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ARTICLE

TEMPORARY TEACHERS IN THE MUNICIPAL NETWORKS OF PARÁ STATE (2011– 2020)^{1 2}

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ABSTRACT: This study sought to analyze the presence of temporary teachers in the municipal public networks of Pará State between 2011 and 2020. This study employed a quantitative approach of exploratory nature with documentary analysis as the data collection procedure. The data were analyzed based on five variables: population size of the municipalities, GDP per capita, financing capacity of the networks, percentage of enrollment in rural schools, and the relationship between the number of teachers of the networks and wage earners in the municipalities. We found a generalized picture of non-compliance with the legislation that remained stable between 2011 and 2020, as well as a heterogeneous scenario, with the municipalities showing enormous diversity concerning the presence of temporary workers in their networks.

Keywords: Educational policy, Basic Education, teachers, temporary contracting, Pará.

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OS PROFESSORES TEMPORÁRIOS NAS REDES MUNICIPAIS DO ESTADO DO PARÁ (2011-2020)

RESUMO: Analisa-se a presença dos professores temporários nas redes públicas municipais do Estado do Pará entre 2011 e 2020. Pesquisa em abordagem quantitativa de natureza exploratória, tendo como procedimento de coleta de dados analise documental. Os dados foram analisados a partir de cinco variáveis: porte populacional dos municípios, PIB *per capita*, capacidade de financiamento das redes, percentual de matrículas em escolas rurais e a relação entre o número de docentes das redes e assalariados nos municípios. Constatou-se um quadro generalizado de descumprimento da legislação que se manteve estável entre 2011 e 2020, bem como um cenário heterogêneo, com os municípios apresentando enorme diversidade no que diz respeito à presença dos temporários em suas redes.

Palavras-chave: Política educacional, Educação Básica, professores, contratação temporária, Pará.

MAESTROS CON CONTRATOS PROVISIONALES EN LOS SISTEMAS ESCOLARES MUNICIPALES DEL ESTADO DE PARÁ, BRASIL (2011-2020)

RESUMEN: Se analiza la presencia de maestros con contratos provisionales en los sistemas escolares públicos municipales del Estado de Pará entre 2011 y 2020. Investigación con enfoque cuantitativo de carácter exploratorio, que utilizó como procedimiento de recolección de datos el análisis documental. Los datos fueron analizados a partir de cinco variables: tamaño poblacional de los municipios, PIB per cápita, capacidad de financiamiento de los sistemas, porcentaje de matrículas en escuelas rurales y la relación entre el número de docentes de los sistemas y asalariados en los municipios. Se verificó un cuadro generalizado de incumplimiento de la legislación, que se mantuvo estable entre 2011 y 2020, así como un escenario heterogéneo, con las municipalidades presentando una enorme diversidad a respecto de la presencia de maestros con contratos provisionales en sus sistemas.

Palabras clave: Política educativa, Educación Básica, maestros, contratación provisional, Pará.

INTRODUCTION

Since the Brazilian Federal Constitution of 1988, a legal framework has been in place that stipulates limits on hiring temporary teachers on an exceptional basis by public school systems. Nevertheless, contrary to the law, the presence of temporary teachers is structural, permanent, and persistent in Brazilian public education. In 2011, the first year the school census included this type of teaching contract, temporary teachers represented 29% of all public school teachers in Brazil; in 2020, they represented 32% of the total. In the last decade, temporary teachers accounted for about one-third of teachers in public Basic Education networks in Brazil (INEPb).³

In this way, the conquest of public competition as a condition for valuing the teaching career has not yet been fully implemented in Brazil and has been repetitively threatened. Nevertheless, the administrative reform agenda is gaining prominence in the National Congress and the public debate. For instance, on September 23, 2021, the Proposal of Constitutional Amendment (PEC) 32/2020, authored by the Executive Branch, was approved by a Special Commission. Among other aspects, the substitute approved by the commission, which will still go to the plenary, sets a relevant precedent by constitutionalizing the permission of "general rules on hiring for a fixed term under administrative law" (BRASIL, 2021, p. 10). Thus, in the current political context, public service, as conceived by the Federal Constitution of 1988, is under threat of dismantling. Therefore, the moment is ripe for research on the presence of a type of worker that, according to the legislation still in effect, should be the exception, not the rule: the temporary teacher.

The Brazilian literature investigating temporary teachers in public school networks has provided robust evidence that the working conditions offered to this professional entail a series of problems. Ferreira (2016) observed temporary teachers in the municipal network of Fortaleza, indicating that these professionals show significant signs of suffering and illness. Nauroski (2014) investigated the subjectivity of temporary teachers in the state network of Paraná and showed that these workers had forged a negative subjectivity because, according to the author, in the situations "observed in schools and, especially, in the reports collected, objective working conditions that generate suffering and malaise predominate" (NAUROSKI, 2014, p. 219). Venco (2018) analyzed the effects of the New Public Management paradigm in São Paulo municipalities, highlighting the relationships between low working conditions, flexible contracts of temporary teachers, and students with more vulnerable profiles. Numerous studies have indicated that temporary teachers work under precarious conditions since their salaries are not linked to a Plan of Position, Career, and Remuneration (FERREIRA, 2013); they are regularly forced to change schools (MARQUES, 2006), and at the limit, they are not protected by labor legislation (FERREIRA, 2013; FELDMAN; COSTA, 2021). In addition to worse conditions than permanent teachers, Silva Jr. and Oliveira (2019) highlighted, based on the case of Bahia State, the disadvantages of temporary teachers in relation, even to CLT rules, revealing that this type of contract creates special regimes that do not reproduce basic elements of worker protection.

Regarding the causes of the structural presence of temporary teachers in public Basic Education networks, research has indicated two prominent factors, both interrelated, namely: the hegemony of the neoliberal prescription that gained strength in Brazil in the 1990s (FERREIRA, 2016) and the budget constraints of public networks. Within this perspective of analysis, Santos (2016) studied temporary teachers in the São Paulo state network from a budgetary point of view. The author's research hypothesis was that

> the budget amount allocated to the education function, specifically for the payment of basic education teachers, is insufficient to afford the hiring of a cadre of effective teachers that makes up, at least, a contingent of 90% of the teachers in the network (SANTOS, 2016, p. 22).

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³ The study was conducted by manipulating microdata from the School Census (INEPa). However, to measure the aggregated national data, the School Census was used through the Educational Data Laboratory (INEPb).

As a more relevant research finding, Santos (2016, p. 117) indicated the savings the São Paulo state government "makes through a personnel policy anchored in a budgetary engineering to decrease spending on education from precariousness." Another study that demonstrated the relationship between contract flexibilization and resource savings is that of Araújo and Jann (2018). The authors analyzed the case of Minas Gerais and highlighted the multiple ruptures of bonds that the bureaucracy involved in temporary contracts subjects teachers to.

Feldman and Alves (2020) and Feldman and Costa (2021), in turn, conducted case studies, respectively, in the Pará municipalities of Portel and Cametá, investigating the policy of hiring temporary teachers in these two municipal networks; both studies indicated that teaching work is an important part of these municipalities' formal salaried labor market. In Portel, between 2011 and 2017, teachers in the municipal network represented an average of 37% of the salaried workers registered by the Annual Social Information Report (RAIS); in Cametá, between 2011 and 2018, they represented an average of 24%. The studies also pointed out that the appointment of temporary teachers has great relevance in municipal political disputes, especially in rural areas. According to Feldman and Costa (2021, p. 17), "taking into account [...] that the rural area has a significant electoral importance, the correlation between the appointment of temporary teachers and municipal political disputes is observed." In Cametá, as the study showed, between 2011 and 2018, on average, 94% of temporary teachers worked in rural areas. Thus, these two studies indicated new causal possibilities for understanding the significant presence of temporary teachers in the municipal networks of Pará State.

Lima and Azevedo (2022) analyzed career plans' effects on teachers' valuing. They showed how the condition of a temporary contract is a variable that continues to interfere structurally with the inequalities of the Brazilian educational system since it is no coincidence that the networks where there are no Career Plans are also those where there is a predominance of temporary contracts with teachers with lower initial qualifications and less access to graduate studies.

Given these concerns and the general objective of analyzing the presence of temporary teachers in the set of municipal public networks of Pará State between 2011 and 2020, some questions were formulated. What is the percentage of temporary teachers in the municipal networks of Pará State? Does this percentage indicate that the legislation is being complied with? Do the municipal networks of Pará have similarities or differences concerning the presence of temporary teachers in their staff? Are there any variables that impact the municipalities of Pará in relation to the percentage of temporary teachers in their school systems?

To answer these questions, five analysis variables were defined in order to verify if they impact the municipalities of Pará concerning the percentage of temporary teachers in their education networks, considering the causal factors pointed out by the literature, as previously explained (SANTOS, 2016; FELDMAN; ALVES; 2020; FELDMAN; COSTA, 2021). More specifically, the literature inspired the last three variables of analysis. These are the five variables: 1) Population size of municipalities, 2) GDP per capita of municipalities, 3) Financing capacity of municipal networks, 4) Percentage of enrollment in rural schools in municipal networks (henceforth % of EnRur), and 5) the ratio between the number of teachers in education networks and wage-earning personnel in municipalities (henceforth Teacher/Wage Ratio).

Moreover, why conduct research whose scope is to analyze the presence of temporary teachers in the 144 municipalities of Pará? First, Pará has the highest rate of municipalizing elementary school enrollments in northern Brazil (MARIALVA, 2021). In 2020, there were 78,690 teachers in Pará's public networks, of which 64,851 (82%) were linked to a municipal network. Second, because the presence of temporary teachers in Pará's municipal networks is more pronounced than in the state network. In 2011, Para's municipal networks had 38% temporary teachers, while the state networks had 14%. In 2020, municipal networks had 37% temporary teachers, while state networks had 11% (INEPa).

Lastly, third, it is important to investigate the 144 municipalities of Pará together in the historical context known as fund policy (GOUVEIA; SOUZA, 2015). This is a unique historical period in the financing of Basic Education, which began in 1996 with the Fund for Maintenance and Development of Basic Education and Valorization of Teaching (henceforth FUNDEF), improved and consolidated in 2006 with the Fund for Maintenance and Development of Basic Education and Educação em Revista|Belo Horizonte|v.38|e38517|2022

Valorization of Education Professionals (henceforth transitional FUNDEB), which was again modified in 2020 (henceforth permanent FUNDEB). In the fund policy before the permanent FUNDEB, each of the 26 state federal units plus the Federal District had a functioning dynamic that faced inequalities with specific contours. Thus, it is highly relevant to perform an analysis of all the municipalities of a state. We established the chronological cut-off from 2011 to 2020 because the School Census only records the number of temporary contracts in 2011. Moreover, as of 2010, the Union's complementation to the provisional FUNDEB stabilized at 10% of the fund's total value. Pará has received, since the beginning of the fund policy, a complementation from the Union, which reached its maximum value and stabilized as of 2010.

In addition to this introduction, the research methodology will be explained below. Next, we will briefly describe the legislative framework that regulates hiring temporary teachers in public school systems. Then we will go on to explain our findings. First, we will show the oscillation in the percentage of temporary teachers in the municipal networks of Pará State between 2011 and 2020. We will then analyze separately how each of the five selected variables relates to the percentage of temporary teachers in Pará's municipal networks. Finally, we will make concluding remarks reflecting on the results of the research as a whole and suggesting a research agenda for new studies on the subject.

METHODOLOGY

This study employed a quantitative approach of exploratory and descriptive nature. For data collection, different documental bases were used: School Census (INEPa, 2011, 2020), Central Register of Companies (IBGEa, 2011, 2019), Accounting Data of Municipalities (FINBRA) (STN, 2011, 2020), Domestic Product of Municipalities (IBGEb, 2011, 2018), and Brazilian Census of 2010 (IBGE, 2010). The data collected from these bases were crossed and grouped according to the five variables of analysis: 1) Population size of the municipalities, 2) GDP per capita of the municipalities, 3) Financing capacity of the municipal networks, 4) % of EnRur, and 5) Teacher/Wage Ratio.

Except for the analysis based on the variable municipal population size, in which the municipalities were grouped into four sizes, the municipalities were divided into quartiles with the variable used as input reference. After dividing the sample of municipalities into quartiles, each quartile's main measures of position (mean, median, standard deviation, lower limit, and upper limit) were crossed with the same measures of the position of the percentage of temporary teachers observed in that quartile.

When the division of the samples into quartiles was performed using an input variable, we first checked to see if there were any outliers (i.e., municipalities with atypical values out of sync with the other values of the sample, which may generate distortions in the interpretation of the data). If there were outliers in the sample, they were removed, and the quartiles were recalculated without the presence of these outliers. Q1 was the lower limit of the second quartile, Q3 was the lower limit of the fourth quartile, and IQR was the interquartile range; the lower limit for calculating the outliers below was defined by the formula Q1 - 1.5 x IQR, and the upper limit for calculating the outliers above was defined by the formula Q3 + 1.5 x IQR.

We always used two reference years to verify the presence of temporary teachers in the municipal networks of Pará: 2011 and 2020. Thus, this study compares two samples, one from the first year in which the School Census provided data regarding the type of contract for teachers, 2011, and another from the last year of the transitional FUNDEB (2020). It is important to note that the year 2020, despite being atypical given the COVID-19 pandemic, is not atypical in the number of temporary teachers in the Para municipal networks registered by the School Census. In 2019, there were 67,656 teachers in Pará's municipal networks, with 24,151 (36%) being temporary. In 2020, this ratio practically remained the same, with 64,851 teachers in Pará's municipal networks, 24,177 (37%) of them being temporary (INEPa, 2019, 2020).

For some analysis variables, data for 2020 were not available. For GDP per capita, data from 2018 were used to correlate with the percentage of temporary teachers in 2020, given that the proposal considers GDP per capita as an indicator of the municipality's economic development. In this case, the year 2020 is peculiar due to the economic crisis resulting from the COVID-19 pandemic. Thus, the

availability of the 2018 data taken here as indicative of the pre-pandemic picture seems adequate to take the variable as a comparative element to the year 2011. To determine the Teacher/Wage Ratio, 2019 wage-employed personnel data was used, which indicates the December number for this year (i.e., we related the percentage of temporary teachers in the 2020 school networks to the December 2019 wageemployed personnel number). This enabled us to compare with the private labor market in the prepandemic municipal context, considering that unemployment levels in December 2020 had completely atypical changes.

To measure the financing capacity of municipal networks, we use the concept of total annual value per student (hereinafter VAAT), which was established by Constitutional Amendment No. 108 of August 26, 2020 (BRASIL, 2020), which made the FUNDEB permanent.⁴ Before moving on to the analysis of the empirical data of the research, however, we will briefly summarize the legal framework that regulates the hiring of temporary teachers in Brazil and in Pará State.

TEMPORARY TEACHERS: LEGISLATION

The constitutional text, in Article 37, item IX, stipulates that temporary hiring must "meet the temporary need of exceptional public interest." In Article 37, item II stipulates that "investiture in public office or employment depends on prior approval in a public competition of tests or tests and titles [...]," except for commissioned positions, which does not refer to teachers. In Article 206, item V, the constitution stipulates the "valuing of school education professionals, guaranting by law, career plans, with entry exclusively through public competition of tests and titles, for public networks" (BRASIL, 1988[2021]).

The Law of Directives and Bases of National Education (LDB) established, in Article 67, item I, the entrance into the education systems as "exclusively by public competition of tests and title" (BRASIL, 1996). The 2014 National Education Plan (PNE) establishes, in strategy 18.1, referring to goal 18,

Structure the public Basic Education networks so that, by the beginning of the third year of this PNE, 90% (ninety percent), at least, of the respective teaching professionals [...] are occupying permanent positions and are working in the school networks to which they are linked (BRASIL, 2014).

The Pará State Education Plan, on the other hand, reproduces, almost verbatim, strategy 18.1 of the PNE (PARÁ, 2014). It should be noted that it is up to each federated entity to legislate about its staffing. Therefore, there are rules for exceptional temporary contracts formulated in each of the 144 municipalities of Pará: organic laws, municipal education plans, PCCRs, and statutes of municipal civil servants, as well as specific rules for the validity of temporary contracts. However, it was not possible to draw an overview of this legislation within the scope of this research.

Let us reiterate, therefore, what has been established by a broad legal framework: the presence of temporary teachers in public school networks should be sporadic and residual. Let us now see if the municipalities of Pará are in accordance with the legislation in force.

⁴ To calculate the VAAT, for each municipality, the sum of : a) 5% of the taxes and transfers that are within the FUNDEB sphere (Cota_FPM, Cota_ICMS, LC_87_97_ICMS, Cota IPI_Export, Cota_ITR, Cota_IPVA, and Cota_IOF_Ouro), b) 25% of the municipal own taxes that are not in the FUNDEB sphere (IPTU, IRRF_Trabajo, IRRF_Other_Income, ITBI, and ISSQN), c) transfers from the National Fund for the Development of Education (FNDE), d) transfers of FUNDEB (Transf_Multigov_FUNDEB), resources and e) Union complementation to FUNDEB (Transf_Multigov_FUNDEB_Comp). From this sum, 20% of the taxes that are in the FUNDEB sphere were subtracted and divided by the number of students enrolled in the respective municipal network (INEPa). The acronyms/abbreviations that are in parentheses in this note indicate how the taxes/transfers are described in the 2011 database (STN). In 2020, the STN nomenclature is more detailed. Weighting factors for the calculation of VAAT were not considered.

TEMPORARY TEACHERS IN THE MUNICIPAL NETWORKS OF PARÁ BETWEEN 2011 AND 2020

Table 1 provides an overview of the municipal networks in Pará regarding the percentage of temporary teachers. It is important to note that in 2011, there were 143 municipalities in the state. With the creation of Mojuí dos Campos in 2013, which was emancipated from Santarém, Pará now has 144 municipalities.

	20	11	2020			
% of temporary teachers	No. of	% of	No. of	% of		
in the network	municipalities	municipalities	municipalities	municipalities		
Between 0 and 10%	10	7%	6	4%		
Between 10 and 20%	21	15%	17	12%		
Between 20 and 30%.	27	19%	33	23%		
Between 30 and 40%	24	17%	30	21%		
Between 40 and 50%	21	15%	22	15%		
Between 50 and 60%	15	10%	17	12%		
Between 60 and 70%	13	9%	15	10%		
Between 70 and 80%	5	3%	1	1%		
Between 80 and 90%	5	3%	3	2%		
Between 90 and 100%	2	1%	0	0%		
TOTAL	143	100%	144	100%		

Table 1. Percentage of temporary teachers in the municipal networks of Pará, by decile, 2011–2020

Source: INEPa (2011,2020)

First, regarding the data in Table 1, we highlight the non-compliance with the law. In 2020, when according to the PNE, public school networks should have a maximum of 10% of temporary teachers, only 4% of the municipalities in Pará met this legal requirement. Secondly, one can note the significant variation in the percentage of temporary teachers in the 144 municipal networks in Pará, which is unequivocally a very heterogeneous picture. Lastly, we can see that the situation changed little between 2011 and 2020. Table 2 also lists this diagnosis of maintenance of the *status quo*.

Table 2. Percentage of temporary teachers in the municipal networks of Pará, position measures (2011

alle	and 2020)							
Measures	2011	2020						
Mean	38%	37%						
Standard								
Deviation	21%	18%						
Minimum	1%	0%						
\mathbf{Q}_1	21%	24%						
Median	36%	37%						
Q ₃	51%	50%						
Maximum	94%	87%						
C IN 11	ED (0011 000)	2)						

Source: INEPa (2011, 2020)

Table 2 shows that, between 2011 and 2020, the presence of temporary teachers remained stable if we look at the municipal networks of Pará as a whole, with a change of only one percentage point in the mean, although with a change in the standard deviation, indicating internal variation in the groups of municipalities in the sample, which will be better illustrated below. Let us now turn to Table 3, in which a negative oscillation means an increase in the percentage of temporary teachers between 2011 and 2020, while a positive oscillation means a reduction in the percentage of temporary teachers during the same period.

Measures	%
Mean	1%
Standard	
Deviation	18%
Minimum	-48%
\mathbf{Q}_1	-11%
Median	2%
Q ₃	13%
Maximum	55%
Source: INEPa (2	2011, 2020)

Table 3. Oscillation in the percentage of temporary teachers in the municipal networks of Pará,position measures (2011 to 2020)

Translating the data in Table 3, 25% of the 143 municipalities in Pará (Mojuí do Campos, non-existent in 2011, was removed from this sample) increased, between 2011 and 2020, the percentage of temporary teachers in their school networks between 11% (Q₁) and 48% (minimum). The most extreme case of negative oscillation (the minimum in Table 3) was the municipality of Santa Isabel do Pará, which had 12% of temporary teachers in its network in 2011 and went on to have 60% in 2020, in a negative oscillation of 48%. Nevertheless, 25% of the 143 municipalities in Pará had decreased the percentage of temporary teachers in their networks between 13% (Q₃) and 55% (Maximum). The most extreme case of positive oscillation (the maximum in Table 3) was the municipality of Nova Esperança do Piriá, which had 87% of temporary teachers in its network in 2011 and went on to have 32% in 2020, in a positive oscillation of 55%. If we analyze the 144 municipalities as a whole, the impression is that nothing has changed, meaning that, on average, the municipalities decreased the percentage of temporary teachers by 1 point (positive oscillation of 1%). However, within this picture of little change in the sample as a whole, we observe municipalities that oscillated significantly between 2011 and 2020.

Having observed the general panorama of the municipal school systems in Pará, we will now analyze separately how each variable relates to the percentage of temporary teachers.

Municipalities grouped by population size

We grouped the Pará municipalities into 4 population sizes, separating the capital, Belém, classified as a metropolis. We chose to divide the two samples (2011 and 2020) based on the 2010 Brazilian Census and not using the estimates.

Table 4: Municipalities of Pará grouped by population size, 2010							
	No. of municipalities	Population	Percent of population				
Up to 20,000	43	518,010	6.8%				
From 20 to 50 thousand From 50 to 100	61	1,856,388	24.5%				
thousand	30	2,002,499	26.4%				
Above 100 thousand	9	1,810,755	23.9%				
Metropolis (Belém)	1	1,393,399	18.4%				
Total	144	7,581,051	100%				
Source: IBGE (2010)							

Table 4 lists the 43 municipalities with fewer than 20,000 inhabitants represented only 7% of the state population in 2010. The other population groups have similar representativeness in terms of

percentage of the state population, ranging from 24 to 26%, with Belém containing 18% of the population of Pará in 2010. Finally, we highlight the significant number of municipalities (61) that had between 20 and 50 thousand inhabitants in 2010.

Before analyzing the relationship between this variable, population size, and the percentage of temporary teachers in municipal networks, it is crucial to observe the size of the networks by the number of teachers. We will perform this visualization with all variables to better understand the size of these education networks according to how they were grouped, as shown in Table 5.

			$\frac{1}{1} = \frac{1}{20}$	From 50	Above	
		Up to	to 50	to 100	100	
Year	Variables	20,000	thousand	thousand	thousand	Belém
	Mean number of teachers in municipal					
	networks	131	328	601	1327	2,186
	Standard Deviation	63	88	246	667	
2011	Network with the lowest number of					
2011	teachers	44	152	215	696	
	Median	117	303	552	1,270	
	Network with the largest number of					
	teachers	308	637	1231	2,828	
	Maan number of teachers in municipal					
	networks	148	359	685	1565	1 960
		140	105	005	1505	1,700
2020	Standard Deviation	/5	125	284	596	
2020	teachers	37	133	223	810	
		57	155	223	1502	
	Median	140	332	628	1582	
	Network with the largest number of	417	700	1 (0)	2 9 4 2	
	teacners	41/	/09 (2011 2020)	1,606	2,842	
	Source: IBGE (2010) and	IINEPa	(2011, 2020)			

Table 5. Size of Para's mur	nicipal networks	(by the num	ber of teacher	rs), municipalities	grouped by
	population	size (2011 a	and 2020)		

Regarding Table 5, it is important to note that Santarém, a municipality with 294,580 inhabitants in 2010, is the largest municipal network in Pará, both in 2011, with 2,828 teachers, and in 2020, with 2,842, because Belém did not municipalize Primary Education, which still concentrates many enrollments in the state network. Another example in this direction is Ananindeua, the second-largest municipality in the state, with a population, in 2010, of 471,980 inhabitants. Located in the metropolitan region of Belém, Ananindeua, like Belém, has not completely municipalized Primary School (something that has already happened, in 2020, in 98 of the 144 municipalities in the state), having a network in 2020, with a smaller number of teachers than Marabá, a municipality with 233,669 inhabitants.

Given these important reservations about Table 5, let us move on to what is more relevant in our study, the Table 6, which relates the variable population size with the percentage of temporary teachers in the municipal networks.

Table 6. Temporary teachers in the municipal networks of Pará, municipalities grouped by populationsize (2011 and 2020)

Year	% of temporary teachers in the networks	Up to 20,000	From 20 to 50 thousand	From 50 to 100 thousand	Above 100 thousand	Belém
	Mean	42%	39%	32%	40%	35%
-	Standard Deviation	23%	21%	20%	21%	
01	Minimum	5%	1%	1%	16%	
CN .	Median	41%	36%	25%	39%	
	Maximum	84%	94%	93%	74%	
20 20	_	39%	39%	35%	30%	24%

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Mean					
Standard Deviation	21%	15%	19%	20%	
Minimum	1%	7%	0%	12%	
Median	38%	37%	32%	21%	
Maximum	85%	69%	87%	66%	

Source: IBGE (2010) and INEPa (2011, 2020)

Regarding Table 6, if we exclude Belém from our analysis, there is a small trend of more temporary contracts in the smaller municipalities. This is presented in the mean and if we observe the standard deviation in 2011. In the municipalities with more than 100 thousand inhabitants, a differentiated situation is observed, with an average of 40% temporary teachers in the networks in 2011, with this population group having an average higher than the state average in 2011 (37%) and breaking with the general trend diagnosed in Table 6. In fact, in the population group of municipalities above 100 thousand inhabitants, the most significant improvement in the average percentage of temporary teachers in the network is observed, a reduction from 40 to 30% from 2011 to 2020. This raises interesting questions for future analysis, such as: what elements of local political organization would lead more complex networks to hold more public competitions? Even so, it should be noted that the minimum percentage of municipalities with more than 100,000 inhabitants in 2020 cannot be considered residual.

Nevertheless, in the second place, and more importantly for our analysis, we note that in all population groups, we observe minimums that indicate compliance with the legislation (or almost) and maximums that indicate exorbitant percentages of temporary teachers in the networks. In other words, regardless of the municipality's population size, the data show that it is possible to make the presence of temporary teachers residual in the public networks. In other words, regardless of the size of the municipality, the data show that it is possible to make the presence of temporary teachers residual in the public networks. In other words, regardless of the size of the municipality, the data show that it is possible to make the presence of temporary teachers residual in the public school system; this observation is important because we will see in the following section that it is valid for all the data analyzed, regardless of the input variable.

Municipalities grouped by GDP per capita

Table 7 divides the Pará municipalities by quartile with GDP per capita as the input variable. In the 2011 sample, 12 outliers above were identified in a first division, and in the 2018 sample, 9 outliers. As explained previously in the methodological section, the outliers were removed from the sample, and the division into quartiles was recalculated. Most outliers are municipalities with mining activity, such as Parauapebas, with a GDP per capita in 2011 far above the general pattern of the sample of BRL 131,149.69, or Canaã dos Carajás, with a GDP per capita of 197,137.69 in 2018.

		prices					
	2011		2018				
Groups	GDP per capita range (BRL)	No. of municipalities	GDP per capita range (BRL)	No. of municipalities			
1st quartile	3,370.46 to 4,640.98	33	5,408.39 to 7,985.91	34			
2nd quartile	4,640.98 to 5,774.77	32	7,985.91 to 9,777.07	34			
³ rd quartile	5,774.77 to 7,927.55	33	9,777.07 to 15,112.345	34			
4th quartile	7,927.545 to 14,281.23	33	15,112.345 to 27,618.27	33			
Outliers	Above 14.281,23	12	Above 27.618,27	9			
Total		143		144			
			1 2010)				

Table 7. GDP per capita in Pará municipalities, division by quartile (2011 and 2018, at the current

Source: IBGEb (2011, 2018)

In Table 8, it is possible to see the mean size of the municipal education networks by the number of teachers by dividing the Pará municipalities by quartile with GDP per capita as the input variable.

Table 8. Size of Para's municipal networks (by number of teachers), municipalities grouped by GDPper capita, division by quartile (2011 and 2018/2020)

	1	1 /		/ 1	\		,	/		
Measures	1st qu	ıartile	2nd q	uartile	3rd qu	uartile	4th q	uartile	Out ab	liers ove
	2011	18/20	2011	18/20	2011	18/20	2011	18/20	2011	18/20
No. of municipalities	33	34	32	34	33	34	33	33	12	9
Average no. of teachers	310	311	374	468	394	443	421	497	755	767
Standard Deviation	283	214	309	412	198	317	532	580	605	617
Smallest network	61	75	56	70	66	66	44	37	193	205
Median	237	281	298	345	384	369	253	279	691	507
Largest network	1,318	1,044	1,522	1,634	871	1,417	2,828	2,842	2,186	1,953
	0	TD C			1 73 773					

Source: IBGEb (2011, 2018) and INEPa (2011, 2020)

One can observe in Table 8 that there is a trend that the higher the GDP per capita, the larger the size of the municipal education networks. In the outliers above, we naturally observe a high standard deviation because, besides being a small sample, in 2011, Belém had the largest network (2,186 teachers), and in 2020, Marabá had the largest network (1,953 teachers). Except for the outliers, the 4th quartile presents the largest standard deviation because besides containing Santarem (the largest quartile network in 2011 and 2018), the 4th quartile also encompasses the smallest network in the state (i.e., Bannach), with 44 teachers in 2011 and 37 in 2020. Let us now observe Table 9.

Table 9. Temporary teachers in F	Para's municipal	networks,	municipalities	grouped by	GDP per capita,
	division by quar	tile (2011 c	and 2020		

	division by quartice (2011 and 2020)										
	% of t	emporary	teachers	in	the	1st	2nd	3rd	4th	Outliers	
Year	networks					quartile	quartile	quartile	quartile	above	
	Mean					36%	41%	37%	40%		35%
	Standard	Deviation				21%	20%	22%	22%		20%
2011	Minimun	n				24%	10%	5%	8%		1%
	Median					33%	36%	35%	39%		34%
	Maximun	n				94%	93%	87%	84%		62%

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	Mean	40%	37%	32%	39%	42%
020	Standard Deviation	18%	16%	17%	20%	23%
8/2	Minimum	3%	15%	0%	1%	12%
201	Median	40%	37%	32%	37%	37%
	Maximum	69%	87%	66%	80%	85%

Source: IBGEb (2011, 2018) and INEPa (2011, 2020)

Table 9 shows that it is very unlikely that there is a correlation between GDP per capita and the percentage of temporary teachers in the municipal school systems of Pará. First, in both samples, 2011 and 2018/2020, if we observe the average percentage of temporary teachers in the quartiles, we find a diffuse oscillation. In 2011, the first quartile had an average (36%), which was below the state average (38%); the second quartile had an average (41%) above the state average; the third quartile has 37% and the fourth 40%. In 2018/2020, a swing in the quartile averages is also fuzzy. There is a downward trend from the first to the third quartile, dropping from 40% in the first, to 37% in the second and 32% in the third. However, this downward trend was interrupted, as observed in the fourth quartile, an average (39%) above the state average (37%).

Let us highlight once again something that will be observed with all variables as input reference. In all quartiles, regardless of GDP per capita, we observe minimums that indicate compliance with the legislation, that is, the residual presence of temporary teachers in the education networks, and maximums that indicate percentages well above what is allowed by the legislation.

Municipalities grouped by VAAT

To measure the financing capacity of municipal networks, the VAAT was used as a criterion. This indicator is an advance in terms of measuring the financing capacity for education because, in addition to considering the FUNDEB resources, which are invariably the main amount of resources, the VAAT also considers the municipal resources not included in the FUNDEB sphere, which in some municipalities has a significant impact, as well as the resources transferred to the municipalities through programs and projects of the National Fund for the Development of Education (FNDE).

To construct Table 10, only 108 municipalities were considered for the 2011 sample and 105 for the 2020 sample, as the others did not present complete tax revenue data in STN (2011, 2020).

	201	1	2020		
Measures	VAAT range (BRL)	No. of municipalities	VAAT range (BRL)	No. of municipalities	
Outliers below	Under 1,411.13	4	Under 2,901.38	1	
1st quartile	1,411.13 to 1,777.12	26	2,901.38 to 3,583.69	25	
2nd quartile	1,772.12 to 1,924.18	25	3,583.69 to 3,839.10	25	
3rd quartile	1,924.18 to 2,208.83	26	3,839.10 to 4,036.95	25	
4th quartile Outliers	2,030.22 to 2,208.83	26	4,036.95 to 4,502.83	26	
above	Above 2,208.83	1	Above 4,502.83	3	
Total		108		105	

Table 10. VAAT in Para's municipal networks, division by quartile (2011 and 2020, current prices)

Source: STN (2011, 2020)

Table 10 shows that, even with the intra-state redistribution of resources promoted by FUNDEB, there is still a big difference among the municipalities in terms of financing capacity. In 2011, Santa Maria das Barreiras had the lowest VAAT (BRL 819.12) compared to Ourilândia do Norte (BRL 2,687.79), the highest. In 2020, Bonito had the lowest VAAT (BRL 2,847.12), while Marituba, in the

metropolitan region of Belém, had the highest (BRL 5,938.54). In Table 11, one can observe the characteristic of each quartile after dividing the municipal networks having VAAT as input variable.

				-	-	`						
Measures	Out bel	liers ow	1st qu	ıartile	2nd c	luartile	3rd q	uartile	4th qu	ıartile	Out abo	liers ove
	2011	2020	2011	2020	2011	2020	2011	2020	2011	2020	2011	2020
No. of municipalities	4	1	26	25	25	25	26	25	26	26	1	3
Average no. of teachers	507	108	259	271	416	381	422	485	614	606	200	808
Standard Deviation	511	-	268	296	419	382	307	330	541	301		480
Smallest network	119	-	44	37	65	94	102	74	96	280		388
Median	338	-	162	205	321	259	298	382	511	570		706
Largest network	1,231	-	1,221	1,582	2,186	1,960	1,467	1,417	2,828	1,634		1,331

Table 11. Size of Para's municipal networks (by number of teachers), municipalities grouped by VAAT, division by quartile (2011 and 2020)

Source: STN (2011, 2020) and INEPa (2011, 2020)

Excluding the outliers from our analysis, Table 11 indicates that networks with fewer teachers tend to have lower VAAT. This may be explained by the fact that 20% of the Municipal Participation Fund (FPM), which in small municipalities has an even greater proportional weight than in medium and large ones, is allocated to FUNDEB, not returning in the same proportion. Parauapebas is the largest network of the 1st quartile, both in 2011 and 2020. We observed that the standard deviation of the 1st quartile is the smallest in the table, showing that the municipalities grouped in this quartile are more homogeneous (i.e., they are mostly small municipalities with fewer teachers). Belém is the largest network in the 2011 and 2020, making the standard deviation of this quartile relatively high. In the 3rd quartile, the largest network in 2011 is Marabá (which is not in the 2020 sample), and in 2020 it is Ananindeua (which is not in the 2011 sample). In the 4th quartile, Santarém, the largest network in the state, was present in the 2011 sample, making the standard deviation of that quartile in that year the highest in the table. Santarém is absent in the 2020 sample due to a lack of data. Let us now analyze Table 12, the most important for our research regarding VAAT as an input variable.

Table 12. Temporary teachers in Para's municipal networks, municipalities grouped by VAAT, divisionby quartile (2011 and 2020)

Year	% of temporary teachers in the networks	Outliers below	1st quartile	2nd quartile	3rd quartile	4th quartile	Outliers above
	Mean	36%	41%	36%	42%	42%	45%
	Standard Deviation	13%	24%	23%	25%	25%	-
011	Minimum	23%	1%	5%	1%	1%	-
7	Median	37%	37%	30%	36%	36%	-
	Maximum	48%	84%	93%	94%	94%	-
	Mean	34%	43%	36%	37%	36%	44%
	Standard Deviation	-	18%	20%	19%	19%	21%
2020	Minimum	-	3%	1%	0%	12%	25%
	Median	-	41%	37%	36%	30%	42%
	Maximum	-	85%	80%	87%	69%	66%

Source: STN (2011, 2020) and INEPa (2011, 2020)

Table 12 shows that it is inconsistent establish a correlation between lower VAATs and a higher presence of temporary teachers in Para's municipal networks. Excluding the outliers from the analysis, for the 2011 sample, only the 2nd quartile had an average percentage (36%) of temporary teachers below the state average (38%). Notably, the standard deviation of all quartiles in the 2011 sample is at a similar level, between 23 and 25%, which shows some similarity of variation within each quartile. The 2020 sample even suggests, still inconclusively, a possible correlation between the lower VAAT and the higher presence of temporary teachers in municipal networks since the first quartile, which gathers the lowest VAAT, is the only one that presents an average percentage (43%) above the state average (37%). However, the average percentage of teachers in the subsequent quartiles stabilizes between 36% and 37%, very close to the state average (37%), indicating the correlation between the lowest VAAT and the higher presence of temporary teachers in the municipal networks is quite inconclusive. It is also worth noting that the standard deviation of the quartiles in the 2020 sample is at a similar level, between 18 and 20%, indicating that the variability within each quartile is similar in 2020.

However, once again, the aspect that most draws attention is that, after a division performed with the VAAT as the input variable, in all quartiles, we observed minimums that indicate compliance with the legislation, that is, the residual presence of temporary teachers in the education networks, and maximums that indicate percentages far above the allowed by the legislation.

Municipalities grouped by the percentage of enrollments in rural schools in the municipal networks (% of EnRur)

As explained in the introduction, Feldman and Costa (2021, p. 18) indicated that in the municipality of Cametá, between 2011 and 2018, on average, 94% of temporary teachers worked in rural areas. Because of this evidence, we conducted an analysis using as an input variable the % of EnRur.

	Table 13 . % of Et	nRur, division by	quartile (2011 and 2020))	
	2011		2020		
	% enrollment in rural	No. of	% enrollment in rural	No. of	
Groups	schools	municipalities	schools	municipalities	
1st					
quartile	0 to 30	36	0 to 29	36	
2nd					
quartile	30 to 49	35	29 to 47	36	
3rd					
quartile	49 to 62	36	47 to 60	36	

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4th				
quartile	62 to 97	36	60 to 92	36
Ťotal		143		144
		Source: INEPa (2011	, 2020)	

Table 13 shows that the municipal networks of Pará have networks with a strong presence of enrollments in rural schools. The median in 2011 (the minimum of the 3rd quartile) was 49%, and the median in 2020 was 47%. Half of the municipalities in Pará concentrate enrollment percentages in rural schools above 47%. Let us now move on to Table 14.

Table 14. Size of Para's municipal networks (by number of teachers), municipalities grouped by % ofEnRur, division by quartile (2011 and 2020)

		,				/		
	1st qu	ıartile	2nd q	uartile	3rd q	uartile	4th qu	uartile
Measures	2011	2020	2011	2020	2011	2020	2011	2020
No. of								
municipalities	36	36	35	36	36	36	36	36
Average no.								
of teachers	499	563	274	420	468	400	382	418
Standard								
Deviation	478	536	163	502	513	306	267	299
Smallest								
network	50	37	44	94	56	70	66	81
Median	297	319	267	280	317	359	311	372
Largest								
network	2,186	1,960	762	2,842	2,828	1,606	1,318	1.594
		0	TNIED	(0011 0	000			

Source: INEPa (2011, 2020)

Table 17 shows a diffuse tendency for the largest networks to be those with the lowest % EnRur. The 2nd quartile partly breaks this trend, the quartile with the lowest average number of teachers in 2011 (274) and which only has its average drastically raised in the 2020 sample because of the presence of Santarém (2,842 teachers), raising the standard deviation. Santarém, being in the third quartile in the 2011 sample (2,828 teachers), raises the average number of teachers in this quartile in 2011 and the standard deviation. To better visualize this fuzzy trend, it would be more accurate to remove Santarém from the sample. It should be noted, however, that the tendency for the largest networks to have fewer rural enrollments is only a fuzzy trend. After all, the 2nd quartile breaks this trend. Furthermore, there are municipalities with large networks with many urban enrollments, such as Belem, the largest network in the 1st quartile, in both 2011 and 2020 (2,186 and 1,960, respectively). Nevertheless, there are also large networks with many rural enrollments, such as Sapucaia (50 teachers), the smallest in the 1st quartile in 2011, and Bannach (37 teachers), the smallest in 2020. The opposite is also true, as we observe, in the 4th quartile, small networks with many rural enrollments, such as Inhangapi (60 teachers, the smallest in 2011) and São João da Ponta (81, the smallest in 2020).⁵

Let us now analyze Table 15, which uses as the input variable the % of EnRur, relating it to our research object, the presence of temporary teachers in the networks.

Table 15. Temporary teachers	in Para's municipal	networks, n	nunicipalities	grouped by %	of EnRur,
	division by quartil	e (2011 and	2020)		

Year	% of temporary teachers in the networks	1st quartile	2nd quartile	3rd quartile	4th quartile
11	Mean	35%	38%	42%	38%
20	Standard Deviation	22%	23%	22%	19%

⁵ For a problematization of what the School Census considers as rural enrollment, please see Feldman and Costa's seventh footnote (2021, p. 10).

	Minimum	1%	1%	5%	5%
	Median	32%	35%	37%	38%
	Maximum	84%	87%	94%	84%
	Mean	33%	34%	41%	40%
_	Standard Deviation	18%	16%	20%	17%
2020	Minimum	0%	7%	3%	3%
	Median	30%	32%	41%	42%
	Maximum	80%	74%	87%	85%

Source: INEPa (2011, 2020)

In Table 15, the correlation between a higher % of EnRur and a higher presence of temporary teachers in the networks from the first to the third quartile is reasonably clear, both in the 2011 and 2020 samples. The drop in the average percentage of temporary teachers in the 4th quartile, more pronounced in 2011 but also observed in 2020, forces us to be cautious in stating that this correlation is strong. Even so, observing the data in Table 15, it is understood that, even if diffuse, it is possible to observe a weak but present correlation between these two variables of analysis. In other words, there are indications of a trend, even if not very strong, that the more rural enrollments a network has, the more temporary teachers it will have. However, let us highlight the point we are making about all the input variables: none seems to be a determinant. In all quartiles of Table 15, we observe reasonable minima and unreasonable maxima. Let us now turn to the analysis of our last variable.

Municipalities grouped by the Teacher/Wage Ratio

As explained in the introduction, Feldman and Costa (2021) and Feldman and Alves (2020) demonstrated, through case studies in Portel and Cametá, that the policy of hiring temporary teachers has great importance in municipal political disputes. The studies point out that, in part, this importance stems from the fact that municipal teacher employment represents an important share of the formal salaried labor supply in the localities. For this reason, we decided to create an indicator, the Teacher/wage Ratio. It is important to note that this indicator is just a ratio, a division between two values of a different nature, coming from very peculiar databases (INEPa, 2011, 2020; IBGEa, 2011, 2019). The employed salaried staff comes from RAIS, which is mandatory in the private sector but has low adherence in the public sector. The School Census records the public-servant teacher more accurately. So, the Teacher/Wage Ratio does not indicate a proportion. It does, however, indicate a ratio. Let us look at Table 16.

	' 0	1	, , , ,	
	201	1	2019/2	2020
Groups	Teacher/Wage Ratio Range (%)	No. of municipalities	Teacher/Wage Ratio Range (%)	No. of municipalities
1st quartile	From 1 to 11%	35	From 0 to 9%	35
2nd quartile	From 11 to 17	35	From 9 to 14%	34
3rd quartile	From 17 to 24%.	35	From 14 to 21	35
4th quartile	From 24 to 39%	35	From 21 to 41%	35
Ôutliers	Above 39	3	Above 41%	4
Total		143		143

Table 16. Teacher	r/Wage Ratio in Pará Muni	cipalities, division by c	quartile (2011 and 2019/2020)
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Source: IBGEa (2011, 2019) and INEPa (2011, 2020)

Abaetetuba does not appear in the 2019 CEMPRE sample (IBGEa), so they only have 143 municipalities in the two samples in Table 16, both in 2011 (Mojuí dos Campos was non-existent) and Educação em Revista |Belo Horizonte|v.38|e38517|2022

2019/2020. Table 16 shows the importance of municipal teaching work in the localities, even if the indicator Teacher/Wage Ratio is imperfect. Disregarding the outliers, in 2011, half of the municipalities had Teacher/Wage Ratio above 17% (median, minimum of the 3rd quartile). In 2019/2020, half of the municipalities had the Teacher/Wage Ratio above 14%. This lowering of the median indicates that the Teacher/Wage Ratio decreased between 2011 and 2019/2020. This is equivalent to saying that the total number of salaried employees grew more (9% growth) than the number of municipal teachers (7%) in this time frame. Let us now look at Table 17.

Table 17. Size of Para's mu	nicipal networks (by	number of teac	chers), municipalities	grouped by
Teacher/W	age Ratio, division b	y quartile (2011	and 2019/2020)	

Monguroo	1st quartile		2nd quartile		3rd quartile		4th quartile		Outliers above	
Measures	2011	19/20	2011	19/20	2011	19/20	2011	19/20	2011	19/20
No. of	25	25	35	34	35	35	35	35	3	4
municipalities	55	55	55	54	55	55	55	55	5	4
Average no.	593	632	307	378	328	307	404	444	342	491
of teachers	575	052	507	510	520	507	101		512	171
Standard	597	651	254	274	313	165	253	368	151	62
Deviation	571	001	231	271	515	105	235	500	151	02
Smallest	61	37	44	75	56	70	85	81	221	418
network	01	01		10	00		00	01		110
Median	409	334	220	325	231	285	342	355	294	489
Largest	2.828	2.842	1 109	1 1 1 5	1 522	666	1 318	1.606	511	568
network	2,020	2,012	1,107	1,115	1,522	000	1,510	1,000	511	500

Source: IBGEa (2011, 2020) and INEPa (2020)

In Table 17, one can observe that the 1st quartile, with the lowest Teacher/Wage Ratio, is the one with, on average, the largest networks. It makes sense because, in both samples (2011 and 2019/2020), the largest cities of the metropolitan region of Belém are within this quartile (Belém, Ananindeua, and Marituba), as well as the most industrialized cities of the state, such as Barcarena and Castanhal. Note that the presence of Santarém in the 1st quartile (the largest network in both samples) also contributes to the increase in the standard deviation of this quartile. Nevertheless, it is interesting to note that if there is a tendency for the average size of the networks to decrease from the 1st to the 3rd quartile, the 4th quartile presents networks, on average, larger than the 2nd and 3rd quartiles. This indicates that there are municipalities with large networks in which the Teacher/Wage Ratio is quite significant. Let us now look at Table 18.

	% of temporary teachers in	1st	2nd	3rd	4th	Autlian above	
Year	the networks	quartile	quartile	quartile	quartile	Outliers above	
2011	Mean	35%	37%	42%	38%	59%	
	Standard Deviation	21%	20%	23%	21%	11%	
	Minimum	1%	9%	5%	1%	48%	
	Median	33%	35%	35%	37%	59%	
	Maximum	83%	84%	93%	94%	71%	
2019/2020	Mean	35%	33%	35%	44%	61%	
	Standard Deviation	17%	18%	19%	17%	5%	
	Minimum	0%	1%	3%	15%	58%	
	Median	34%	30%	33%	43%	59%	
	Maximum	69%	80%	87%	85%	69%	

Table 18. Temporary teachers in the municipal networks of Pará, municipalities grouped by the Teacher/Wage Ratio division by quartile (2011 and 2020)

Source: IBGEa (2011, 2019) and INEPa (2011, 2020)

It is possible, in Table 18, to observe a correlation between the increase in the Teacher/Wage Ratio with the average percentage of temporary teachers in the networks. However, as with other Educação em Revista|Belo Horizonte|v.38|e38517|2022 variables, this correlation is neither decisive nor extremely high. It is not high because in the 2011 sample, there is an upward trend between the 1st and 3rd quartile, but there is a decrease in the 4th. In 2020 this correlation seemed clearer because the average of the 4th quartile (44%) is well above the average of the other quartiles. However, and this is true for all variables, the average temporary teachers in the networks in no quartile, in no variable, was below 30%. In other words, all the correlations established throughout this research are low. Finally, as we have insisted throughout the text, the correlations observed are very far from determinative. In Table 18, as in other tables of this nature with other input variables, we observe reasonable minimums and unreasonable maximums in all quartiles.

Let us move on to our concluding remarks to look at the data that have been presented separately and suggest some inferences by way of conclusion.

CONCLUDING REMARKS

In 2020, only 4% of the municipalities in Pará had less than 10% of temporary teachers in their networks; the other 96% of the municipalities were beyond the established by the PNE. This is a broad and generalized picture of non-compliance with the goal of valuing teachers through a career. This picture remained stable between 2011 and 2020 since the state average of temporary teachers in the municipal networks oscillated from 38% to 37%. It should also be noted that this is a very heterogeneous scenario, with municipalities of different types presenting a temporary contract strategy to maintain the labor force in their networks. Therefore, the constitutional rule that should be treated as exceptional has become a common strategy in the expansion process of the municipal school systems in Pará. The research sought to test variables that could explain trends for the types of municipalities that used this strategy.

As for the variables of analysis, we found that in three of them, it is possible to establish a low and diffuse correlation with the percentage of temporary teachers in the municipal school systems of Pará: population size of the municipalities, % of EnRur and the Teacher/Wage Ratio. In relation to the other two variables, GDP per capita of the municipalities and the financing capacity of the municipal networks (measured through VAAT), the data analyzed showed that it is more unlikely that this correlation exists.

What the data show, nevertheless, is a complex scenario in which these variables have been shown to influence the greater or lesser presence of temporary teachers in the networks but do not determine the volume of this presence. First, analyzing all the variables' quartiles (remember that in the variable population size, no division by quartile was used), the lowest average number of temporary teachers in the networks was 30%, and the highest 43%. This means that the averages for all quartiles were very close to the state average for 2011 and 2020 (38 and 37%), indicating that if a variable influences the presence of temporary teachers in the networks, this influence should not be taken as a determinant. Moreover, our findings indicate that multiple causes explain the structural permanence of temporary teachers in the networks, and this is a multicausal phenomenon.

In this way, the most relevant finding of this study is an aspect that has been highlighted repeatedly throughout the text. Within all quartiles, in all variables, we observe minimums that indicate compliance with the legislation, that is, the residual presence of temporary teachers in the school systems, and maximums that indicate percentages well above what is allowed by the legislation. This indicates that the presence of more or less temporary teachers in the network is, to a large extent, a political decision made by the municipality. The internal political dynamics of each municipality are a factor that must be considered when analyzing the issue of temporary teachers. The very heterogeneous scenario, with municipalities showing enormous diversity concerning the presence of temporary teachers in their networks, indicates that the local political dynamic is an important explanatory factor.

Having made these considerations, let us conclude this text with two propositions. The first is the suggestion of a research agenda. We suggest developing case studies that compare the political dynamics of municipalities that comply with the legislation, with a residual presence of temporary teachers in the school systems, with municipalities with exorbitant percentages of temporary teachers. The second proposition is a political agenda. The valorization of teachers as a central condition for the quality of public education demands a political project that mobilizes society to understand the place of public servants in constructing the right to education. More than a corporate agenda of the teachers' unions, but also as part of a union agenda, the overcoming of temporary contracts needs to be part of a project to defend the quality of education as a public service, where dignity in relation to power and continuity in relation to time is what builds the identity of belonging of teachers as public servants committed to a project of education. It is, therefore, a political challenge on the horizon.

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AUTHORS' CONTRIBUTIONS

Autor 1 - Project coordinator, data collection, data analysis, and text writing. Autora 2 - Data analysis and text writing.

DECLARATION OF CONFLICT OF INTEREST

The authors declare that there is no conflict of interest with this article.