

**THE EFFECTIVENESS OF FUNDEB: AN EXPLORATORY STUDY IN THE
EDUCATION NETWORK OF THE STATE OF PARAÍBA**

***A EFETIVIDADE DO FUNDEB: UM ESTUDO EXPLORATÓRIO NA REDE DE
EDUCAÇÃO DO ESTADO DA PARAÍBA***

***LA EFICACIA DEL FUNDEB: UN ESTUDIO EXPLORATORIO EN LA RED DE
EDUCACIÓN DEL ESTADO DE PARAÍBA***



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ABSTRACT: In 2020, the Fund for the Maintenance and Development of Basic Education and the Valuation of Education Professionals (Fundeb) comes to an end, completing a cycle of almost a quarter of a century of policy financing education based on state funds, including states and their municipalities, in addition to a complementation of the Union. This article investigates the effectiveness of Fundeb in the educational network of the state of Paraíba (2007-2019) in relation to its ability to present results consistent with its objectives to meet the needs of maintenance and development of basic education, in harmony with the perspective of meeting the right to education assured in the Federal Constitution. The study is based on a qualitative research based on a methodological proposal that employed bibliographic and documentary research and the collection of financial and educational data. As a theoretical framework to support the research, authors addressing the theme on screen were used, such as Amaral (2012), Lima (2006), Martins (2011), Pinto (2015; 2018) and Sousa Júnior (2006). The study found that, although Fundeb has guaranteed a regular, automatic and increasing flow of financial resources to the state education network of Paraíba, the indicators of efficiency and educational performance have shown limited advances and improvements, as well as there has not been an effectiveness in stimulating the expansion of the basic education offer in the state education network of Paraíba in order to meet the right to education of all its citizens.

KEYWORDS: Fundeb. Financing of basic education. Right to education.

RESUMO: Em 2020, chega ao fim a vigência do Fundo de Manutenção e Desenvolvimento da Educação Básica e de Valorização dos Profissionais da Educação (Fundeb), completando um ciclo de quase um quarto de século de política de financiamento da educação com base em fundos estaduais, englobando estados e seus municípios, além de uma complementação da União. Este artigo investiga a efetividade do Fundeb na rede educacional do estado da Paraíba (2007-2019) em relação à sua capacidade de apresentar resultados condizentes com o seu objetivo de atender às necessidades da manutenção e do desenvolvimento do ensino básico, em harmonia com a perspectiva do atendimento do direito à educação assegurado na Constituição Federal. O estudo fundamenta-se numa pesquisa qualitativa embasada numa proposta metodológica que empreendeu uma pesquisa bibliográfica e documental, além de uma coleta de dados financeiros e educacionais. Empregou-se como referencial teórico para fundamentar a pesquisa autores que abordam a temática em tela, como Amaral (2012), Lima (2006), Martins (2011), Pinto (2015; 2018) e Sousa Júnior (2006). Constatou-se na pesquisa que, apesar de o Fundeb ter garantido um fluxo regular, automático e crescente de recursos financeiros para a rede estadual de educação paraibana, os indicadores de eficiência e rendimento educacional apresentaram avanços e melhorias limitadas, bem como não ocorreu uma efetividade em estimular a ampliação da oferta da educação básica na rede estadual paraibana de modo a atender o direito à educação de todos os cidadãos.

PALAVRAS-CHAVE: Fundeb. Financiamento da educação básica. Direito à educação.

RESUMEN: En 2020, el Fondo para el Mantenimiento y Desarrollo de la Educación Básica y la Valoración de los Profesionales de la Educación (Fundeb) llega a su fin, completando un ciclo de casi un cuarto de siglo de políticas de financiación de la educación basadas en fondos estatales, que abarcan los estados y sus municipios, además de un complemento de la Unión. Este artículo investiga la eficacia del Fundeb en la red educativa del estado de Paraíba (2007-2019) en relación con su capacidad para presentar resultados coherentes con sus objetivos de satisfacer las necesidades de mantenimiento y desarrollo de la educación básica, en armonía

con la perspectiva de satisfacer el derecho a la educación garantizado en la Constitución Federal. El estudio se basa en una investigación cualitativa a partir de una propuesta metodológica que empleó la investigación bibliográfica y documental y la recopilación de datos financieros y educativos. Para apoyar la investigación se utilizó la referencia teórica de autores que abordan el tema en la pantalla, como Amaral (2012), Lima (2006), Martins (2011), Pinto (2015; 2018) y Sousa Júnior (2006). El estudio determinó que, aunque Fundeb garantizaba un flujo regular, automático y creciente de recursos financieros a la red estatal de educación de Paraíba, los indicadores de eficiencia y rendimiento educativo mostraban avances y mejoras limitadas, así como que no había eficacia en el estímulo de la expansión de la oferta de educación básica en la red estatal de Paraíba para satisfacer el derecho a la educación de todos sus ciudadanos.

PALABRAS CLAVE: *Fundeb. Financiación de la educación básica. Derecho a la educación.*

Introduction

The process of redemocratization in Brazil, begun in the mid-1980s, brought a new element to the political and social scenario: popular participation through large social and political mobilizations. Among the many repressed demands that emerged in these mobilizations is the educational question. In a country where formal education has always been denied to the majority of the population, the moment of change has led to this issue gaining contours never previously imagined and that, from these manifestations, it would leave the imaginary of the claims, gain the field of legalization and, most importantly, have its objectives expanded, aiming at the care of the entire population and reaching all levels of education. As Silva, Conrado and Luz (2011) points out, it is in this context that, in the process of redemocratization, the conception of expanding access to education is enhanced.

An important milestone in this scenario of struggles and achievements is the Federal Constitution of 1988, also known as the citizen constitution. In chapter II, which deals with Social Rights, in Article 6, education is presented as a social right. It is ensured, also in the constitutional text, the duty of the State in relation to education, specifically in its Chapter III, which deals with Education Culture and Sport, in Article 205, stating that "education, the right of all and the duty of the State and the family, will be promoted and encouraged with the collaboration of society, aiming at the full development of the person, their preparation for the exercise of citizenship and their qualification for work" (BRASIL, 1988).

Furthermore, with the promulgation of Constitutional Amendment No. 59 of November 11, 2009 (BRASIL, 2009), the Constitution determined that the state's duty to education will be effected by guaranteeing compulsory and free basic education from 4 (four) to 17 (seventeen) years of age, even ensuring its free offer to all those who did not have access to it at their own

age, in addition to the progressive universalization of free high school and early childhood education, in daycare and preschool, to children up to five (five) years of age (BRASIL, 1988, art. 208).

The right of all citizens to education is directly related, on the one hand, to the condition that education is public, that is, assumed by the public authorities as the duty of the State, plus the responsibility of the family – possibly guaranteeing the freedom of private initiative. On the other hand, education should be mandatory, in the sense that parents have the duty to send their children to school, and it is up to the State to fund schools to guarantee places for all, throughout the national territory, thus ensuring free of charge in order to enable them, regardless of their social origin, everyone can attend school (ARELARO, 2010; CURY, 2008).

The educational system in Brazil, in the context of the consolidation of democracy, was structured with a high degree of autonomy among federal entities, as well as by decentralization in the implementation of educational policies. According to current legislation, the municipalities competed to act primarily in Early Childhood Education and Elementary School. It was up to the states, in turn, to act primarily in elementary and high school. Finally, the federal government assumed responsibility for higher education, in addition to the redistributive and supple functions, in technical and financial terms in relation to the other entities (CARMO; ZAIDAN FILHO; MIYACHI, 2014).

However, there is a fundamental issue related to the fulfillment of the duties of the State with regard to the attendance of the right to education of every citizen. This issue deals specifically with the need to ensure financial resources to meet the effective demands of public education. In this perspective, Nunes (2017, p. 33, our translation) states that the fulfillment of the state's duty with the fulfillment of the right to public and free education "[...] inevitably implies the expenditure of budgetary resources [...]. For this reason, it has been that the state duty to provide the right goes hand in hand with the undisputed need for financing". In order to meet this demand, the government would have to seek sources that would guarantee the increase of resources to finance education. In general, the guarantee is through constitutional provisions. However, it was not always possible to ensure the necessary investments to affect the right to education.

Alongside the need to ensure resources for the maintenance and development of education, it is also necessary – and this is a requirement of contemporaneity – the evaluation of public policies in the effort of making them more effective. The evaluation of the effectiveness of a public policy seeks to verify the results achieved and the real changes brought about in a specific reality. Through evaluation, it is possible to measure its limits, as well as its

advantages and contributions. In addition, the evaluation of public policies contributes to democratic debates and, consequently, to the strengthening of social control (RAMOS, 2009).

As a result of the historical scenario and this new political, economic and social configuration in state action, specific financing policies were made feasible in the educational field that affected basic education. In this perspective, the focus of this article will be the analysis of the effectiveness¹ of the Fund for the Maintenance and Development of Basic Education and the Valorization of Education Professionals (Fundeb) in the educational network of the state of Paraíba, between 2007 and 2019, in relation to its ability to present results consistent with its objectives of meeting the needs of maintenance and development of basic education, in harmony with the perspective of the right to education guaranteed in the Federal Constitution². It is known that, due to the strong economic and educational asymmetries, the impacts of an investment fund in education raise differentiated results between regions, states and municipalities. Therefore, it is imperative to investigate, beyond the national sphere, results at the local level that contribute to a more specific assessment of the results of a policy of financing education systems based on educational funds.

This is a qualitative research based on a methodological proposal that used a bibliographic and documentary research, in addition to a collection of financial and educational data. It was used as a theoretical reference to support the research authors who approach the theme on screen, such as Amaral (2012), Lima (2006), Martins (2011), Pinto (2015; 2018) and Sousa Júnior (2006). The documentary part involved the analysis of the Federal Constitution (1988), Constitutional Amendment No. 53 of December 19, 2006, and Law No. 11,494 of June 20, 2007. In addition, to operationalize the research objective, we first analyzed the data regarding the revenues distributed by Fundeb to the educational network of the state of Paraíba from the database of the Information System on Public Budgets in Education (SIOPE). Then, we performed the analysis of a set of data extracted from the Reports of Educational Indicators organized by INEP, that is: analysis of attendance/enrollment data, the numbers of two efficiency and performance indicators, specifically, as well as the rate of school performance (approval, disapproval and abandonment) and, finally, the age-grade distortion rate.

The organization of the text comprises, first, a synthesis about the financing of education

¹ The etymological origin of the word effectiveness refers to a conception of "producing effect" and, according to Houaiss (2009, p. 723, our translation), effectiveness constitutes the "possibility of producing a real effect" or "ability to achieve its real goal".

² The focus of this study will be on some eminently educational indicators. Therefore, the issue of teacher appreciation will not be addressed. It is noteworthy that in this field the changes are significant. However, due to its complexity and breadth, as well as the objectives of this writing, they will not be addressed.

in Brazil from the Federal Constitution of 1988 and the institution of Fundeb. Next, the analyses regarding the effectiveness of Fundeb in the educational network of the state of Paraíba are presented. Finally, the conclusive considerations of this study are offered.

The FUNDEB and the financing of education in Brazil

It is noteworthy that the path of legal and legal foundations to ensure the financing of public education, throughout the historical periods of the Colony, the Empire and the Republic, was marked indelibly by advances and setbacks and, in many moments, by the precariousness in ensuring the maintenance and development of education. Only from the Federal Constitution of 1934, elaborated in the context of the Revolution of 1930, did the constitutional mechanisms that ensure the linkage of financial resources to education were implemented. However, during the following decades there were eliminations and reintegrations of binding in constitutional texts. Finally, the Federal Constitution of 1988 reestablishes the binding of financial resources for education (CURY, 2018).

In the Federal Constitution of 1988, the financing allocated for public education is provided through the binding of tax resources, specifically imposed, of federal entities, by affirming that the Union must apply at least eighteen percent, while the States, the Federal District and municipalities, twenty-five percent (at least) of the revenue resulting from taxes, including transfers, maintenance and development of education (BRASIL, 1988, art. 212). Moreover, it is also determined that the distribution of these amounts should ensure priority to meet the needs of compulsory education, specifically universalization, the guarantee of quality standards and equity (BRASIL, 1988, art. 212, § 3).

The origin of accounting funds, such as Fundeb, is related to a long historical trajectory of struggle for a public, free and quality education, which is linked to the propositions of the Manifesto of the Pioneers of Education, of 1932, and with the performance of educator Anísio Teixeira (1900-1971), who came to draw the guidelines of a proposal that served as the basis for the constitution of Fundeb in the 1990s (LIMA, 2006). The conception that underpinned the policy of accounting funds was the correction of regional inequalities through the promotion of the homogenization of resources invested in education through a mechanism of redistribution of financial resources among federal entities (AMARAL, 2012).

With the end of the term of the former Fundeb³, Constitutional Amendment No. 53 of

³ Established by Constitutional Amendment No. 14 of September 12, 1996, instituting the policy of accounting funds for education.

December 19, 2006 instituted Fundeb. According to Martins (2011), this amendment contributed to organize and, at the same time, redistribute the financial resources linked to public basic education, as well as to ensure regular and automatic flows, which, in general, ensure greater autonomy and a balance for the entities of the federative pact.

Fundeb is an accounting fund consisting of revenue stemming from the collection of taxes from all federal entities, i.e., the Federal Government, the Federal District and municipalities. Fundeb's operating mechanisms promote the sub-binding of tax revenues, constitutional transfers and the complementation of the Union to be invested in basic education. This new accounting fund was regulated by Law No. 11,494 of June 20, 2007, and is intended "[...] the maintenance and development of public basic education and the valorization of workers in education, including their decent remuneration, in accordance with the provisions of this Law" (BRASIL, 2007, art. 2, our translation).

As Sousa Júnior (2006, p. 281) explains, the mechanics of distribution of Fundeb's resources follow the same institute by Fundef, with revenues from states and municipalities, in addition to the complementation of the Union, and its redistribution within each State and its municipalities according to enrollment in basic education. According to Pinto (2015), the institution of accounting funds, that is, Fundef and Fundeb, brought a significant change in the financing system until then in force and directly reflected student spending.

In the period prior to the accounting funds, each state and municipality exclusively enjoyed the resources of taxes and transfers constitutionally linked to serve students enrolled in their educational networks. The accounting funds introduced a double equalizing mechanism and reduction of inequalities in investments made by each federated group: the redistribution of financial resources within each state and its municipalities, and the complementation of the Union. These mechanisms aim to promote a reduction of disparities in student spending among the entities of the federation.

Each federal entity, whether state, Federal District or municipality, receives Fundeb resources from the number of effective enrollments in basic education and according to the care priorities established by the Federal Constitution. Thus, municipalities will act primarily in Elementary School and Early Childhood Education, while states and the Federal District will act primarily in elementary and high school (BRASIL, 1988, art. 211).

In addition, for the purposes of distributing Fundeb's resources, each enrollment has a different weight, that is, a specific weighting factor that will result in a value per student/year for each stage, modality and type of educational establishment. The base weighting factor = 1.0 corresponds to the initial grades of urban elementary school. The other stages and modalities

have weighting factors ranging from 0.7 (lower factor) to 1.30 (major factor) (BRASIL, 2007, art. 9).

The second equalizing mechanism and reduction of inequalities in the investments made by each state and municipality is the complementation of the Union. The Union will, whenever necessary, make financial contributions to complement the fund, whenever, within the state and the Federal District, the weighted average value per student does not reach the minimum annual value per student defined nationally. The objective of this mechanism is to ensure a minimum investment standard per student in each stage and modality of basic education teaching. The complementation was progressively increased, according to legal provisions, and reached the level of 10% of the total resources from the fourth year of the fund. Thus, whenever the state fund presents the value per student/year below the minimum established by the Intergovernmental Commission for Financing for Quality Basic Education, it will have to receive the complementation of the Union, so as to never receive amounts lower than the legally established minimum (BRASIL, 2007, art. 4º, 6º and 31).

A second observation is that studies in the field of public investments in education, such as those conducted by Jackson, Johnson and Persico (2016) and Hyman (2017), show that financial investments in public education are essential to ensure learning and, consequently, educational outcomes, especially when spending per student is relatively low. These studies also point out, among the important and significant repercussions, that when promoting the increase in spending per student through public policies of educational funding, there is an improvement in educational levels, the reduction of differences in academic performance among students with low and high socio-economic level, the growth of the propensity to enter and completion of courses in higher education, the growth of individual wages and family income, and the reduction of the intergenerational transmission of poverty. The results and benefits found in the research are robust and important enough to justify the investments of financial resources in public education.

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Fundeb: repercussions on the state network of Paraíba

Located in northeastern Brazil, the state of Paraíba is one of the oldest occupied areas in national history. Its capital, the city of João Pessoa, was founded in 1585. Its climate is predominantly semi-arid. Therefore, it has long periods of drought. Paraíba has four mesoregions: Mata Paraibana, Agreste Paraibano, Borborema and Sertão Paraibano. Only 13.80% of its territory, which corresponds to the area of The Paraíba Forest, is not in the semi-

arid region, which covers the Agreste, Borborema and Sertão regions. A significant portion of its population, 44.45%, and GDP, 53.40%, is concentrated in the Region of Mata Paraibana (SILVA, 2014). The total population of Paraíba, in 2007, was 3,614,395 inhabitants, with 73.70% of this population located in the urban area (IDEME, 2008).

Currently, the state of Paraíba has 223 municipalities and occupies only 0.70% of the territory of Brazil. In 2007, the economic production of the state of Paraíba represented only 0.80% of the national GDP. In the period between 1995 and 2005, GDP growth occurred, however combined with a low level in the human development index (HDI)⁴. This fact caused the state to be classified in an expanding underdevelopment situation. In addition, per capita income in the state of Paraíba, in 2007, was R\$ 6,097.00. This amount was higher only in those presented by the states of Alagoas (R\$ 5,880.80), Maranhão (R\$ 5,165.20) and Piauí (R\$ 4,671.40) (MENDES *et al.*, 2012).

An overview of the educational data of the state of Paraíba from the beginning of the 1990s reveals some of the challenges to be faced for the attendance of the right to education, as well as for the promotion of social justice and well-being for all citizens of Paraíba. Between 1992 and 2008, the evolution of the average schooling rate in Paraíba increased by 31.70%. However, despite being an advance, this growth was lower than the average in the Northeast (49.80%) and Brazil (35.10%). In 2008, the average schooling rate for the population aged 25 years or older was only 5.2 years of schooling - in 1992 the average was 4 years of study. However, despite the advance, in those with average schooling, Paraíba surpassed, among the northeastern states, only Piauí (5.1) and Alagoas (5.0). In addition, in 2008, the percentage of people with less than 8 years of schooling was 63.70% (MENDES *et al.*, 2012).

The illiteracy rate in the population between 15 and 24 years, age group that should theoretically be attending high school and higher education, showed advances in the period between 1992 and 2007. In this time frame, the illiteracy rate was significantly reduced from 21.50% to 5.40%. However, its result is still higher than the average in the Northeast (5.0%) and Brazil (2.30%) (MENDES *et al.*, 2012).

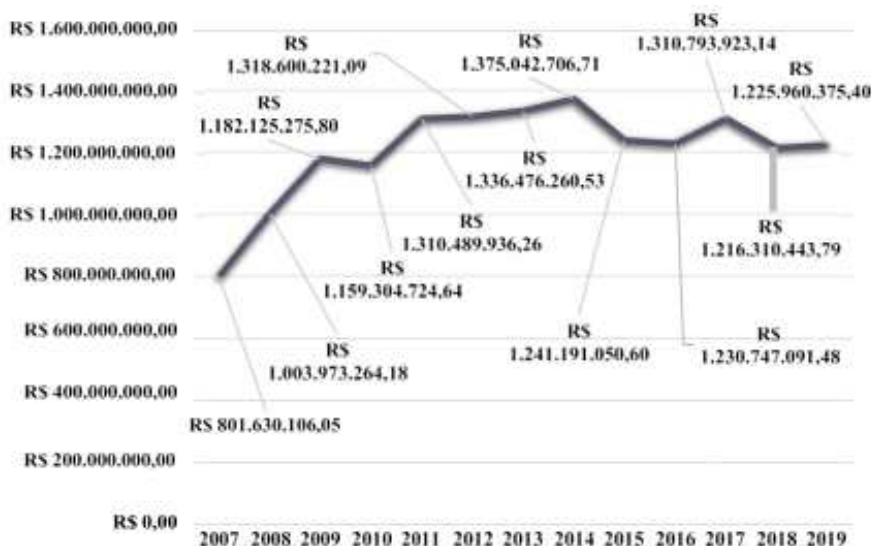
These data show the enormous challenges for effective government action in the educational field, of which this accounting fund is an essential part, as well as to remember the imperative of evaluating public policies as a central element for route correction in order to expand inclusion and democracy. It is emphasized, once again, that the focus of this study will be to analyze the educational effectiveness of Fundeb in the educational network of the state of

⁴ In 2005, the HDI of the state of Paraíba was 0.718 (EDEME, 2008).

Paraíba, considering the resources underlinked through this accounting fund, in the period from 2007 to 2017, from the educational results presented in relation to its objective of maintenance and development of public basic education (BRASIL, 2007, art. 2), from a perspective of service to the right to education, guaranteed in the Federal Constitution (BRASIL, 1988, art. 6 and 205).

This initially shows, in Graphs 1 and 2, the evolution of Fundeb's revenues, including constitutional transfers and the complementation of the Union, in the period 2007 to 2019. Graph 3 also shows the evolution of student spending between 2008 and 2019⁵. It is noteworthy that the data from graphs 1, 2 and 3 had the values deflated by the IGP-M of November 2020 so that they could be compared over time.⁶

Figure 1 - Evolution of FUNDEB Revenue transfers of Resources (2007-2019)



Source: Own development based on SIOPE data

The data from Graph 1 show that there was a trend line of growth of Fundeb's revenues for the state of Paraíba until 2014, with a subsequent decrease. In the analyzed period, it was observed that there was a significant growth of 52.93% of the resources allocated for the maintenance and development of paraiba education. In this sense, one cannot disregard the importance and potential of the resources derived from Fundeb for the financing of public

⁵ All graphs were prepared from the data collected between 2007 and 2019 from the Information System on Public Budgets in Education (SIOPE), specifically the Demonstrative Reports of Fundeb's Revenues and Expenses and the Indicator Reports. Available: https://www.fnde.gov.br/index.php/fnde_sistemas/siope/relatorios/relatorios-estaduais. Access: 10 Feb. 2021.

⁶ The central bank of Brazil calculator was used for this process. Available: <https://www3.bcb.gov.br/CALCIDADAOPUBLICO/exibirFormCorrecaoValores.do?method=exibirFormCorrecaoValores>. Access: 10 Feb. 2021.

education in the state of Paraíba in the period studied, through the mechanism of tax subbinding of this accounting funds policy. The Union's contribution played an important role in this growth.

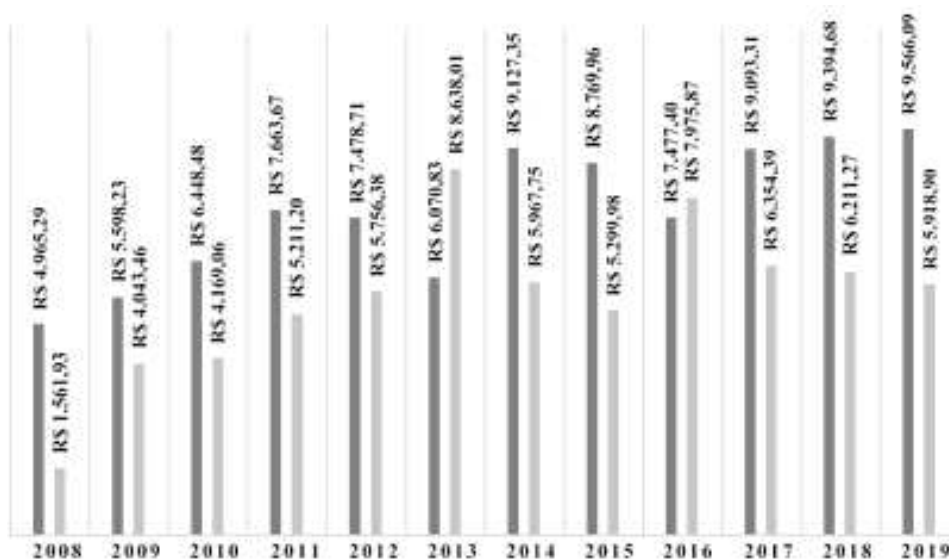
Figure 2 - Evolution of FUNDEB Revenues. Complementation of the Union (2007-2019)



Source: Own development based on SIOPE data

Despite the fluctuations observed in the period studied, the data in Graph 2 indicate a growth of 315.35% of the Union's complementation in Fundeb revenues aimed at ensuring the levels of student spending defined annually. However, again, a negative inflection should be noted from the year 2015, so that this complementation in 2019 is close to the values of the year 2009. These fluctuations in the complementation of Fundeb's resources, of course, were also reflected in the expenditure per student of the state education system of Paraíba.

Graph 3 - Evolution of Student Spending in the State of Paraíba (2008 to 2019)



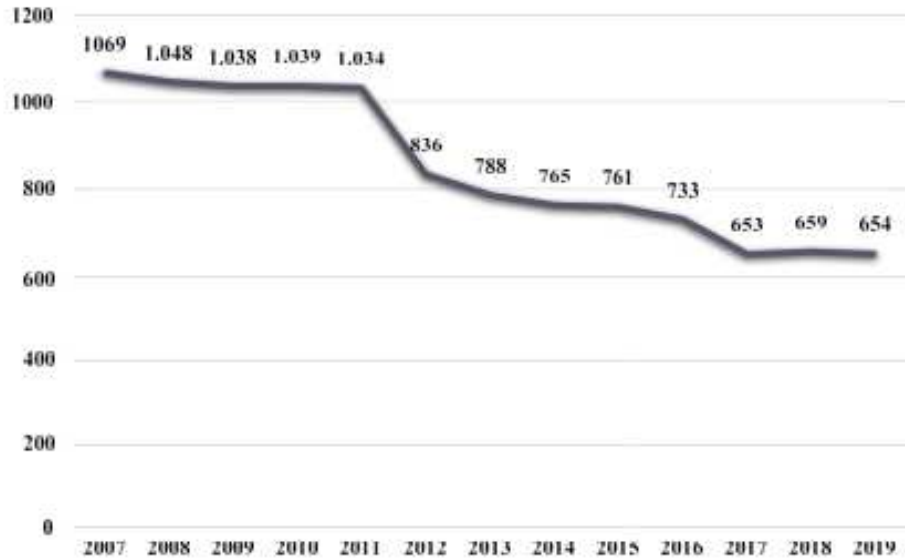
Source: Own development based on SIOPE data

Graph 3 shows the evolution of student spending in the state of Paraíba in Elementary and High School between 2008 and 2019. It should be clarified that the data for the year 2007 were not available in the reports of state indicators made available on the SIOPE portal. With regard to elementary school, there was an important growth of 92.66% in student spending in the state of Paraíba between 2008 and 2019; however, student spending growth was not linear. Thus, in 2012, 2013, 2015 and 2016, there was a reduction in student spending compared to the previous year.

In relation to high school student spending, there is also a growth. However, at this stage of education, the growth was very significant and reached a level of 278.95% between 2008 and 2019. However, following the trend already explained above, there were reductions in high school student spending in the period analyzed in the years 2014, 2015, 2017, 2018 and 2019 compared to the previous year.

Before starting the presentation of enrollment data in the state of Paraíba, it is considered important to expose, as a complementary element of understanding the educational scenario in the period studied, the data referring to the educational establishments of basic education in this federated area. From the data explained in graph 4, there is a well-designed movement: a significant reduction in the number of public basic education educational establishments in the state of Paraíba. The reduction reached the level of 65.74%, which means 424 fewer schools in the composition of the network.

Graph 4 - Rate of Variation of Educational Establishments in the State School of Education in Basic Education of the State of Paraíba (2007-2019)

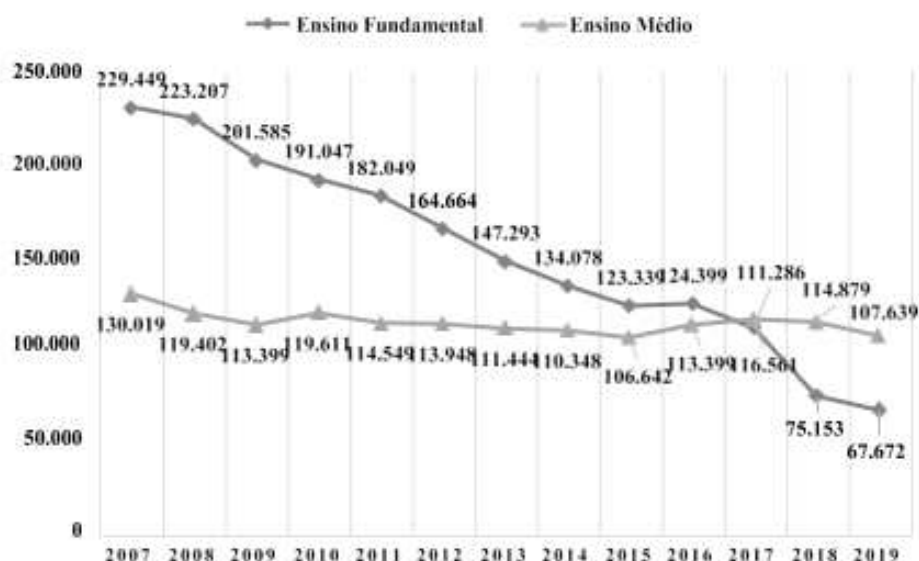


Source: Own elaboration based on school census data

From this point, graph 5⁷ shows the data of total enrollment (urban and rural) in the educational network of the state of Paraíba, in the delimited period, considering the stages of Elementary And High School. The data contribute to the composition of an educational scenario in Paraíba in that period. Initially, the data of elementary school enrollment scans are analyzed. | **13**

⁷ All graphs were elaborated from the data collected between 2007 and 2019 in the Synopses Statistics of Basic Education/School Census, organized by INEP. Available: <http://portal.INEP.gov.br/sinopses-estatisticas-da-educacao-basica>. Access: Feb. 10 2021.

Graph 5 - Evolution of Enrollment in Basic Education - State of Paraíba (Elementary and High School)⁸



Source: Own elaboration based on school census data

Regarding “Fundamental School”⁹ in Paraíba, according to graph 5, the data show that, in the period from 2007 to 2019, there was a reduction in total enrollment. In the analyzed time frame, the reduction was 239.06%. Considering the data presented, the reduction reached 161,777 fewer enrollments in this stage of education in the state network. In the same way as the registration data in elementary school, the data shown in graph 6, which presents the information of attendance in high school in Paraíba, presented a trajectory of reduction in the total enrollment. During the research period, the reduction was 20.79%. This represented a reduction of 22,380 high school enrollments.

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This scenario of reduction of educational supply in the state network becomes more worrying when confronted with data from the Report of the 3rd Cycle of Monitoring of PNE Goals (BRASIL, 2020). In this record, it is exposed that 11,956 people from 6 to 14 years old who had not completed elementary school and had not yet completed it still existed in Paraíba, in 2019; just as there were 80,150 people aged 15 to 17 who did not attend high school and had not completed basic education.¹⁰

The data presented in graphs 6 and 7¹¹ show the percentage evolution of the population

⁸ Fundamental School; High School.

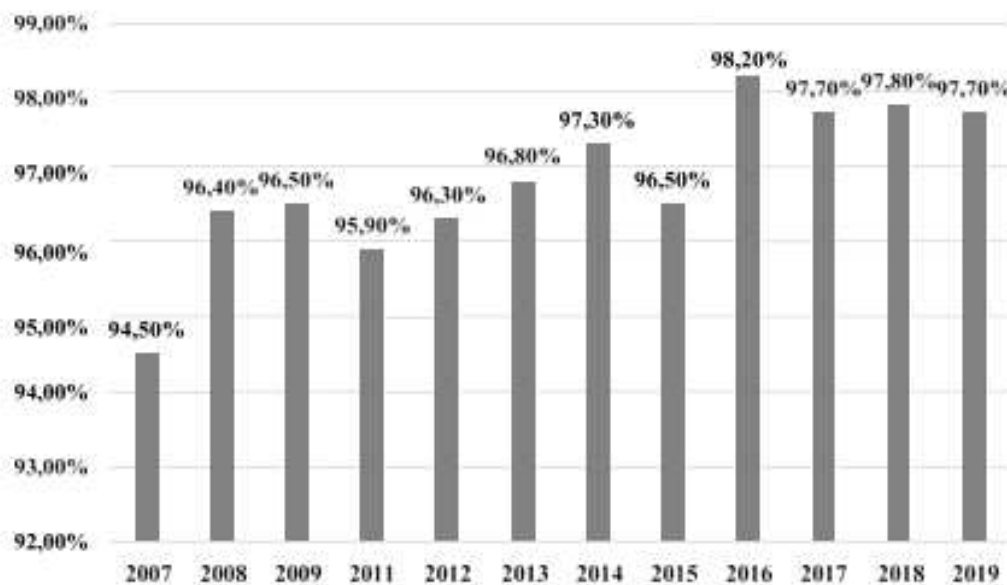
⁹ It is noteworthy that, according to Constitutional Amendment No. 14 of 1996, it was determined that the states and the Federal District will act primarily in elementary and high school.

¹⁰ This data should be understood in the context of high percentage of age-grade distortion in elementary school presented in graph 10.

¹¹ The graphs were elaborated from the data available in the Reports of the 1st, 2nd and 3rd Cycle of Monitoring the Goals of the National Education Plan (BRASIL, 2016; 2018; 2020).

aged 6 to 14 years who attended or had already completed elementary school, and of the population aged 15 to 17 years who attended or had already completed high school in Paraíba, both in aggregate, that is, with consolidated information from all education networks in the state of Paraíba, between 2007 and 2019¹². These data constitute a complementary element that contributed to the process of understanding the educational scenario of Paraíba in the analyzed period.

Graph 6 - Percentage Evolution of the population aged 6 to 14 years who attended or had already completed elementary school in Paraíba (2007-2019)



Source: Own elaboration based on INEP data (BRASIL, 2016; 2018; 2020)

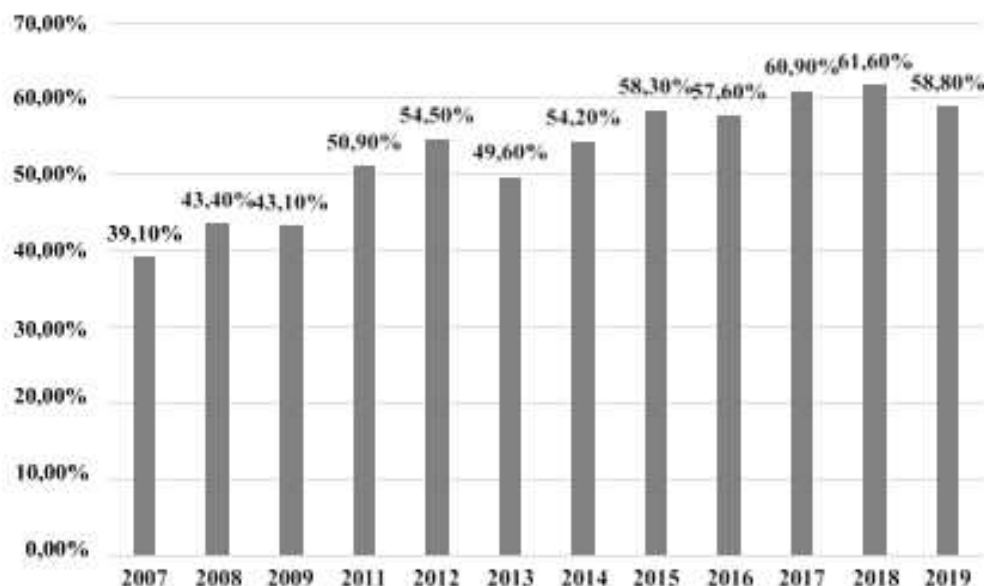
The data in graph 6 show that, in the period from 2007 to 2019, there was a progress in the percentage of the population aged 6 to 14 years who attended or had already completed elementary school, considering all the networks in Paraíba. The data start from a high level of 94.50% in 2007 and show a growth of 3.2 percentage points twelve years later, reaching 97.70% in the last year analyzed, thus reaching a very high level. It is observed that, over the years, despite the occurrence of small oscillations, the general line is ascending. However, the universalization of elementary school will only be actually achieved with the increase and maintenance of the completion rate at the recommended age over the next few years (BRASIL, 2020).

The evolution of the frequency percentage of the population aged 15 to 17 years who

¹² Data for the year 2010 were not available.

attended high school in the state of Paraíba is described in the following graph.

Graph 7 - Percentage Evolution of the population aged 15 to 17 years who attended high school or had completed basic education in Paraíba (2007-2019)



Source: Own elaboration based on INEP data (BRASIL, 2016; 2018; 2020)

Graph 7 shows a growth trajectory, in the analyzed period, of the percentage of the population aged 15 to 17 years who attended or had already completed high school, considering all the teaching networks in Paraíba. The growth rate of school coverage of students in the recommended age group at this stage of basic education was 19.7 percentage points, i.e., it showed a growth rate of 50.38%. Nevertheless, the advance in the period, the indicator is still at a level lower than 60%, which is relatively low.

However, despite the advances in the percentages of attendance in Elementary and High School, the enrollment data of basic education in the network of the state of Paraíba show a tendency to progressively reduce care in these stages. In general, in the period from 2007 to 2019, the reduction was 105.05%, which is translated into 184,157 fewer enrollments in the state network. In short, despite the growth of Fundeb's investments in the period, there was a significant reduction in enrollment in the state public network.

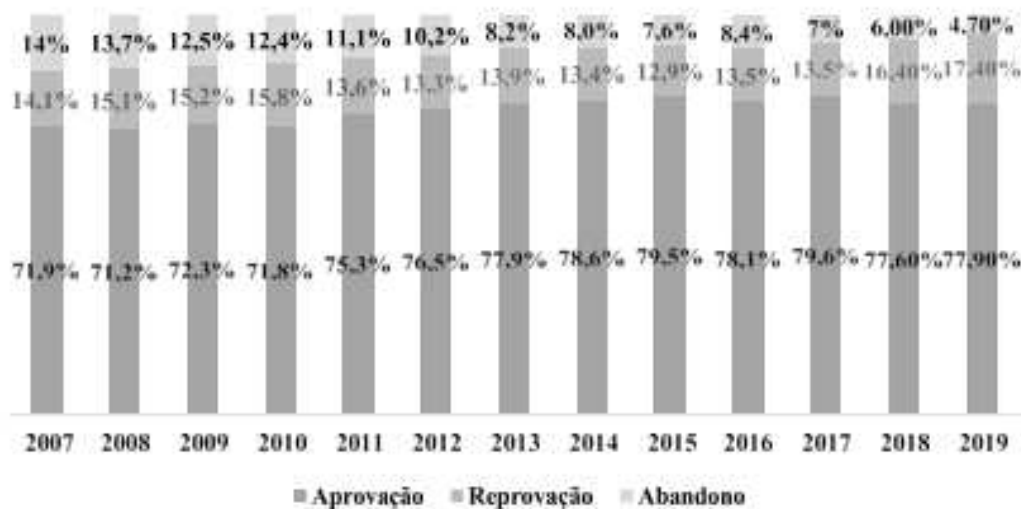
According to Pinto (2018), the reduction in enrollment in education networks is a worrying phenomenon observed throughout the validity of the accounting funds policy. For this author, "[...] mayors and governors have chosen to make the money pay off by making use of the reduction in enrollment. And this occurs in full force of the PNE 2014-2024, which presents several goals that imply an expansion of the offer in basic education" (PINTO, 2018, p. 17, our

translation). In Law No. 13,005/2014, which deals with the National Education Plan (2014-2024), there are two goals directly related to the universalization of basic education. Goal 2 talks about promoting the universalization of elementary school from 9 (nine) years for the entire population from 6 (six) to 14 (fourteen) years, while goal 3 talks about promoting the universalization, by 2016, of school care for the entire population from 15 (fifteen) to 17 (seventeen) years.

Next, data from 2007 to 2019 show the educational indicators of efficiency and performance, specifically, the rates of school performance (approval, failure and dropout), in Elementary School, in Graph 8, and in High School, in Graph 9. Finally, the indicators of age-grade distortion in elementary school and high school are shown in graph 10, in addition to the presentation of a table with IDEB data from the state of Paraíba. They are all important data to analyze the educational effectiveness of Fundeb in the educational network of the state of Paraíba.¹³

Graphs 8 (Elementary School) and 9 (High School) are presented with school performance rates (approval, failure and dropout) that assess the requirements of school attendance and achievement.

Graph 8 - Evolution of Performance Indicators in Elementary School in the educational network of the State of Paraíba (2007-2019)



Source: Own elaboration based on data from the Reports of Educational Indicators /Income Reports of INEP

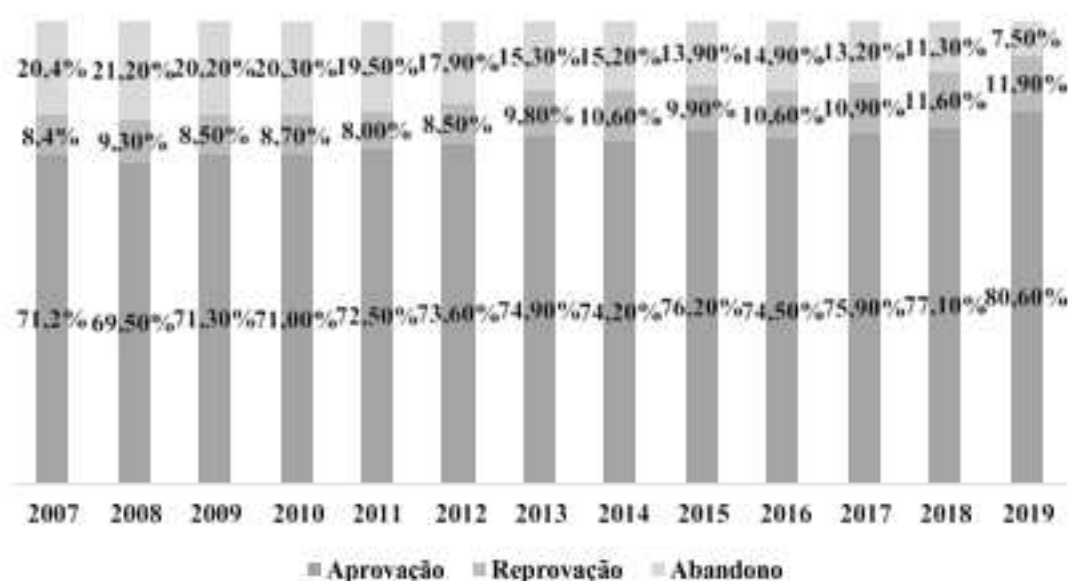
¹³ All graphs of the educational indicators of efficiency and performance were elaborated from the data collected, between the years 2007 and 2019, in the Educational Indicator reports, specifically the Income and Distortion Reports Age-Series, organized by INEP. Available: <http://portal.INEP.gov.br/web/guest/indicadores-educacionais>. Access: Feb. 10 2021.

In the data in Graph 8, there is a progressive expansion of the approval rates for elementary school in the educational network of the state of Paraíba. In the period between 2007 and 2019, there was an increase of 8.34% in this indicator of school performance.

With regard to failure rates, the data show that they remained at high levels, always above 13%, with the exception being 2015, which presented a rate of 12.90%. When we observed the data between 2007 and 2019, there was an increase of only 3.3 percentage points, i.e., the period showed a growth of 23.4%.

Regarding the dropout rate of elementary school, there was a significant reduction in the period analyzed. Between 2007 and 2019, the reduction was 9.3 percentage points. In fact, it was the reduction in dropout rates that drove the improvement in approval rates. Next, the same rates are being reviewed in high school.

Graph 9 - Evolution of Performance Indicators in High School in the educational network of the state of Paraíba (2007-2019)



Source: Own elaboration based on data from the INEP Educational Indicators/Income Reports

In the period between 2007 and 2019, in the high school stage, there was a slight improvement in approval rates. The increase in this rate was 9.4 percentage points. Thus, it showed a growth of 13.20% and reached, in 2019, the level of 80.60%.

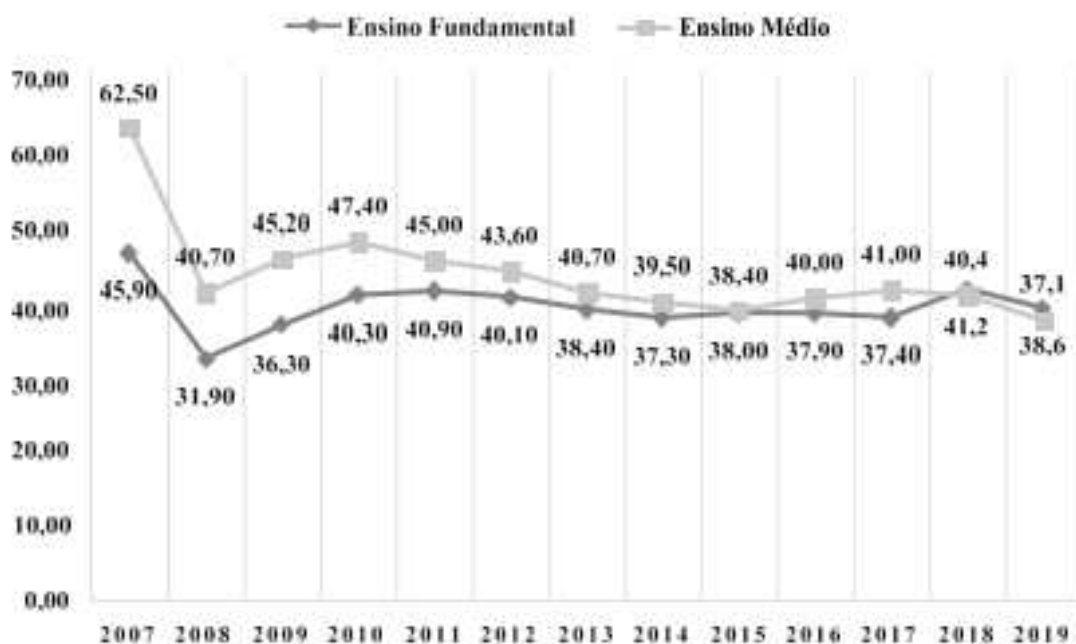
With regard to failure rates, the data point to a growth. In 2007, this rate was at the level of 8.40%, while in 2019 it reached 11.90%, i.e., it showed a growth of 3.5 p.p. in that period. In this sense, the failure rate remained at a high level and presented a growth trend. As regards school dropout rates, we noticed a significant reduction of 12.9 p.p. in that period. This means that the dropout showed a reduction of 63.24%. However, it still remained at a relatively high

level, as it stood at 7.5% in 2019.

In summary, when analyzing the results of the first indicator of efficiency and performance listed for this study, that is, the rates of school performance (approval, disapproval and abandonment), the state network of Paraíba presented improvements over the period studied. However, there were modest improvements, especially in the approval rates in elementary and high school. On the other hand, dropout rates decreased significantly. On the other hand, the failure rates remained high. In addition, they showed a growth trend, reaching, in 2019, the level of 12.90% in elementary school and 11.90% in high school.

Finally, the data in graph 10 show the information of the second educational indicator of efficiency and performance selected for this research, that is, the age-grade distortion rate. This indicator expresses the percentage of students enrolled in each grade who are older than the recommended or predicted age. The age-grade distortion results, above all, from late school admission, repetition and dropout, and subsequent return of the student to the school system. This rate is one of the main problems of Brazilian education (SARAIVA, 2010). Graph 10 shows the data of age-grade distortion, elementary school and high school, in the state of Paraíba in the period between 2007 and 2019.

Graph 10 - Evolution of the Age-Series Distortion Rate in the educational network of the State of Paraíba (2007-2019)



Source: Own elaboration based on data from INEP's Educational Indicators/Age-Series Distortion Reports

From the data in Graph 10, it is possible to see some advances over the period analyzed, especially in the passage from 2007 to 2008. However, it remained relatively stable at high levels in subsequent years. In fact, there is a high age-grade distortion rate in elementary school and high school, close to 40%, in the educational network of the state of Paraíba, that is, four out of ten students were at their age laid to attend these stages of basic education. In this sense, the data reveal the challenge for the state network of Paraíba to improve the synchronism between the age/grade of students enrolled in elementary school and high school and to make more students able to complete compulsory basic education at the appropriate age.

In elementary school there is a reduction of 7.3 percentage points in the period analyzed. This represents a reduction of 18.91%. However, the percentages of age-grade distortion in elementary school, throughout the period analyzed, remained high. In addition, between 2013 and 2017, rates remained stable at about 38%. In 2019, at this stage of education, the age-grade distortion rate was 37.1%, that is, there were 25,106¹⁴ students delayed in relation to their studies in relation to the total of 67,672 enrolled in the state network.

Regarding high school, there was a reduction of 25.4 percentage points between 2007 and 2019, i.e., there was a reduction of 68.46%, with the percentage of age-grade distortion remaining quite high, always above 40%, except only the years 2014, 2015 and 2019, which presented rates of 39.50%, 38.40% and 38.60%, respectively. In 2019, the age-grade distortion rate was 38.60%. This means that 41,163¹⁵ high school students out of a total of 107,639 enrolled in the state wide network are lagging behind their studies. In addition, as of 2015, the age-series distortion rate began a upward trend, which only retreated in 2019.

In a total, the series distortion-age rates showed a significant reduction between 2007 and 2008, however, they remained at high levels and close to 40% in subsequent years. Finally, table 1 shows the IDEB data from the state of Paraíba.

¹⁴ This total was calculated with data from Graph 4.

¹⁵ This total was calculated with data from Graph 5.

Table 1 - IDEB data in the 8th grade/9th grade Elementary School and 3rd grade High School (2007-2019)¹⁶

Ano	2007	2009	2011	2013	2015	2017	2019
8ª série/9º ano EF							
IDEB observado	2,8	2,8	2,9	3,0	3,3	3,4	3,8
Metas Projetadas	2,6	2,7	3,0	3,4	3,7	4,0	4,3
3ª série EM							
IDEB observado	2,9	3,0	2,9	3,0	3,1	3,1	3,6
Metas Projetadas	2,7	2,7	2,9	3,2	3,5	4,0	4,2

Source: Own development based on INEP data

According to the data just above, it is possible to observe that, despite presenting a growth trend in elementary and high school, the goals were not achieved in five of the years in which the indicator was calculated. In Elementary School, as of 2011, the Observed IDEB has been lower than the goals projected for the network. In high school, this situation happens from the year 2013. Moreover, in general, the results of the IDEB are still far from the target of 6.0, considered a quality parameter because it is equivalent to the average of OECD member countries. However, in the last year of the series, there was an important increase in the results of the Index, which is out of the scope of this article and would deserve a specific study. In general, the IDEB has advanced, but below expectations.

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Final considerations

The data presented in the research indicate that, over the period analyzed, Fundeb not only guaranteed a regular and automatic flow of financial resources, but the volume available showed a very significant upward line until 2014. The subsequent approval of Constitutional Amendment 95/16 and the political and economic crisis opened with the impeachment of President Dilma Rousseff greatly reduced the capacity for adequate financing of public education.

According to the data brought in this study, the revenues showed significant growth, indicating a positive character. With regard to constitutional transfers, growth was around 52.93%, while in the union's complement the level was 315.35%. Overall, growth was 61.62% between 2007 and 2019. This fact directly had a significant impact on the annual student expenditure, causing its increase – however, part of this increase in annual student spending

¹⁶ Comparison between observed IDEB and projected goals, during 8th grade and also at the final year of High School.

was driven by a reduction in enrollment.

This expansion is particularly important, especially in an educational reality where the amounts spent per student are still relatively low. Thus, when analyzing the financial resources made available to serve the state network of Paraíba through FUNDEB's sublinking mechanisms, it was verified its efficiency in ensuring and even promoting an expansion of resources for the financing of basic education in public networks. However, two observations fit. The first is that there is a clear sign of depletion of this mechanism in recent years, mainly due to the economic crisis and the low growth of the economy, aggravated in 2020 by the pandemic of the new coronavirus.

In addition, it is worth mentioning that the document Education at a Glance 2018: OECD indicators (2018) exposes that the average annual expenditure per student, for the year 2015, among OECD member countries, was \$9,941.00 for Elementary School and \$10,010 for High School, while the average annual spend per student in Brazil was only \$3,762.00 for Elementary School and \$3,872.00 for the Middle school. Thus, despite the growth in the annual student expenditure, provided by Fundeb in the state of Paraíba, this value is still relatively low and, therefore, below the needs of a quality offer.

Meanwhile, when analyzing the data of care/enrollment of compulsory basic education in the public network in the state of Paraíba, we observed a trajectory of retraction in the period studied. Considering the legal determinations regarding the right to education present in the Federal Constitution (BRASIL, 1988) and the Law of Guidelines and Bases of National Education (BRASIL, 1996), as well as the goals of the National Education Plan (2014-2024) to universalize elementary and high school, in addition to the objectives of Fundeb (BRASIL, 2006) to promote the maintenance and development of education, it is a serious and worrying situation in the face of the reduction of enrollment in the state network in a scenario in which many paraibanos, according to the updated official data, did not attend educational institutions in the various stages of basic education or had not completed this level of education. This fact gains more dramatic contours when considering that Paraíba is one of the poorest states of the federation. From this perspective, in the period analyzed in the state education network of Paraíba, Fundeb, despite the significant expansion of the resources available to the Paraíba educational network, did not present the necessary effectiveness in promoting the development towards the universalization of compulsory basic education, which aligns with the attendance of the right to education for all citizens.

Finally, it was found that, after analyzing the data of the indicators of efficiency and school performance in the educational network of the state of Paraíba, improvements occurred.

These, however, were not homogeneous in all indicators: for some, the improvements were insignificant or even a trend of worsening (failure rate), while in others the advances were to a median degree (approval and abandonment rate) and others exhibited important improvements, but still need to make a lot of progress to achieve satisfactory and desired levels, that is, the lowest possible for public education (age-grade distortion). Thus, from the perspective of analysis of efficiency and performance indicators, the effectiveness of Fundeb, in the period studied, with regard to the objective of maintenance and development of education in the educational network of the state of Paraíba, presented a limited result.

With regard to IDEB, the progress was very incipient, with the exception of the last year. Further studies would be needed to ascertain the extent to which funding policies such as Fundeb have contributed – or not – to advance this indicator within state and municipal networks, but what can be said is that adequate financial resources are a necessary but not sufficient condition to provide the quality of education. In any case, Brazil has never secured a Cost-Student-Quality for its basic education. This is a task that is yet to be accomplished.

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