the federal network. The first year of High School presents the highest dropout rates in state and municipal networks when it surpasses 2 digits. In the private network, the dropout rate peaks in the second year of High School, when it reaches 4.7%. The federal network presents the lowest dropout rates throughout Elementary and Junior High School, with rates close to the private network throughout High School. In the 3rd year of High School, however, we did not observe a sharp decline in dropout from the federal network, as observed in the other networks, reaching 3.6%, against 1% in the private network.

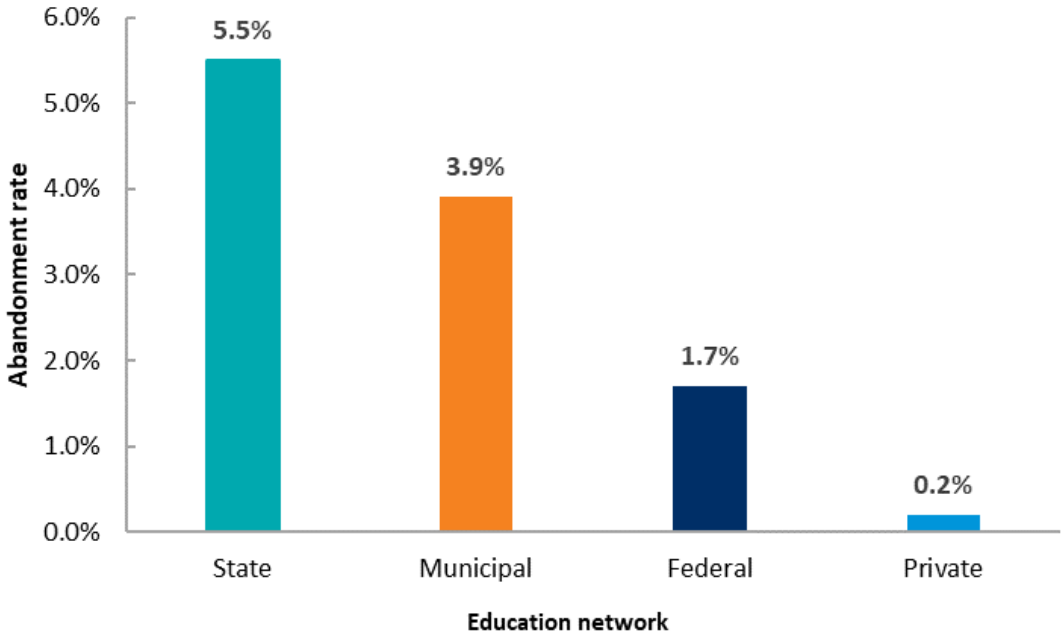
the average of students from other networks. Schools in the federal network also have higher expenditures per student than those in other public networks.

Figure 20 – Elementary and Junior High School abandonment rate – Brazil, by education network, 2019



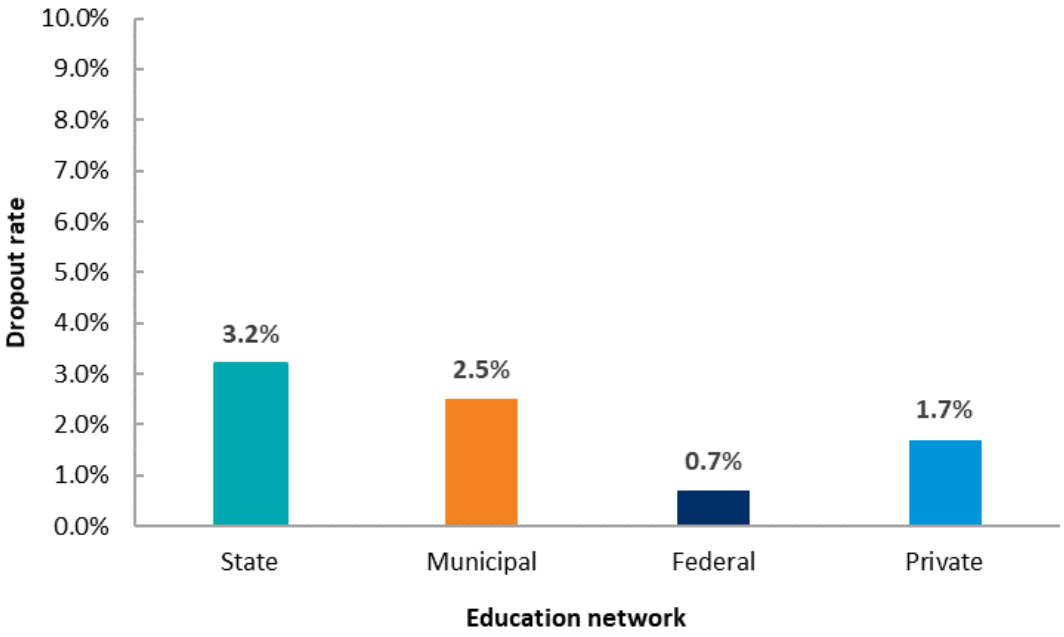
Source: Own elaboration, based on INEP performance data tabulated by IMDS.

Figure 21 – High School abandonment rate – Brazil, by education network, 2019



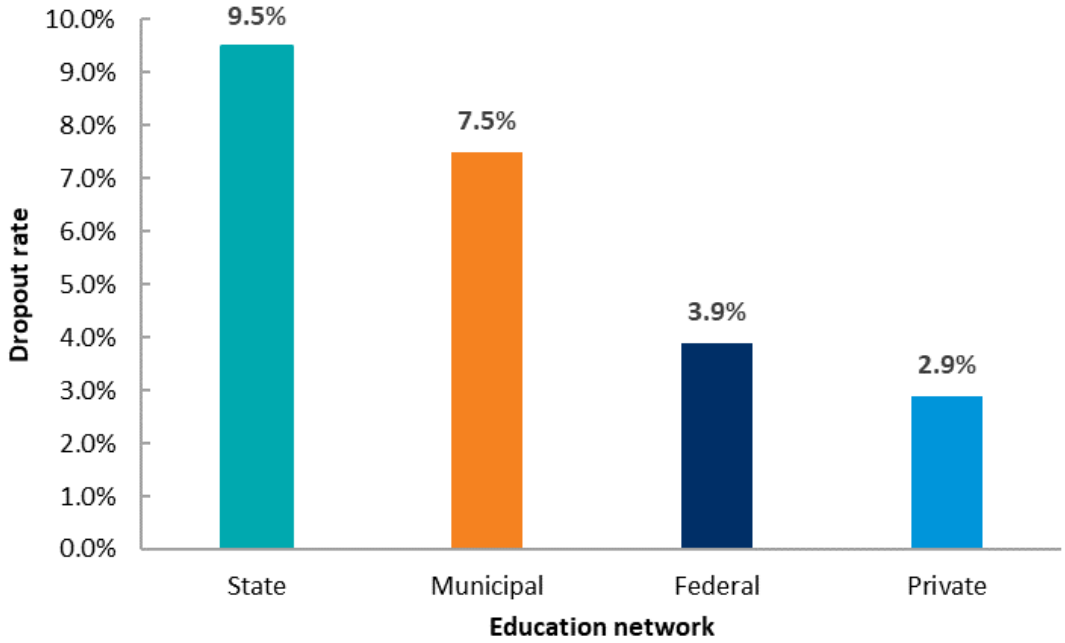
Source: Own elaboration, based on INEP performance data tabulated by IMDS.

Figure 22 – Elementary and Junior High School dropout rate – Brazil, by education network, 2017/2018



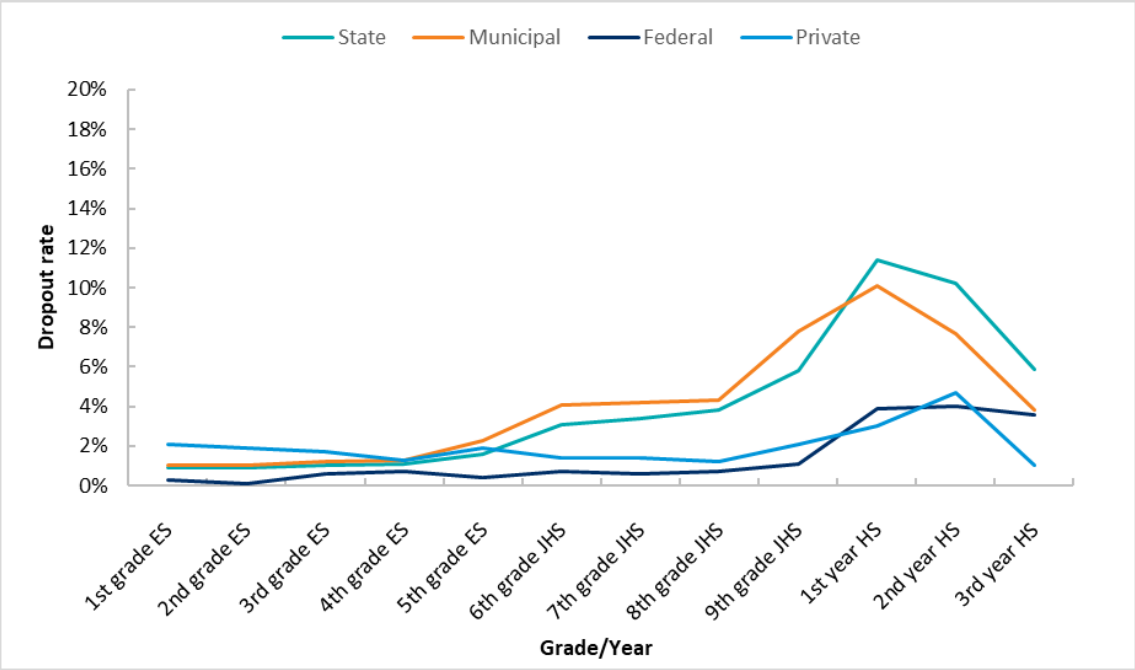
Source: Own elaboration, based on INEP School Census flow data tabulated by IMDS.

Figure 23 – High School dropout rate – Brazil, by education network, 2017/2018



Source: Own elaboration, based on INEP School Census flow data tabulated by IMDS.

Figure 24 – Dropout rate per grade/year – Brazil, by education network, 2017/2018



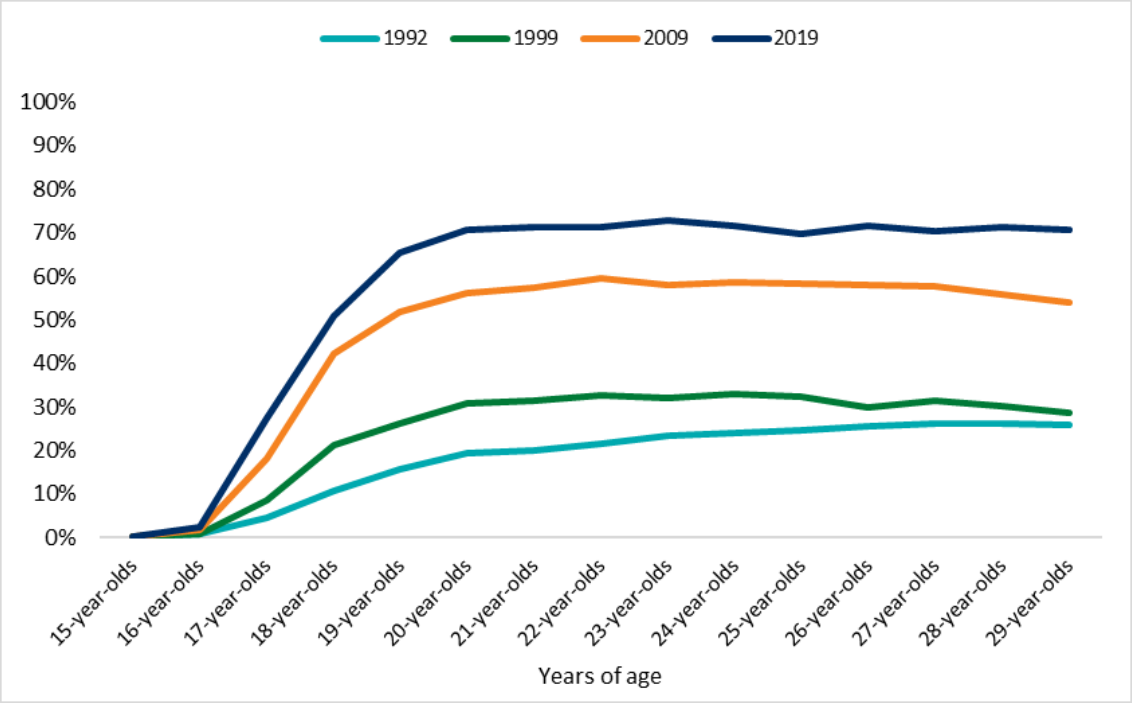
Source: Own elaboration, from INEP school census flow data tabulated by IMDS.

Note: ES stands for Elementary School; JHS for Junior High School; and HS for High School.

5.6 Youth and Adult Education

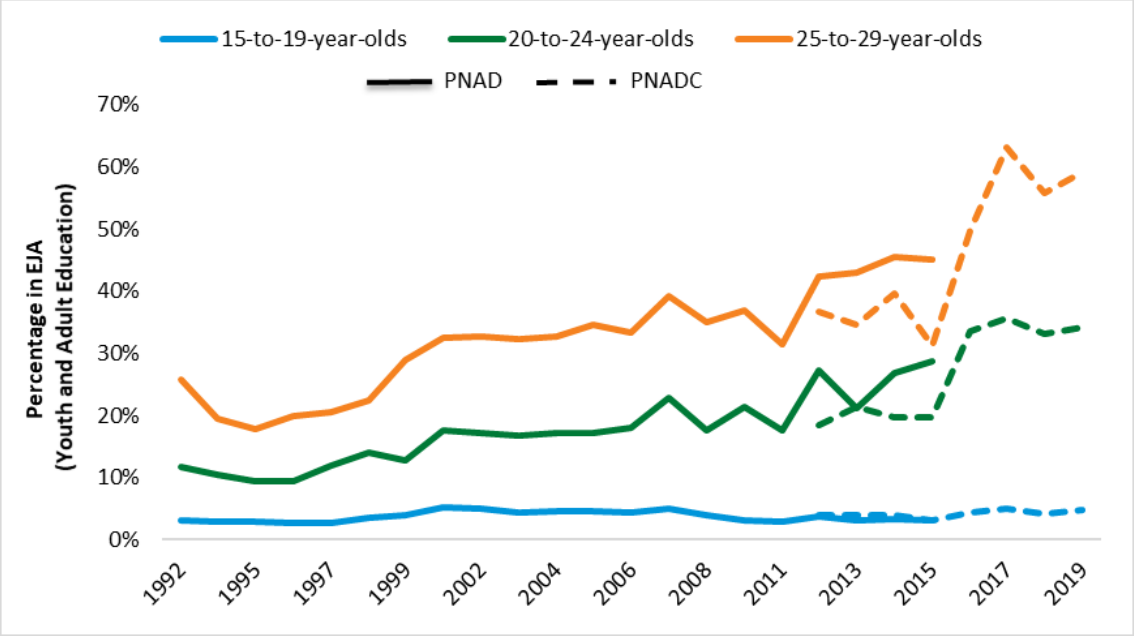
It is also interesting to note that even despite the expansion of Youth and Adult Education (EJA), the profile of High School graduates by age reaches a plateau after the age of 20, as seen in Figure 25. That is, the number of young people who graduate from High School after the age of 20 is small. Figure 26 shows the proportion of young people who attend EJA, out of the total number of young people who attend school and have not completed High School. As expected, the proportion of young people in EJA increases with age. In recent years, we see a movement of greater relative presence in EJA within the contingent of older young people, signaling a migration of older students who continue studying in the direction of EJA. Figure 27 corroborates this analysis, and shows that, between 1992 and 2019, the relative presence of EJA among those who attend school and did not finish High School increased to all age groups aged 17 and older. The proportion of 20-year-old students attending EJA more than doubled since 2009, reaching more than 30% of young people in this age group that continue to study.

Figure 25 – Proportion of High School graduates by age – Brazil, 1992, 1999, 2009 and 2019



Source: Own elaboration, based on 1992, 1999, 2009 PNAD and 2019 PNADC data tabulated by IMDS.

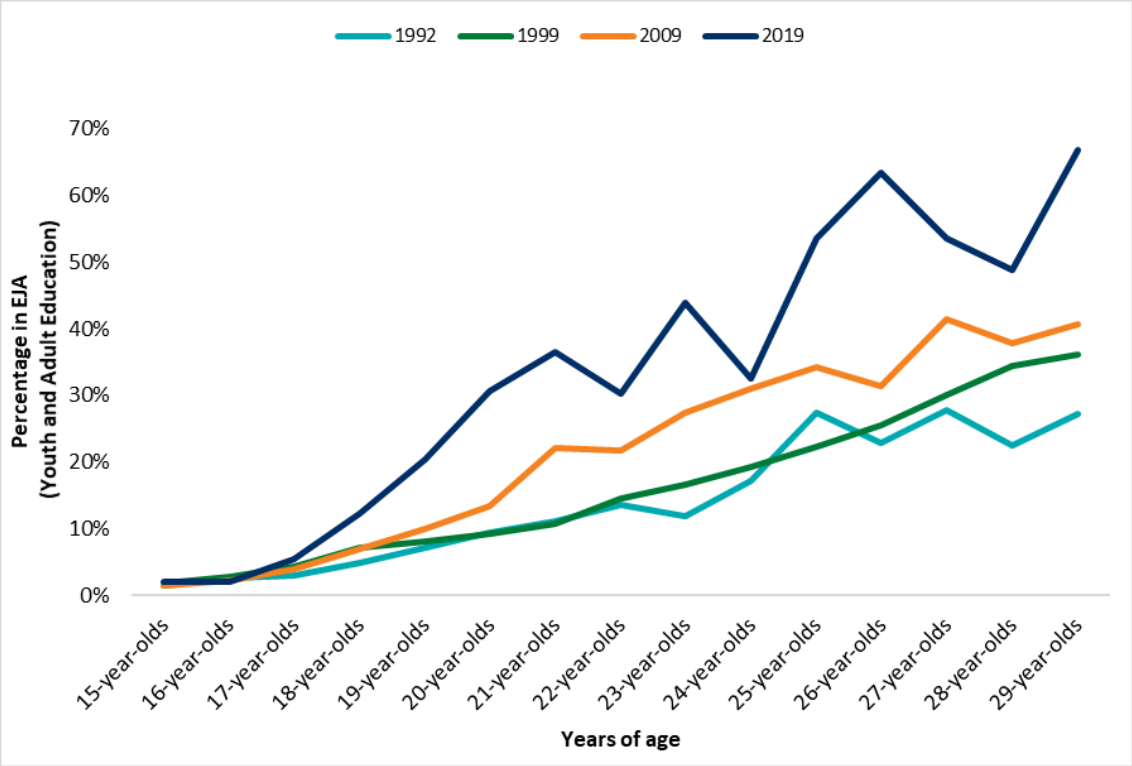
Figure 26 – Proportion of adolescents and young people who attend EJA (Elementary and Junior High School or High School), among those who attend school and have not completed high school – Brazil, by age group



Source: Own elaboration, based on 1992 to 2019 PNAD and PNADC data tabulated by IMDS.

Note: Solid lines refer to PNAD data and dashed lines to PNADC data.

Figure 27 – Proportion of adolescents and young people who attend EJA (Elementary and Junior High School or High School), among those who attend school and have not completed High School – Brazil, by age



Source: Own elaboration, based on 1992, 1999, 2009 PNAD and 2019 PNADC data tabulated by IMDS.

6. Completion of studies: Recent developments

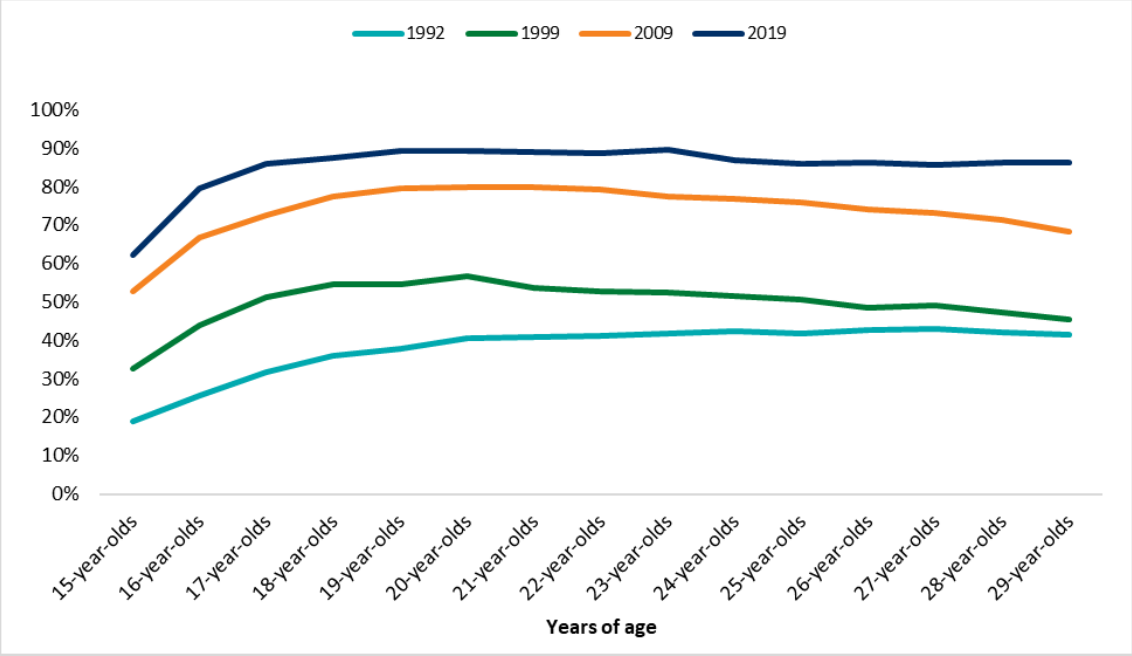
6.1 Completion rates

Over the last 30 years, Brazil presented considerable advances in improving school flow and reducing dropout. To have an idea of this advance, according to PNAD and PNADC data, in 1992 only 32% of 17-year-old Brazilians, and only 40% of 20-year-olds had completed Elementary and Junior High School (Figure 28). Still in 2019, the completion rate of Elementary and Junior High School was 86% among 17-year-olds and 89% among 20-year-olds.

PNAD and PNADC show similar advancement in High School. In 1992, only 1 in every 10 18-year-old Brazilians had completed High School. This number rises to a little over 20% at the end of the 90s, to more than 40% in the next decade, and reaches a little over 50% in 2019. A qualitatively similar jump occurs for 20-year-olds. Less than

20% of young Brazilians had finished High School before 20 years of age in 1992. In 2019, little more than 70% of 20-year-olds had graduated from High School (Figure 25).

Figure 28 – Adolescents and young people who have completed Elementary and Junior High School – Brazil, by age



Source: Own elaboration, based on 1992, 1999, 2009 PNAD and 2019 PNADC data tabulated by IMDS.

6.2 Age-grade distortion[48]

Figure 25 and Figure 28 also suggest a great lag in relation to the correct age in which to conclude Elementary and Junior High School, and High School. Without repeating the year, a teenager would finish Junior High School at the age of 15 and High School at 18. Only 62% of 15-year-olds Brazilians finish Junior High School at that age – including in the denominator those who attend school and those who have already dropped out at this age. Using the same counting procedure, among 18-year-olds, only half completed High School in 2019. However, we see that a good number of young people still take another 2 to 3 years to complete each of these cycles. In

[48] The student is in age-grade delay when he is two years older than the ideal age for the grade in which he studies.

2019, for example, the proportion of young people who graduated from High School jumped 15 pp when we compared 19-year-olds and 18-year-olds (Figure 25).

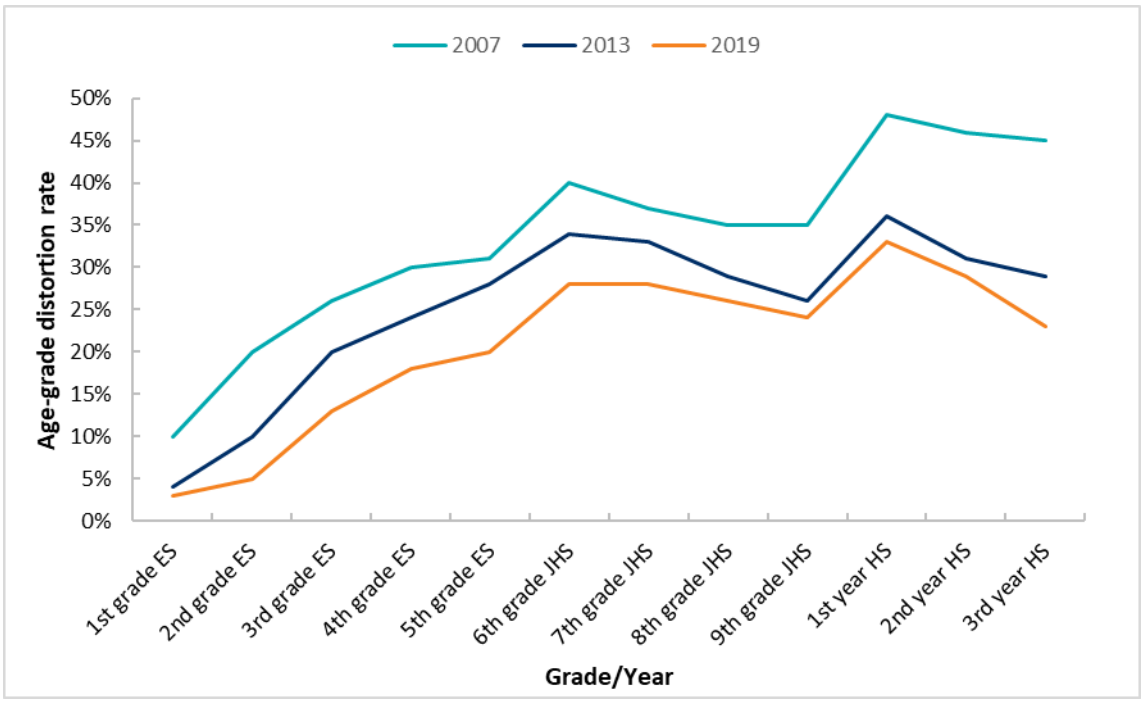
Since we no longer have practically any problems with delay on entering school[49], this means that there is still a serious problem with repetition throughout the student's school life, increasing the proportion of students in age-grade lag and, consequently, delaying the conclusion of their studies. Already in the 5th grade of Elementary School, for example, 1 out of every 5 students had 2 or more years of delay relative to the correct age in 2019. Over the final years, there are 1 out of every 4 students lagging. In the first year of High School, 1 out of every 3 students are behind in their studies (Figure 29).

These numbers show the seriousness of the problem, although we have improved significantly since 2007, at which time 40% of 6th graders in Junior High School were at age-grade distortion, as well as 48% of the students in the 1st year of High School. From 2007 to 2013, there was an expressive drop in age-grade distortion in High School. In the 3rd year of High School, for example, the percentage of students in distortion fell 15 pp. From 2013 to 2019, the reduction of distortion in Elementary and Junior High School followed the pace of the previous period, but there was a slowing down in the pace of reduction in High School.

There are several factors behind the decrease in age-grade distortion in the period. One is the reduction in failure in the lower grades relative to previous years. In fact, there was a consistent drop from 4 to 6 pp in failure rates in all Elementary and Junior High Schools between 2007 and 2019 (Figure 30). Another factor is the relative increase in the participation of older students in EJA, as was previously shown (Figure 27).

[49] According to PNAD 2019, 99.7% of children aged 6 to 10 in Brazil are at school. According to the 2019 School Census, the age-grade distortion in first grade of Elementary School is less than 2%, and includes students who have already failed. Making a conservative estimate that 0.03% of 6-year-olds are out of school and that all the age-grade distortion in 1st grade of Elementary School may be due to the late entry of these children, there would be a maximum of 2.03% of children entering Elementary School late.

Figure 29 – Percentage of students at age-grade distortion – Brazil, per grade/year



Source: Own elaboration, based on INEP performance data tabulated by IMDS.

Note: ES stands for Elementary School; JHS for Junior High School; and HS for High School.

Figure 30 – Failure rate – Brazil, per grade/year

Source: Own elaboration, based on INEP performance data tabulated by IMDS.

Note: ES stands for Elementary School; JHS for Junior High School; and HS for High School.

6.3 Education evolution by characteristics of students

6.3.1 Elementary and Junior High School

Figure 31, Figure 32, Figure 33, and Figure 34 show the evolution of the proportion of 20-to-24-year-olds that had completed Elementary and Junior High School, according to per capita household income, skin color or race, region, and rural or urban location. There was improvement in all segments analyzed.

In relation to income, the moat that separated the young people from the top and those from the base of the income distribution has declined expressively. At the beginning of the data series, in 1992, 77% of the young people from the richest fifth of the distribution had completed Elementary and Junior High School, a difference of approximately 65 pp in relation to the poorest young people, who had only a 12% chance of graduating from this stage. Twenty-seven years later, the completion rate of the two groups had not yet completely converged, but the difference had fallen to 25 pp, less than half of what it used to be (Figure 31).

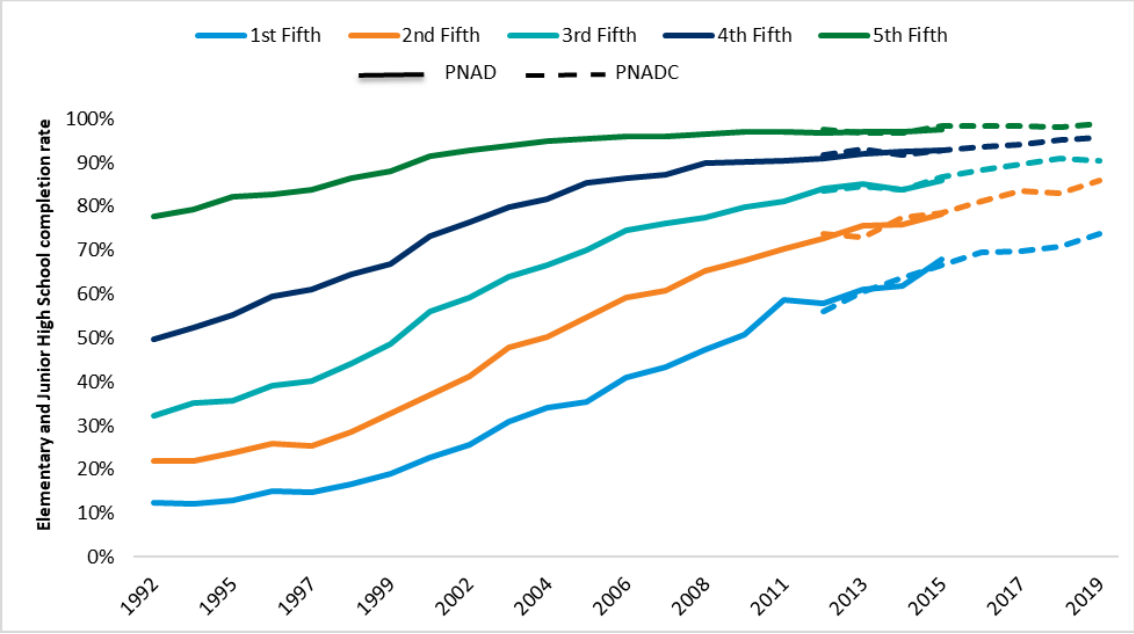
It can be observed that the rate of convergence levels varied a lot from one decade to another. The difference between the richest and poorest quintile changed little over the 90s but declined more strongly in the following decade. Between 1999 and 2009, the proportion of young people from the poorest quintile that concluded Elementary and Junior High School jumped from 20% to 50%, reducing the difference between the ceiling and floor of income distribution to little more than 45 pp. The educational leap of the lower quintile of income distribution has continued in the subsequent decade, with more than 70% of young people from the poorest families completing Elementary and Junior High School in 2019.

The convergence of Elementary and Junior High School completion rates is also present in the comparison by race (Figure 32). In 1992, only 1 out of 2 of 20-to-24-year-old White Brazilians had finished Elementary and Junior High School. For Blacks, the chance of a young person of this age group having completed Elementary and Junior High School was only 30%. In 2019, these numbers were 93% and 86%, respectively. That is, there has been a gradual convergence in the rates in these two racial groups: the difference has fallen from approximately 20 pp to 7 pp in 2019.

Regarding Brazilian regions, there is also a convergence, but not as strong as that between income class or race (Figure 33). The difference between the proportion of those who conclude Elementary and Junior High School in the Southeastern and in the Northeastern region was 19 pp in 2009 and falls to 11 pp in 2019. Urban areas in the Northern Region presented growth close to that of the Midwestern Region until 2003. From the moment PNAD incorporated the rural areas of the Northern Region, the averages for that region became closer to those of the Northeastern Region, reaching 83% in 2019.

The highest growth in Elementary and Junior High School completion rates occurred in rural areas (Figure 34). In 1992, only 14% of 20-to-24-year-olds in rural areas finished Elementary and Junior High School, as compared to 76% in 2019. In metropolitan urban areas the completion rate jumped from 54% to 92% in the same period, while in non-metropolitan urban areas the number rose from 44% to 89%.

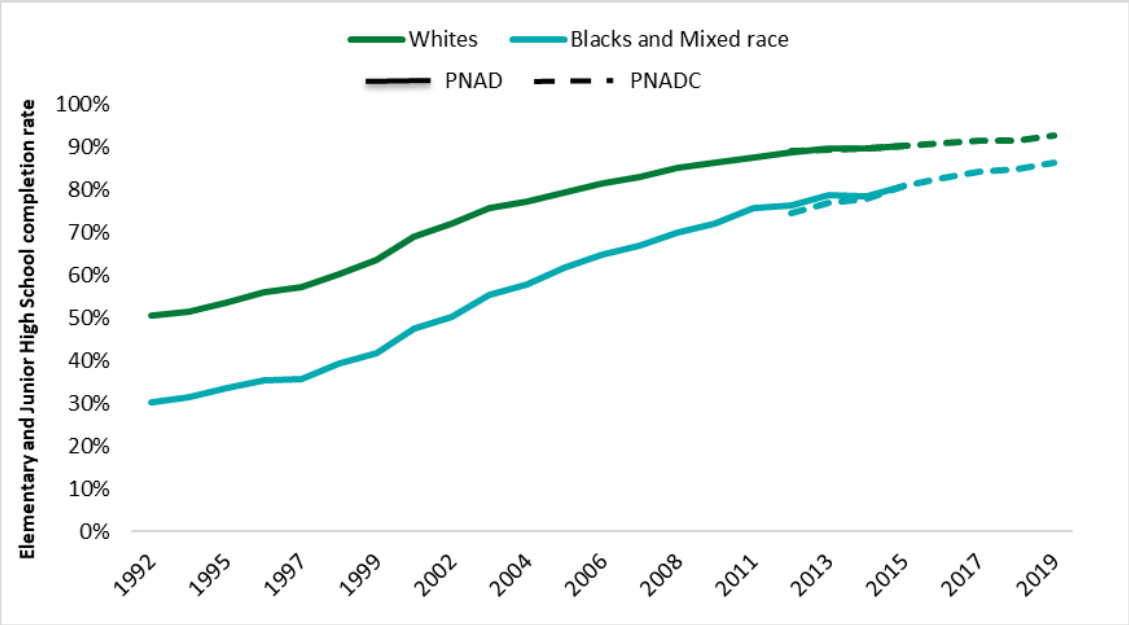
Figure 31 – Elementary and Junior High School completion rate among 20-to-24-year-olds – Brazil, per fifth of per capita household income



Source: Own elaboration, based on 1992 to 2019 PNAD and PNADC data tabulated by IMDS.

Note: Solid lines refer to PNAD data and dashed lines to PNADC data.

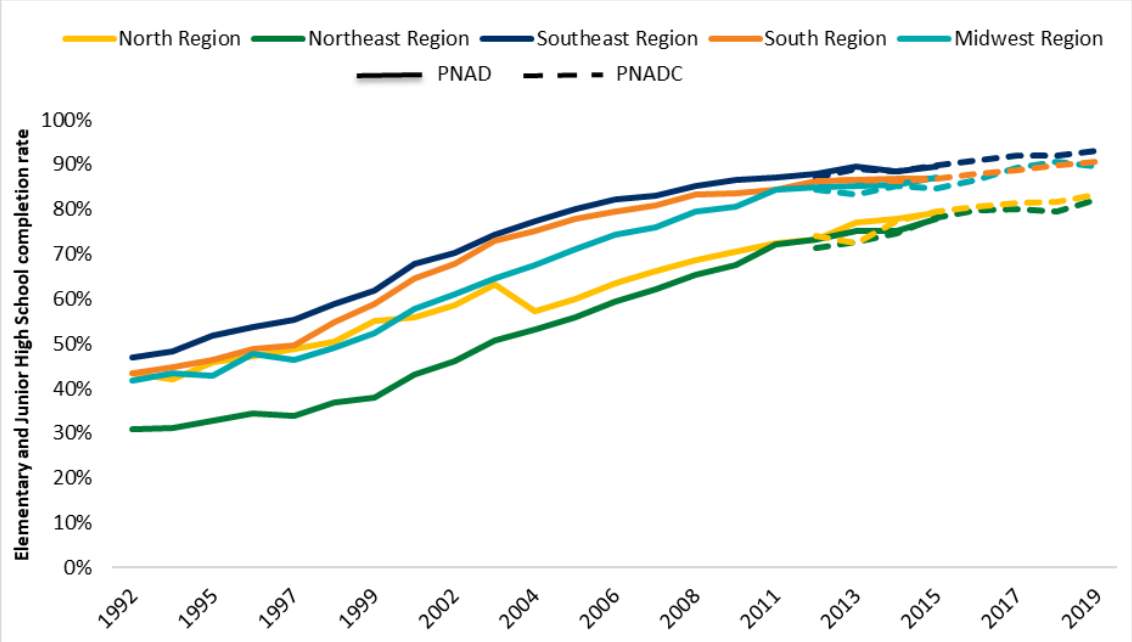
Figure 32 – Elementary and Junior High School completion rate among 20-to-24-year-olds – Brazil, per skin color or race



Source: Own elaboration, based on 1992 to 2019 PNAD and PNADC data tabulated by IMDS.

Note: Solid lines refer to PNAD data and dashed lines to PNADC data.

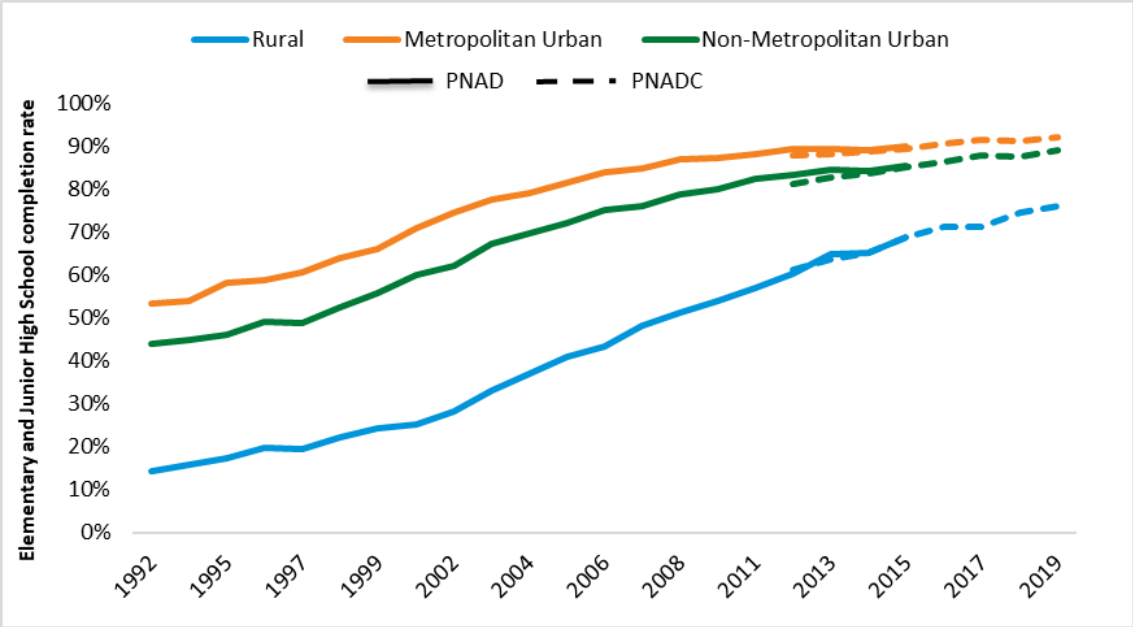
Figure 33 – Elementary and Junior High School completion rate among 20-to-24-year-olds – Brazil, per region of residence



Source: Own elaboration, based on 1992 to 2019 PNAD and PNADC data tabulated by IMDS.

Note: The sample plan of the PNAD for the Northern Region was changed as of 2004, when it began to incorporate rural areas. Solid lines refer to PNAD data and dashed lines to PNADC data.

Figure 34 – Elementary and Junior High School completion rate among 20-to-24-year-olds – Brazil, per area of residence



Source: Own elaboration, based on 1992 to 2019 PNAD and PNADC data tabulated by IMDS.

Note: Solid lines refer to PNAD data and dashed lines to PNADC data.

6.3.2 High School

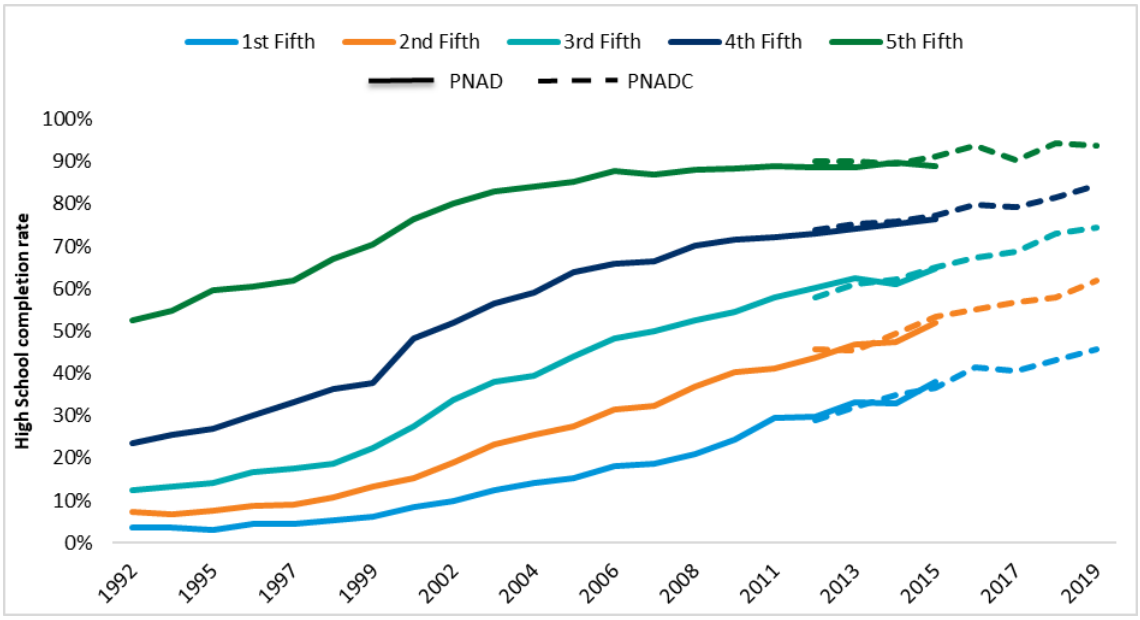
In 1992, High School was an option for very few young people from Brazil's poorest fifth (Figure 35). Only 3.5% completed High School. In 27 years, this number has multiplied by 13, reaching 46%. This enormous growth in the High School completion rate for the poorest, however, is far from closing the distance that separates them from the richest. Already in 1992, for example, the High School completion rate for the richest fifth was higher than the completion rate for the poorest fifth, at 52%, and it has only grown since then. Today, the likelihood of graduating from High School for a young man whose family is among the 20% richest in the country is 93%, more than twice the chance of concluding for a young person from the poorest fifth (Figure 35). The highest growth period of the High School completion rate among the two richest fifths occurred between the end of the 90s and the second half of the 2000s. And yet among the poorest fifth, growth begins at the beginning of the 2000s, more shyly and more slowly, but gradual and sustained, until the current 46% are reached.

Figure 36, Figure 37, and Figure 38 also show strong growth in the High School completion rate by skin color or race, rural area, Urban Metropolitan or Urban Non-Metropolitan, and region of the country. Differently from Elementary and Junior High School, however, we have not observed a clear movement of convergence in the High School completion rate since all curves seem to grow parallel to one another[50].

The increase in High School completion rates can be attributed to at least 3 factors. First, there is an increasing flow of young people and adolescents finishing Elementary and Junior High School and entering High School, as we have seen in the previous sections. Second, there are fewer young people entering High School in age-grade distortion, in part due to the decrease in failure at the Elementary and Junior High School level. That is, the correction of flow problems at the Elementary and Junior High School level increases the base of students entering High School at the correct age. Third, we also witness an improvement in the abandonment and dropout rates throughout High School, as shown in Figure 39 and Figure 40[51]. The abandonment rate fell from 15% to a little over 5% in state education networks, while the dropout rate fell from 15% to less than 10%.

[50] Again, we see an abrupt drop in the series of the Northern Region in 2004, which is due to the inclusion of the rural areas of the region in the PNAD sample model from then on.
[51] It is also important to remember that Constitutional Amendment 59, 2009, made basic education compulsory from 4 years of age to 17.

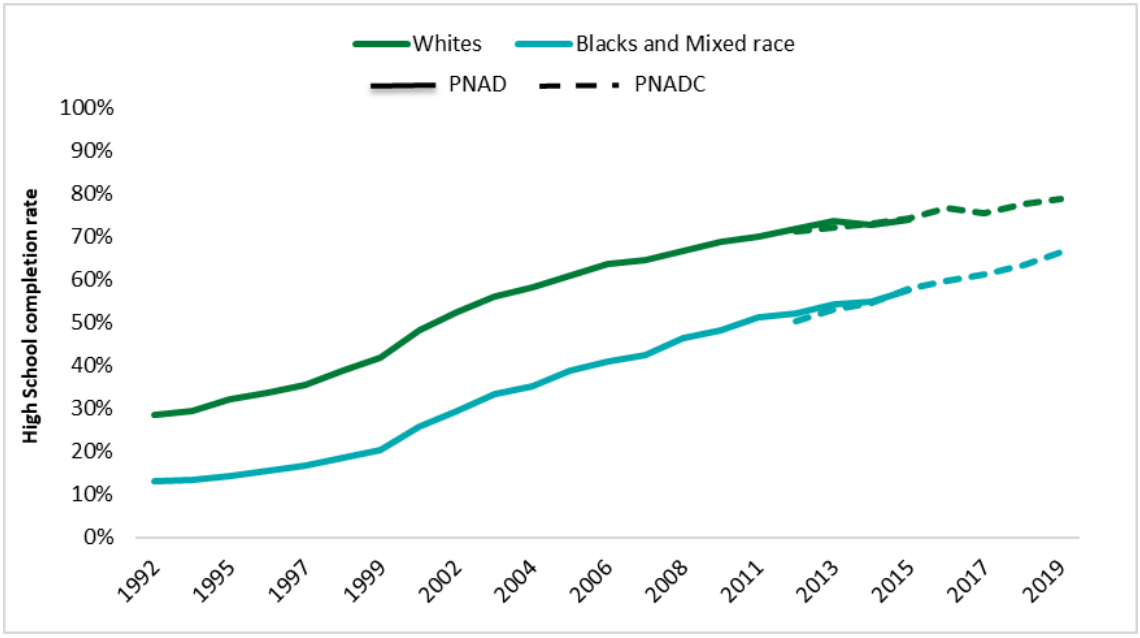
Figure 35 – High School completion rate among 20-to-24-year-olds – Brazil, per fifth of per capita household income



Source: Own elaboration, based on 1992 to 2019 PNAD and PNADC data tabulated by IMDS.

Note: Solid lines refer to PNAD data and dashed lines to PNADC data.

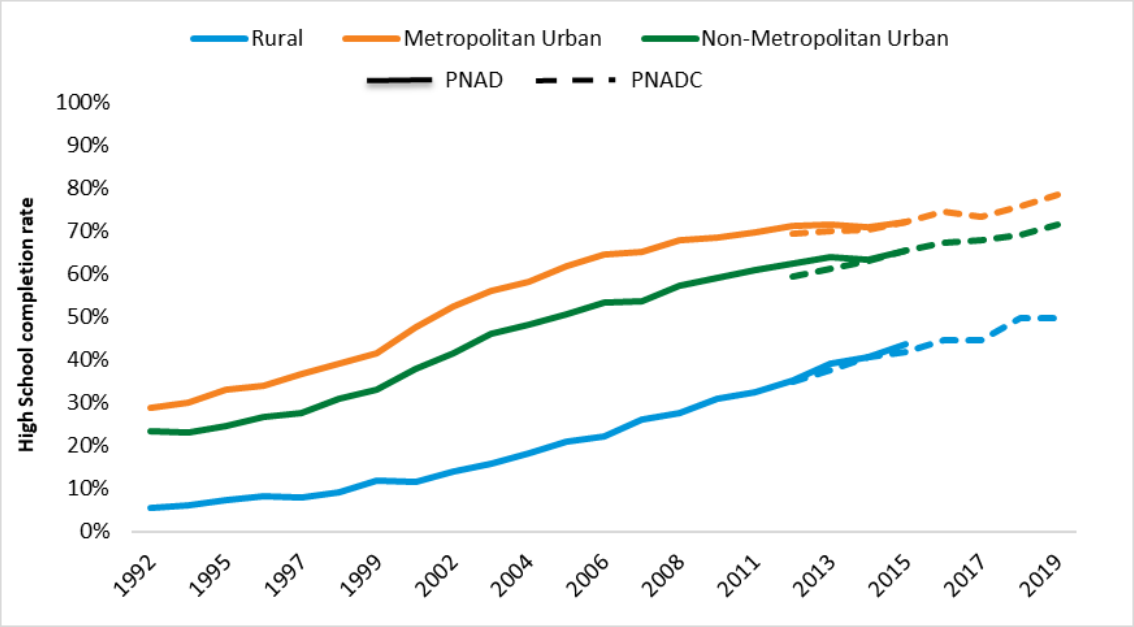
Figure 36 – High School completion rate among 20-to-24-year-olds – Brazil, per skin color or race



Source: Own elaboration, based on 1992 to 2019 PNAD and PNADC data tabulated by IMDS.

Note: Solid lines refer to PNAD data and dashed lines to PNADC data.

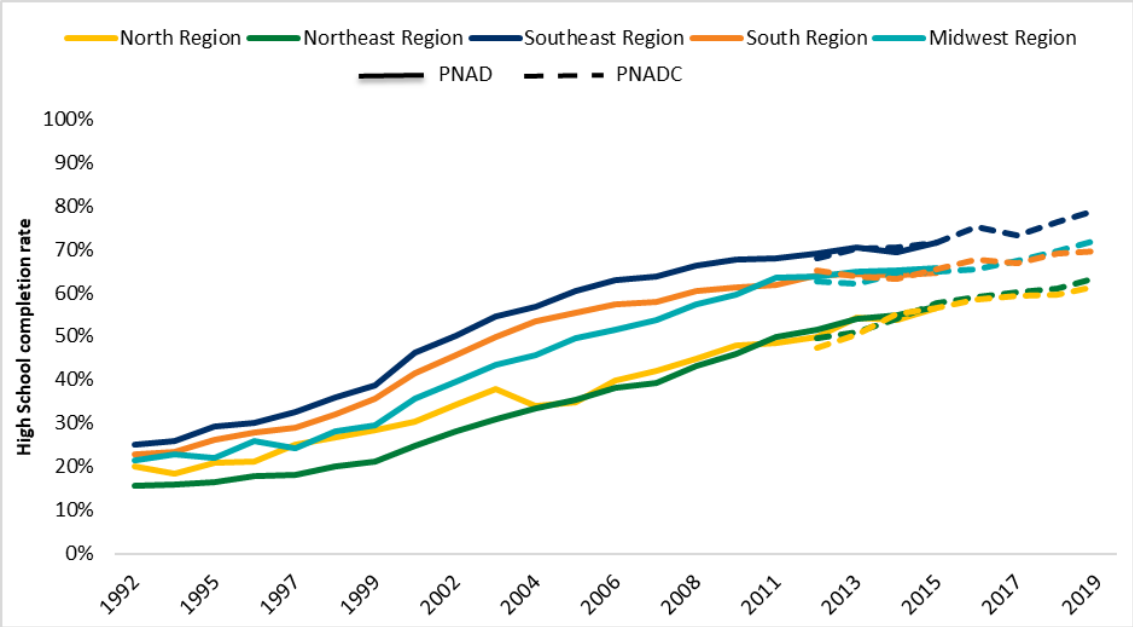
Figure 37 – High School completion rate among 20-to-24-year-olds – Brazil, per area of residence



Source: Own elaboration, based on 1992 to 2019 PNAD and PNADC data tabulated by IMDS.

Note: Solid lines refer to PNAD data and dashed lines to PNADC data.

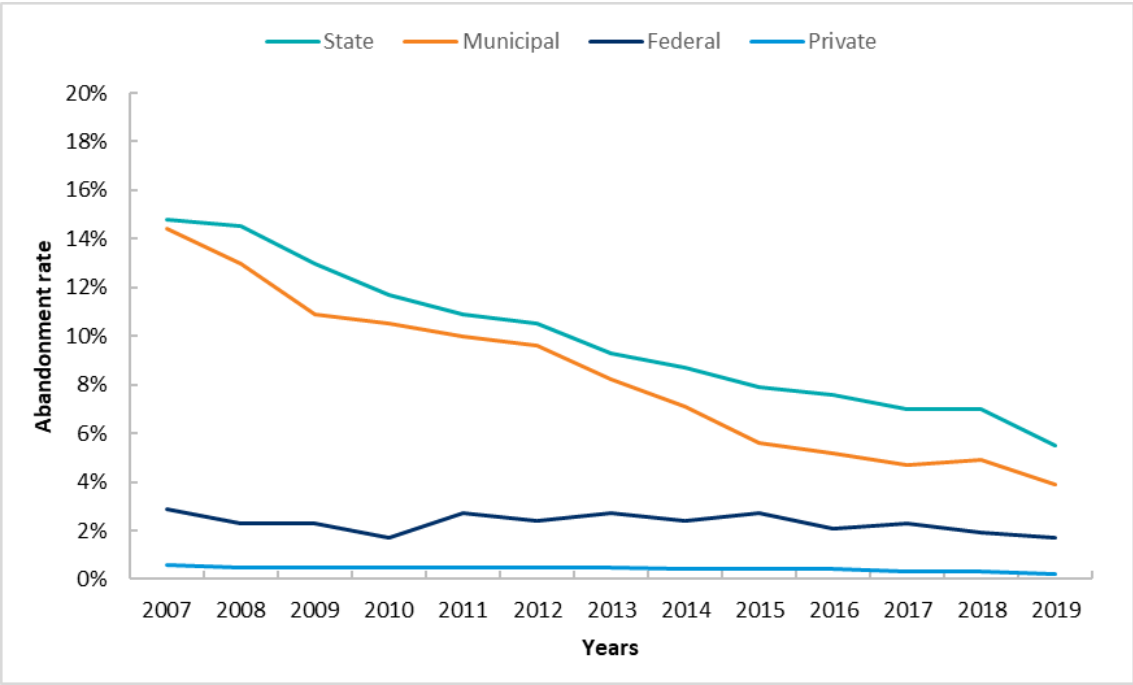
Figure 38 – High School completion rate among 20-to-24-year-olds – Brazil, per region of residence



Source: Own elaboration, based on 1992 to 2019 PNAD and PNADC data tabulated by IMDS.

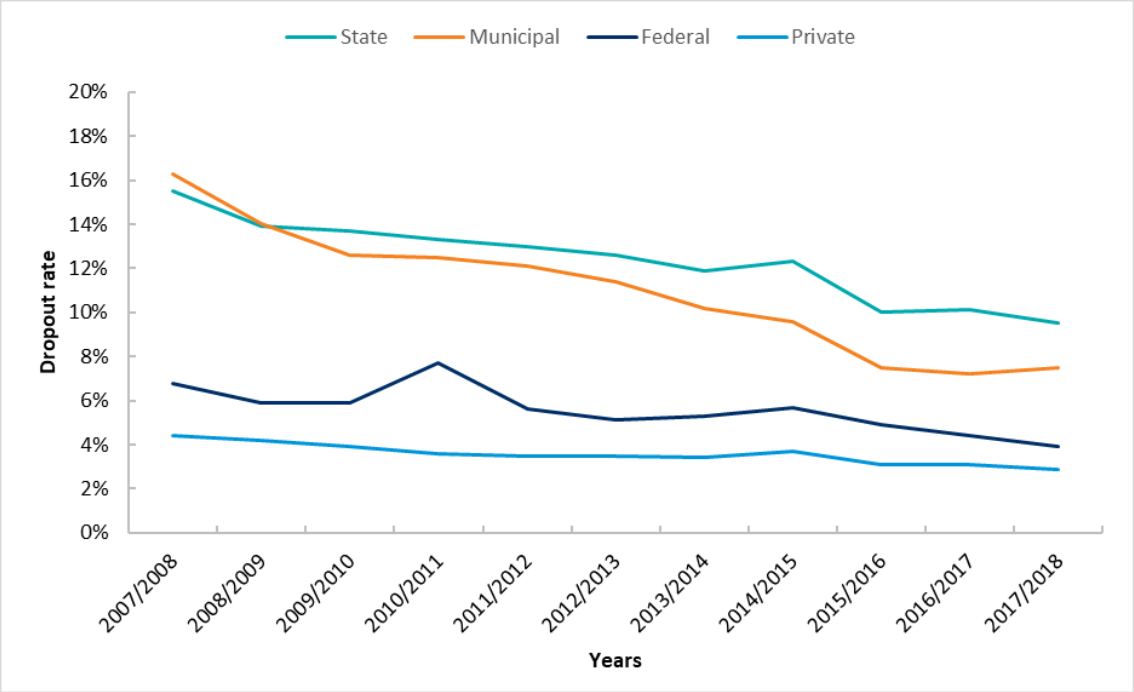
Note: Solid lines refer to PNAD data and dashed lines to PNADC data.

Figure 39 – Evolution of abandonment rate in High School – Brazil, per education network



Source: Own elaboration, based on INEP performance data tabulated by IMDS.

Figure 40 – Evolution of dropout rate in High School – Brazil, per education network



Source: Own elaboration, based on INEP's School Census flow data tabulated by IMDS.

7. Quality of the Teaching, Repetition and Dropout

Until the beginning of the 1990s, there was a mistaken perception that the great problem of dropout in Brazil started in the initial grades of Elementary and Junior High School. It was wrongly believed that children dropped out of school early due to social factors such as poverty, income inequality, lack of interest in studying, or lack of family structure. The failures of the educational system, therefore, were external to the school.

This diagnosis was based on statistics from the Educational Census at the time, which basically confused school abandonment with repetition and school transfer. Many teachers were in the habit of dismissing at the end of the year students who no longer had a chance of being approved, and the Census was unable to identify students who did not attend classes at the end of the year (abandonment) but who enrolled in the same grade the following year (grade repetition), or students transferring to another school. This perception was only revised through the pioneering work of researchers such as Sérgio Costa Ribeiro, Ruben Klein, and Phillip Fletcher (Fletcher and Ribeiro 1988; Klein and Ribeiro 1991; Ribeiro 1991; Fletcher and Ribeiro 1996; Fletcher 1997) when they developed the Profluxo methodology, which allowed

estimating, under certain stability hypotheses, what in fact was failure and dropout based on PNAD data.

This new diagnosis completely changed the view on dropout in Brazil. It was then noticed that children did not abandon school in the early years because of initial difficulties encountered and due to lack of family support. On the contrary, children only abandoned after much persistence, going through multiple failures and accumulated grade repetitions[52]. The big problem was not abandonment or dropout, but failure and repetition. And behind the high repetition rates, there was the veiled quality of teaching and a pedagogical culture that blamed school failure almost invariably on the student, the parents and other external factors, but rarely on the school or the teacher, which became known by the term “repetition pedagogy”, coined by Sergio Costa Ribeiro (1991).

This diagnosis allowed the public sector to structure specific actions to reverse the serious problem of repetition in the early years, such as the adoption of school cycles[53], school reinforcement programs and initiatives to teach all children to read and write at the correct age (Soares and Lima, 2002). Since then, learning as measured by SAEB assessments has improved considerably in the early years, while failure rates have steadily declined.

Despite all the improvement in relation to the school flow over the last 30 years, Sérgio Costa Ribeiro's (1991) diagnosis, so well summarized by the term “repetition pedagogy”, remains present today. We still have high repetition rates throughout school life, which do not immediately cause dropout, but which accumulate, increasing the proportion of students in delay, and which eventually

[52] To have an idea of the distortion of the estimates, while the School Census pointed to a 25% school "dropout" between the 1st and 2nd grade of the old Primary School in the year 1982, PNAD pointed to a dropout of only 2.3%. But grade repetition, yes, this affected 52% of the first year enrollment (Ribeiro, 1991).

[53] Foureaux Koppensteiner (2014) shows that the cycle system can discourage students' efforts. Comparing different cohorts of students in schools that have adopted the cycle system in Minas Gerais, the researcher finds a drop of 7% of 1 standard deviation in Math grades. On the one hand, therefore, the cycle system can decrease retention, improve student flow and allow some students to remain more time at school, but on the other hand it can decrease learning. The total impact of the cycle system on average learning for all students is the sum of the discouraging effect with the positive impact generated for students at risk of repetition, either by not generating the possible psychological effects of repetition, or by the additional learning that such students will undergo by staying longer at school.

translate later into dropout in the transition to High School. There is evidence that repetition can have negative consequences on students' self-esteem and other emotional and behavioral dimensions of students (Meisels and Liaw 1993; Correa 2013), which in turn can lead to an increased likelihood of school dropout (Manacorda 2012).

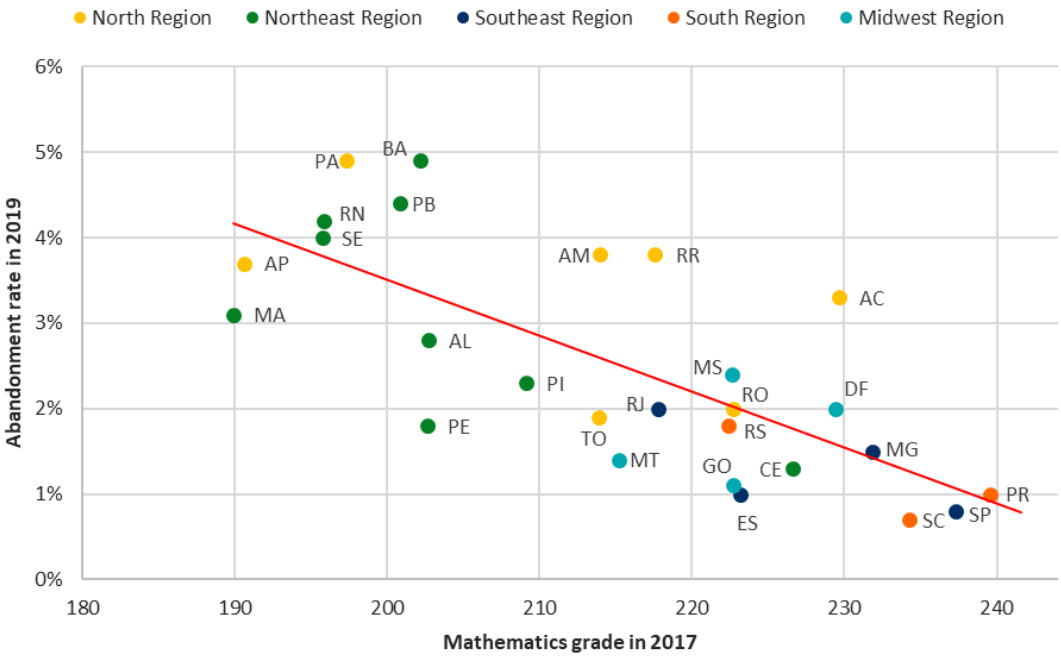
Figures 41 and Figure 42 show how learning deficits are correlated to abandonment rates in the Junior High School and in High School. In Figure 41 we have on the vertical axis the average abandonment rate in the Junior High School in 2019 - average per state - and in the horizontal axis the average mathematics grade - average per state - in the 2017 SAEB, in the 5th grade of Elementary School[54]. In Figure 42 we have, by state, the 2019 High School abandonment rate average against the 9th grade of Junior High School mathematics average grade in the 2017 SAEB. The greater the grade in the SAEB evaluations of two years earlier, the lower the abandonment rate two years later. This relationship occurs not only at the state level, but also at the municipal level, as shown by Figure 43 and Figure 44.

Today, 1 in every 4 students in the final grades (JHS), and 1 in every 3 in the 1st year of High School is in distortion. As shown in Figure 45 and Figure 46, age-grade distortion is positively correlated to the dropout rate at the level of Federation Units, both in the years of Junior High School and in High School.

Learning deficits are also linked to failure rates and age-grade distortion. Although there is no objective uniform criterion for students' minimal learning to configure their failure, low learning is one of the key causes of failure (Gomes-Neto and Hanushek 1994).

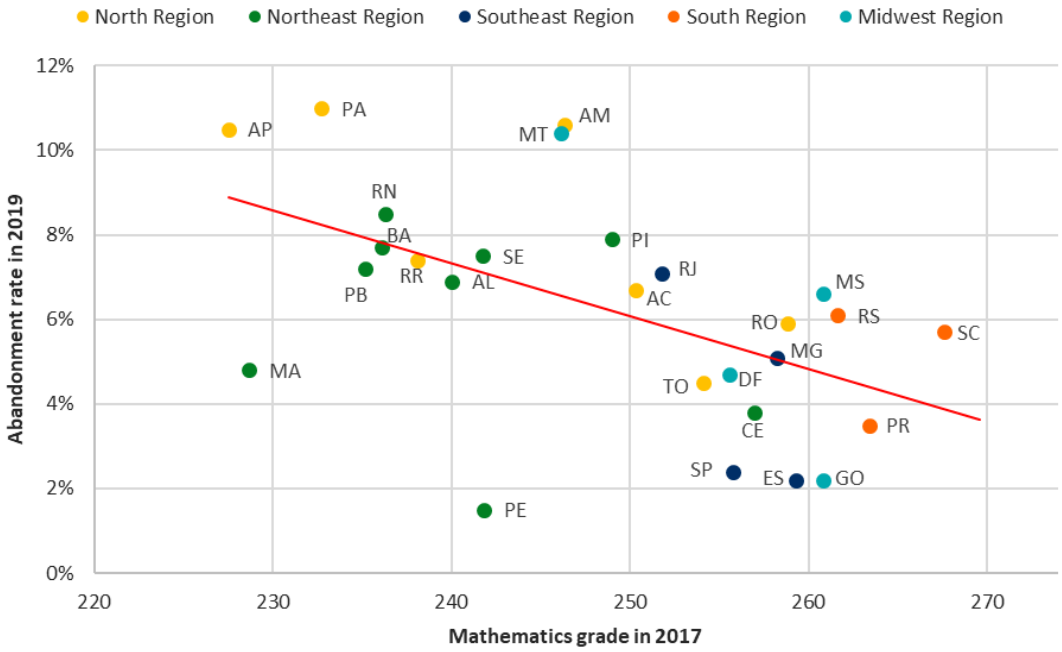
[54] If we correlate abandonment against the grade of the same year, we could have a selection problem of students who took the test. The greater the abandonment, the better the students who took the test at the end of the year.

Figure 41 – Relationship between the Mathematics grade on the 2017 SAEB for 5th grade of Elementary School and the abandonment rate in the years of Junior High School in 2019 – Brazil, per Unit of the Federation



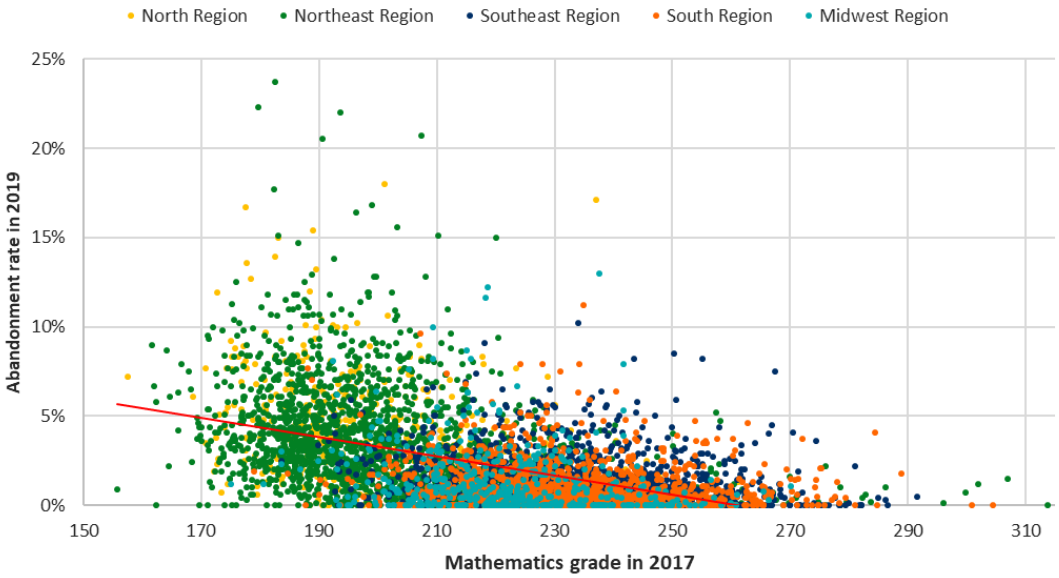
Source: Own elaboration, based on data from Prova Brasil 2017 and on INEP 2019 performance data tabulated by IMDS.

Figure 42 – Relationship between the Mathematics grade on the 2017 SAEB for 9th grade of Junior High School and the abandonment rate for High School in 2019 – Brazil, per Unit of the Federation



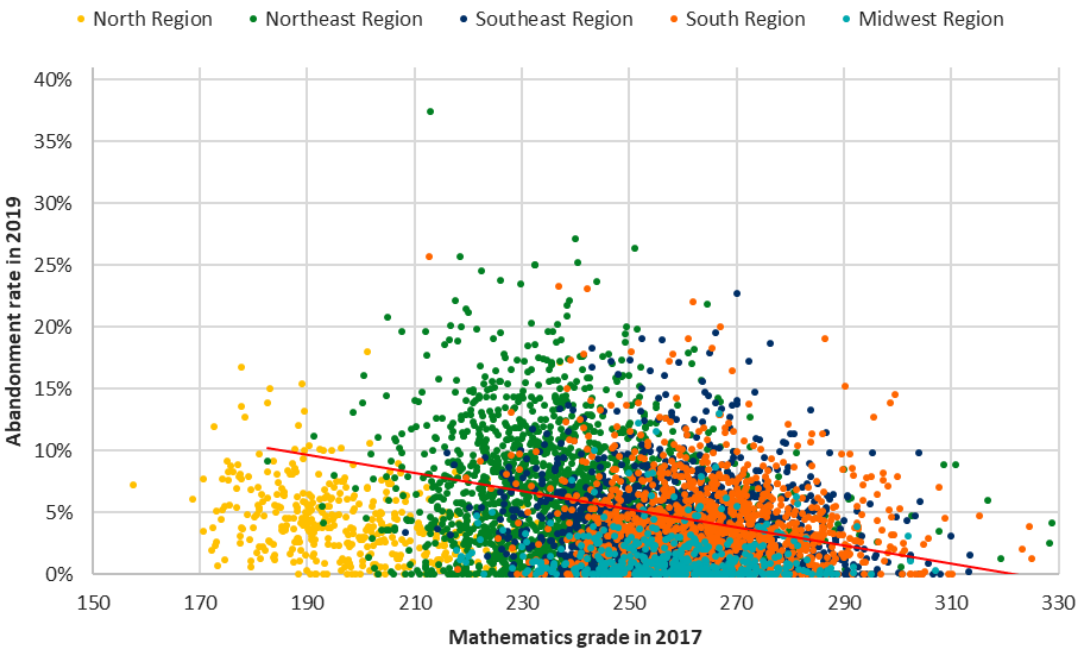
Source: Own elaboration, based on data from Prova Brasil 2017 and on INEP 2019 performance data tabulated by IMDS.

Figure 43 – Relationship between the Mathematics grade on the 2017 SAEB for 5th grade of Elementary School and the abandonment rate in the years of Junior High School in 2019 – Brazil, per municipalities



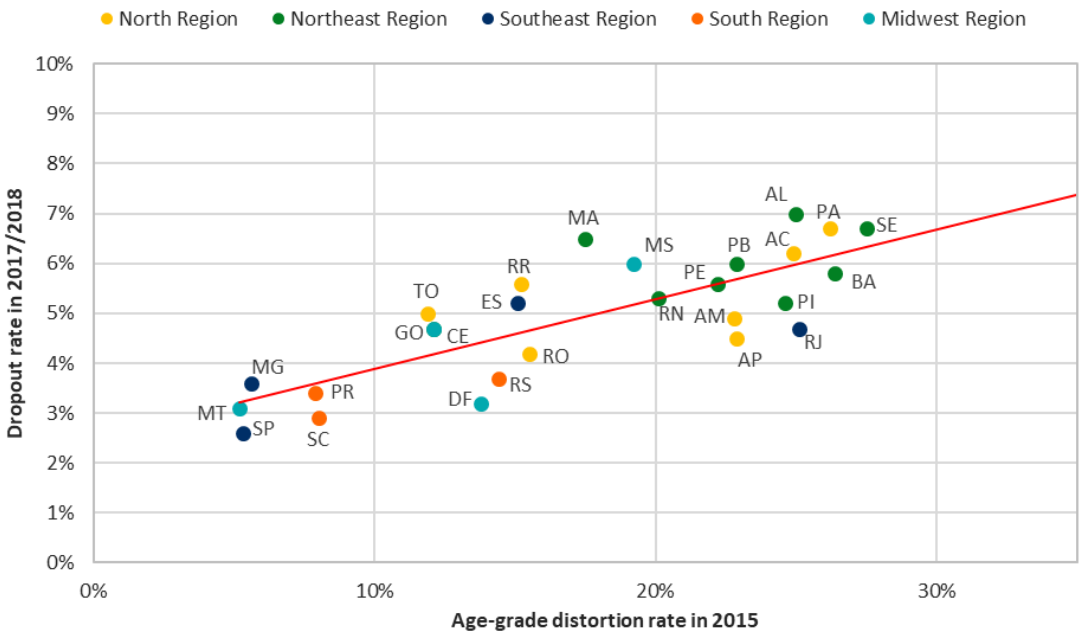
Source: Own elaboration, based on data from Prova Brasil 2017 and on INEP 2019 performance data tabulated by IMDS.

Figure 44 – Relationship between the Mathematics grade on the 2017 SAEB for 9th grade of Junior High School and the abandonment rate in High School in 2019 – Brazil, per municipalities



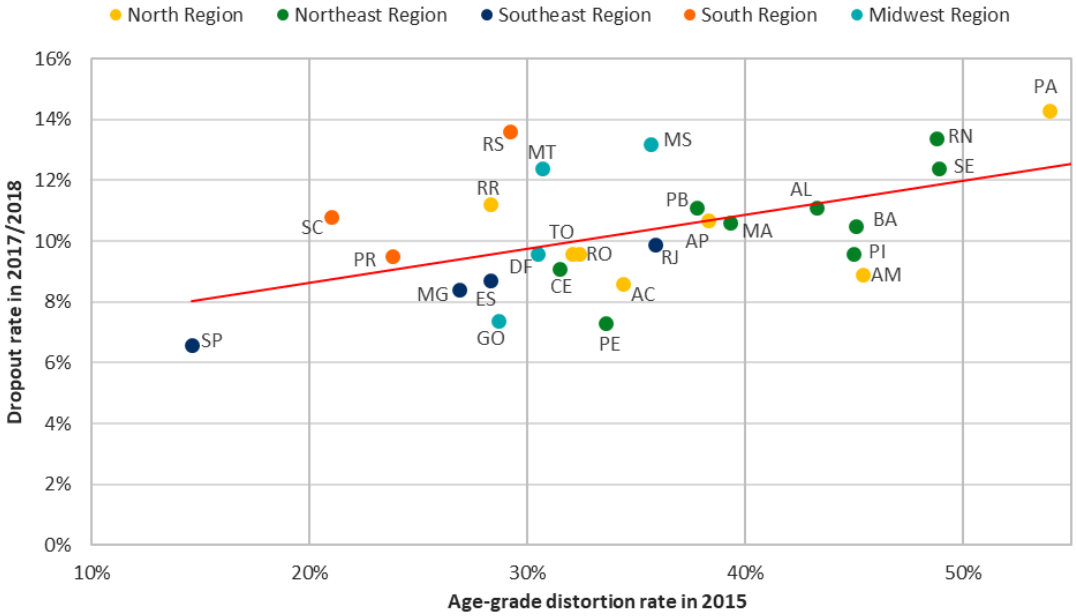
Source: Own elaboration, based on data from Prova Brasil 2017 and on INEP 2019 performance data tabulated by IMDS.

Figure 45 – Relationship between age-grade distortion rate and dropout rate in the years of Junior High School – Brazil, per Unit of the Federation



Source: Own elaboration, based on INEP's School Census performance and flow data tabulated by IMDS.

Figure 46 – Relationship between age-grade distortion rate and dropout rate in High School – Brazil, per Unit of the Federation



Source: Own elaboration, based on INEP's School Census performance and flow data tabulated by IMDS.

8. Conclusion

This paper had as its main objective to update the diagnosis about school dropout and abandonment in Brazil, focusing on the last years of Junior High School, and High School, using data from PNAD/PNADC and from the School Census. Conclusion rates per grade were calculated and INEP performance indicators and school transition/flow were analyzed.

Brazil presented considerable improvement in relation to school flow over the last 30 years. However, High School abandonment and dropout rates remain high and distant from the necessary trajectory to universalize High School completion among young people. Inequalities in income, skin color, region and area of residence, besides education networks are reflected in school access, with great disparities in High School dropout and completion rates between rich and poor students, Whites and Blacks, whether from the South or the North, from rural or urban areas, and from public or private networks.

Lastly, without claiming to identify any causal impact, we have seen that abandonment and dropout rates present a correlation with the level of learning experienced and with the age-grade distortion, which is nothing if not a reflection of multiple past repetitions. We have verified that this relationship is strong both for state and municipal averages.

This paper is part of a series of 3 studies on school dropout among adolescents and young people in Brazil. The next paper analyzes the causes and consequences of the dropout phenomenon in Brazil, while the last paper in the series brings into focus evidence on policies with proven effectiveness in reducing High School dropout.

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Appendix

Table A1 – Acronyms of the Federation Units

Federation Unit	Acronym
Rondônia	RO
Acre	AC
Amazonas	AM
Roraima	RR
Pará	PA
Amapá	AP
Tocantins	TO
Maranhão	MA
Piauí	PI
Ceará	CE
Rio Grande do Norte	RN
Paraíba	PB
Pernambuco	PE
Alagoas	AL
Sergipe	SE
Bahia	BA
Minas Gerais	MG
Espírito Santo	ES
Rio de Janeiro	RJ
São Paulo	SP
Paraná	PR
Santa Catarina	SC
Rio Grande do Sul	RS
Mato Grosso do Sul	MS
Mato Grosso	MT
Goiás	GO
Federal District	DF