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Suffrage, Political Voice and Primary Education in Brazil, 1947-1962

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ABSTRACT

This article aims to examine the influence of suffrage rates on the rates of primary education enrollment in Brazil between 1947 and 1962. There was neglect from the federal government in expanding mass primary schooling, leaving this task to state governments. Thus financial centralization has probably hampered the expansion of enrollment rates during the period. As states were responsible for educational matters, the effect of suffrage rates on enrollment rates at the state level was tested. It was found that the suffrage rate was not a significant explanatory variable, under the assumption of the existence of state unobservable characteristics. The evidence indicates that education in Brazil developed within the context of an elite democracy, due to which the expansion of suffrage had little effect on the expansion of education.

Key-words: education, political power, political voice, decentralization, schooling

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1. Introduction

Throughout the 20th century, Brazil persistently presented one of the worst educational indexes among Latin American countries: in 1950, 49% of the population over 15 years old was illiterate (IBGE, 1952). On the other hand, neighboring countries such as Argentina, Costa Rica and Chile were far ahead of Brazil in educational matters concerning literacy and enrollment rates (Astorga, Bergés and FitzGerald, 2005). In terms of average years of schooling, Brazil has ranked behind most countries, such as Argentina, Uruguay and even Bolivia (Barro and Lee, 2011).

Despite the recent decrease in income inequality, Brazil is still one of the most unequal countries in the world.¹ Many scholars assert that current inequality and social hardships in Brazil, at least partially, stem from the educational situation in the country. Since education mostly affects income distribution and growth in the long run, educational policies in the past have probably had enduring influences on the Brazilian economy. Productivity advances are expected to increase the relative demand for skilled-labor. However, Brazilian governments clearly underinvested in basic education during the period, constraining the supply of skilled-labor.² Thus it is not striking that Brazilian income inequality increased throughout the 20th century. Moreover, underinvestment in schooling may have hampered long run economic growth, as emphasized by endogenous growth models (Romer, 1986, 1990; Lucas, 1988).

The puzzle here is why Brazilian governments did not increase the supply of primary schooling. Theoretical literature often argues that elites have incentives to create a mass education system when positive externalities are high enough to compensate economic costs and losses in political power (Bourguignon and Verdier, 2000). Economic historians have highlighted the role of political voice of the population: extension of suffrage and decentralization seem to have helped the spread of mass education in many countries (Engerman, Mariscal and Sokoloff, 2009; Goldin and Katz, 2008; Lindert, 2004). Acemoglu et al. (2005) and Gallego (2010) also emphasized that democratic improvements preceded primary schooling improvements. Latin American countries are known to have entrenched elites that may have blocked the spread of mass education

¹ According to the CIA Factbook database, Brazil was ranked 16th in terms of Gini coefficient in 2012, after a substantial decline in inequality recently, partly due to the extension of social policies. See Barros et al. (2007).

² Goldin and Katz (2008) have forcefully demonstrated that the decrease of income inequality in the United States at the mid-20th century was mainly due to the expansion of mass schooling.

(Frankema, 2010). Lindert (2010) has particularly called attention to the problems of education finance in Latin America.

Brazil is a special case, since the country had one of the fastest economic growth rates in the world throughout the 20th century: average growth rate in Brazil was 5.6% per year between 1930 and 1964. This period was a good opportunity to improve Brazilian educational records. However, in line with the literature we mentioned, this paper argues that the Brazilian population did not have enough political voice, giving elites few incentives to increase the supply of schooling. Only literate people had voting rights, which in turn were exerted only during few democratic periods.

In order to study the influence of suffrage on education outcomes, we chose to focus on the period 1947-1962. This was a period of rapid industrialization and free elections between two authoritarian regimes.³ The first finding is that the federal government did not make enough efforts to enhance the spread of mass public education. From 1930 onwards there was a strong process of financial centralization: states were responsible for providing primary education, but financial resources were concentrated in the hands of the federal government. However, the federal government often claimed that states should take care of primary schooling, as we show in the second section.

Then we turn to state level results. After some years of decreasing enrollment rates during the Estado Novo dictatorship, enrollments started to grow steadily from 1945 onwards. In order to check if political voice has had a role in this increase, we can analyze the data from state legislative elections. We found that the extension of suffrage did not have an influence on the expansion of enrollment rates at the state level. Urbanization rates and school-age population share seem to be more significant explanatory variables. Democracy was not enough to overcome the relative educational backwardness of the country since political voice was restricted to a small part of the population – only literate people had voting rights. Consequently, state political elites did not have incentives to expand the supply of schooling.

This paper is organized as follows. Section 2 shows how schooling evolved in Brazil and what national elite's thoughts were over educational matters. It is clear that the

³ Vargas' dictatorship ended in 1945, while a coup led by military took over the government in 1964. We chose to start our quantitative analysis in 1947 because there were legislative election in this year, as well as in 1962.

federal government, who had most of the financial resources, was not interested in expanding primary education, leaving this task for the states. Section 3 shows that Brazil was a type of elite democracy, since only a part of the population had voting rights until 1988. Given that the federal government did not invest in primary schools, we need to know how state governments behaved regarding educational matters. Section 4 presents some econometric evidence that the extension of suffrage at state level had no influence on educational results between 1947 and 1962. Therefore, all channels through which the population could have had some influence were blocked by their weak political power; people had no political voice at both national and state levels. Section 5 concludes.

2. Elites and Primary Education in Brazil

Primary education has never been a priority in Brazil. Some politicians argued that education was a crucial input for growth and for a better society even in the 19th century, during a highly centralized monarchical regime.⁴ However, little was done during that period. During the republican period from the end of the 19th century to 1930, states had more financial and political autonomy.⁵ However, the situation changed after the centralization promoted by the Vargas government due to more intense financial and political centralization.

Many reforms were implemented in Brazilian education during Getúlio Vargas' autocratic regime from 1930 to 1945. The educational policy of the Vargas government was shaped by the actions of Minister Gustavo Capanema, who was in office from 1934 to 1945. This minister argued that the federal government should not supervise primary schooling, and that this matter should be the responsibility of the states.⁶ States should coordinate primary education, while the federal government should cooperate with states by means of technical assistance and establishing guidelines (Horta, 2000, p. 155). However, Capanema believed that the establishment of an elite capable of leading the country would be sufficient to ensure national progress and was therefore more

⁴ Important politicians such as Rui Barbosa (1883) were also well-known for supporting mass education.

⁵ The importance of state influence on several matters during this period, including education, is highlighted by the works of Martinez-Fritscher, Musacchio and Viarengo (2009).

⁶ At least in his speeches, Capanema recognized that "primary education is the first national problem and that all care and importance must be given to it" (Notes, Folder II, pp. 226-227 *apud* Horta, 2000, p. 158). See also Schwartzman *et al.* (2000, p. 205).

important than educating the poor (Schwartzman *et al.*, 2000, p. 207). Figure 4 shows the general enrolment rates for school age children (5-14 years of age) in basic primary education.⁷ It is interesting to note that enrollment rates decreased during the *Estado Novo* regime (the politically-closed regime that allowed Vargas to remain in term from 1937 onwards), especially during the Second World War years. On the other hand, democracy, a law concerning primary education (*Lei Orgânica do Ensino Primário*) enacted in 1946 and the new Constitution seem to have produced an immediate increase in enrollment rates right after the end of the *Estado Novo*. A possible reason is that the 1946 Constitution defined a minimum amount to be spent on education: 10% for the federal government, and 20% of the revenue for municipalities and states.

[Figure 1 – Enrollment rates Brazil 1932-1964]

It is hard to estimate the extent to which the advent of democracy in 1945/46 influenced enrollment expansion in primary schools. Also the tendency towards decentralization may have been positive, though in the absence of a detailed study about states policies, it is not possible to know for sure. Joseph Love takes into account the fact that, despite a significant rise in political participation after 1945, *coronelismo* (also known as “rule of the coronels”) was still very strong in many rural regions.⁸ General Dutra, who was President from 1946 to 1950, was aware of the huge problem represented by illiteracy, and considered its removal one of his priorities. At the same time, however, he adopted harsh policies against trade unions and workers, suppressing the voice of these groups.⁹

It is striking that successive governments of the postwar period remained inactive on education-related issues. According to Bomeny (2008a), in his second term (1951-1954), Vargas did practically nothing with respect to educational matters, except for setting up organizations such as the National Research Council in 1951. Kubitschek’s government (1956-1960) released the Targets Plan (*Plano de Metas*), which proposed targets for five basic sectors: energy, transport, heavy industry, education and food. Although education was included in the plan, only 3.4% of the resources were actually destined to it, in contrast to the 93% destined to energy, transport and heavy industry

⁷ During the period we are studying, the “basic primary schooling” (*ensino primário fundamental*) comprised the first four grades. Thus, it is difficult to make international comparisons, since in most countries, primary education comprised eight grades.

⁸ “Coroneis” were the political chiefs, mainly in rural areas, who had control over the voting behavior of the local community (Farhat, 1996, p. 189). See also Love (1970, p. 17).

⁹ See Schwartzman *et al.* for Dutra’s awareness of the importance of elementary education (2000, pp. 142-143). References to the repression against trade unions can be found in Colistete (2001).

(Silva, 2008; Lafer, 2002). Among the 30 targets proposed under the Plan, only a single and vague target concerned education. According to one of the main proponents of the Targets Plan, Lucas Lopes, the educational target had not originally been one of the targets listed under the Plan, but the insistence of the Minister of Education played a crucial role:

“[...] on the eve of the divulgation of the plan, Clóvis Salgado, who was our friend, friend of Juscelino, and had been chosen Minister of Education, insisted: ‘It is not possible that there is no educational target!’. We answered: ‘So, Clóvis, write the target on education, because we are exhausted’. We did not know what to do with the educational target, we did not have training for that. And he did a literary job, he wrote two volumes of literature” (Lopes, 1991, p. 201).¹⁰

Education was clearly not a priority. Although the aforementioned Minister Clóvis Salgado pushed for an educational target, he also had an elitist view of education. Salgado proposed a program called “Education for development”, which prioritized secondary and tertiary schooling, more evidence of elitist policy (Bomeny, 2008b) According to Salgado, despite some political groups demanding that priority be given to primary education, he deliberately chose not to hear them:

“[...] the tertiary schooling was already consuming then 60% of the resources destined to education, with patent sacrifice of the other schooling levels. Nonetheless, my option was for the concentration of resources on tertiary schooling, convinced that only through this way it could be given the necessary educational coverage to the effort of the country’s industrialization” (Brasil - MEC, 1967, pp. 39-40)¹¹

This statement is consistent with Frankema’s (2010, p. 362) findings with respect to the spending bias of Latin American governments towards tertiary education rather than to primary education.

Goulart’s government (1961-1964) gave more importance to education, choosing a well-known Brazilian educator as minister and increasing the budget allocated to education. In his 1961 Presidential Message, Goulart dedicated many pages to

¹⁰ Thanks to Renato Colistete for having shown me this quotation.

¹¹ Pires (1996, pp. 298-299) also highlights this quotation.

educational matters (Goulart, 1963, pp. 119-129). However, he was removed from power after a military coup in the midst of the political radicalization in 1964.¹² The conclusion that arises from examining Brazilian educational policies in the postwar period is that federal governments took minimal actions, handing over educational matters to state governments.

As we can see, the federal government was clearly not interested in primary schooling matters during almost the entire period. Although state governments depended on federal government funds, the latter clearly left primary schooling issues under the responsibility of states. Since state deputies and governors were elected by the population, they could try to compensate the lack of interest of the federal government on that matter. Population could exert more pressure over state and local governments than over national ones due to proximity, as highlighted by studies on decentralization of public services, despite the capture of local governments may undermine it (Bardhan, 2002; Bardhan and Mookherjee, 2006). However, we show in the next section that suffrage, one of the main means of exerting pressure, was restricted to a small part of the population. Therefore, state politicians had no incentives to improve educational outcomes.

3. Voting Rights, Education and State Politics in Brazil

We have seen that little was done concerning education at the federal level, despite the federal government access to a great part of the tax revenues. States were financially dependent on federal government funds due to the process of financial and political centralization undertaken by the Vargas dictatorship from 1930 onwards. This was barely changed with the democratic constitution of 1946. However, the provision of primary education was under the responsibility of states since the 19th century. Therefore, decisions regarding education were mostly taken by politicians at state level. State deputies decided over several issues such as the budget allocation regarding educational matters. Although the 1946 Constitution have obliged that states and municipalities should spend 20% of the budget on schooling, this requirement was rarely enforced.

¹² Details about the political instability during Quadros' and Goulart's terms can be found in Skidmore (1982).

Kang (2011) showed that states and municipalities had few sources of tax revenue to invest on schooling. However, states had more decision power over administrative matters: some states were administratively more centralized on educational issues than others. Data on the proportion of schools that were the responsibility of municipalities may be important to show the huge differences between Brazilian states. For example, Rio Grande do Sul and Maranhão presented a high degree of administrative decentralization, since a large proportion of the primary schools in those states were the responsibility of municipalities (Kang, 2011). On the other hand, there were very centralized states, such as Espírito Santo and Pará. The decision concerning administrative centralization or decentralization within the state was left to the states themselves and, hence, states had a significant amount of power to decide over educational matters, despite the scarcity of resources.

Since the federal government was not interested in expanding primary education and states had a certain degree of autonomy, state elections could have been an important means of demanding better public services. However, few people actually had voting rights. Before the Republic, franchising restrictions in Brazil were based on income. This legal requirement disappeared in 1889, when the Empire made way for the Republic, but there was already another requirement: only literate men were eligible to vote.¹³ According to Love (1970), up until 1930, only around 5% of the population was eligible to vote. In 1932, during the provisory Vargas government (1930-1934), women were given voting rights, as long as they were literate. This legal change did not make a significant practical difference, since Vargas was president until 1945, when the *Estado Novo* autocratic regime finally ended. Only in 1988 did illiterate people receive voting rights.

From 1945 to 1964, literate population was allowed to vote for both executive and legislative seats. Literate Brazilians could vote for mayors and city councils, state governors and deputies of state assemblies, president, vice-president and National Congress representatives. It is important to notice that there was widespread illiteracy in Brazil: in 1950, approximately half of the adult population was illiterate (IBGE, 1952). In order to check the importance of suffrage, we gathered some data on state level elections during the period 1947-1962. In 1947, 34.6% of the Brazilian population over

¹³ Actually, the literacy requirement started to be applied in 1882, whereas the income requirement disappeared when the Republican Constitution of 1891 was enacted. See Nicolau (2002).

20 years of age was enfranchised (22.3% effectively voted in that year's legislative elections). By 1962, there had been a significant increase in suffrage: 52.0% were enfranchised, and 41.3% of the Brazilian population over 20 years of age actually voted in 1962. Figure 1 and 2 show scatter plots between enrollment and electoral participation rates in 1947 and 1962, respectively.

[Figure 1]

[Figure 2]

Analyzing the situation in each state, it is noticeable that Santa Catarina (SC) and Rio Grande do Sul (RS), southern states that received huge influxes of German and Italian immigrants, always had a high percentage of voters. This was clearly a product of the higher literacy rates in those regions (56.6 in SC and 58.6 in RS, according to the 1950 census). These states also had a far lower degree of land ownership inequality (0.843 and 0.870 Theil indexes, respectively, in 1950). São Paulo (SP), which was the richest state and received a lot of Italian immigrants, was not far behind. On the other hand, Northeastern states such as Maranhão (MA) and Alagoas (AL) had high degree of land inequality (0.972 and 0.956 Theil indexes, respectively, in 1950) and a very small proportion of enfranchised people – since literacy rates were very low in those regions (21.7 and 20.3, respectively).¹⁴

Although more studies are needed, southern states probably had less extractive institutions than northern states, since southern geographical features ended up favoring European immigration and less unequal land policies, as some scholars have emphasized (Prado Jr., 1942; Wegenast, 2010).¹⁵ We do not intend to explore the connections between factor endowments, land inequality, institutions and literacy.¹⁶ We only mention it for two reasons: (a) to highlight that there were many exogenous and non-observable characteristics that can be treated as state fixed-effects on our

¹⁴ Land inequality measures by state can be found in Hoffmann (1971)

¹⁵ These ideas are consistent with the findings of specialist literature. Assessing micro-level data, De Carvalho Filho and Colistete (2010) found that in the state of São Paulo, the presence of foreign-born immigrants and low levels of land concentration were associated with a better supply of public education. In the case of Rio Grande do Sul, one of the southern states that presented good results, immigration and 'egalitarian landholdings' were also found to be important explanatory factors: micro-level data reveals that municipalities closer to the original colonies have better educational outcomes and less poverty, as well as having other good social indicators (De Carvalho Filho and Monasterio, 2010).

¹⁶ In line with the research agenda undertaken by Engerman and Sokoloff (1997, 2005, 2010); Acemoglu, Johnson and Robinson (2001, 2005); and others.

quantitative tests and (b); as a clue to understand the differences between states regarding literacy and, consequently, voting rights.

Despite these regional differences, the general conclusion that literacy was low in the whole country remains. Hence, since literacy was a requirement, suffrage was restricted to a part of the population even during the democratic regime between 1945 and 1964. As late as 1950, only 30.8% of the population over 20 years of age actually voted. The Brazilian case would seem to fit Lindert's definition of an "elite democracy" – even though Lindert (2004) was dealing with the period before WWI, and his definition of an elite democracy was a country where less than 40% of the male population was eligible to vote. Elite democracies often produce results in terms of public services which are no better than those in autocracies. Therefore, despite our scatter plots seem to support the idea that there was a relationship between proportion of voters and enrollment rates, we need not necessarily expect the expansion of suffrage to have had a significant influence on Brazilian school enrollments between 1947 and 1962.

4. Econometric analysis

4.1 Identification strategy

In our identification strategy, we assume that schools are supplied by state governments.¹⁷ Our dependent variable is enrollment rates with respect to the population between 5 and 14 years old. We have some variables that represent the political voice of the population. We are primarily interested in the effects of the proportion of voters or enfranchised people on primary schooling enrollment rates. Few people were entitled to vote or actually voted during the period. Therefore, this proportion partly represents the political voice (in elections) of a part of the population that was already literate. The latter segment may not be interested in paying taxes to supply schools for the rest of the population.

We collected five state legislative elections during the period 1947-1962 and added control variables. Urbanization rates may capture the demand for schooling that arises in bigger cities. School-age population share is also expected to influence the demand for primary schooling as well. Electoral competition indexes to legislative elections

¹⁷ Although there were some states that decentralized the provision of primary schools (municipality levels). See Kang (2011).

were also included in some specifications, in spite of presenting low coefficients.¹⁸ All other non-observable variables are supposed to be exogenous and are included in the fixed effects component of the regression. Since enrollment rates do not tend to decrease and federal policies mattered in this centralized context, we use time fixed effects that capture some non-observables. Also, we have to consider that Brazil is a big country with huge differences between states: there are exogenous and time-invariant non-observable state characteristics that may arise from different institutions, culture, colonization patterns, ethnic fractionalization, climate, etc.

Our specification is the following:

$$y_{it} = \alpha + \beta v_{it} + \gamma' \mathbf{X} + \delta_t + \varphi_i + \varepsilon_{it} \quad \dots\dots\dots (1)$$

where v_{it} is the proportion of voters over 20 years of age (or the proportion of people eligible to vote depending on the specification). \mathbf{X} is a vector of control variables, while δ_t is the non-observable time fixed effect coefficient (year dummy). φ_i is the non-observable state fixed effect coefficient and ε_{it} is a random error term with conventional properties.

4.2 Data

Enrollment rates were extracted from *Anuários Estatísticos do Brasil* – the Brazilian statistical yearbook. The rates were obtained through estimates of the population between 5 and 14 years of age. From 1933 to 1971, there is a continuous data series for enrolment rates for each state. Since we are looking for results about primary education, it is important to highlight that at the time, *ensino primário* was defined as the first four or five grades of elementary schooling. The difference between this system and others around the world prevents us from making proper international comparisons in terms of enrollment rates and also prevents us from going beyond 1971, when the category *ensino primário* disappeared to give way to a category entitled *primeiro grau*, comprising the first eight grades of schooling.¹⁹

The main explanatory variables are the ones related to democracy and elections, also obtained from the *Anuários Estatísticos do Brasil* and comprise data on enfranchised people and voters. To obtain the rates, we used estimates of the population over 20

¹⁸ Electoral competition indexes were taken from Almanaque de Dados Eleitorais - LEEX/IUPERJ: (<http://www.ucam.edu.br/leex/>). Details can be found at Santos (1997).

¹⁹ Law n. 5.692, August 11th, 1971.

years of age, since every person over 21 was allowed to vote as long as he or she was literate. The data refer to state legislative elections. We collected the legislative election years of this period: 1947, 1950, 1954, 1958 and 1962.

A second control variable is the fraction of the population of school age (5-14 years of age) with respect to the adult population over 20 years old. Population data were obtained through geometric interpolation of decennial data coming from national censuses. It is important to include this variable in the regressions because there may be two situations in which there is an ‘excessive’ number of children: either in the family or in schools. A family with many children may have difficulty in sending all of them to school, while schools can also be overloaded due to a larger-than-average generation of children of school age. According to Lindert, both phenomena would have occurred during the baby-boom period in the United States (1978, Ch. 6 and 7; 2004b, p. 35). Furthermore, a bigger fraction of children within a population means that a greater amount of resources need to be allocated to education, since these children do not produce while they are at school.

There might be a problem of simultaneity bias, since only literate people were allowed to vote. Nevertheless, primary school students would only be able to vote around ten years after their graduation, after reaching the age of 18, which reduces the simultaneity bias problem for a test that covers a period of 15 years (1947-1962). Only a negligible fraction of voters in 1962 were in school in 1947.

Descriptive statistics are presented at Table 1. On average, 45.6% of the population was enfranchised in each state and 33.8% actually voted during the period 1945-1964. There is a huge variation between states: states such as Amazonas had only 11.1% of voters in 1947, whereas Santa Catarina had 57.9% in 1958. Table 2 is a data summary for the whole country.

[Table 1 – Descriptive statistics]

[Table 2 – Data summary]

4.3 Results

We estimated a panel data regression with fixed effects using 21 states and five legislative election years (1947, 1950, 1954, 1958 e 1962), resulting in 105

observations. In some specifications, we excluded the Federal District (until 1960), which later became the state of Guanabara, due to its specific character. In those specifications, we have then 100 observations and 20 states.

[Table 3]

[Table 4]

As we can see from the results stated above, variables representing political participation at elections (proportion of voters or proportion of people eligible to vote) are not statistically significant in any specification. Coefficients are not high as well. Rather, urbanization rates appear to be a statistically significant explanatory variable. According to most specifications, a one percentage point increase on urbanization rate leads to an increase of approximately 0.5 percentage points on enrollment rates. Electoral competition and share of the population in school-age are not significant in most regressions run.

If time fixed effects are excluded from the regression, political participation becomes statistically significant at 5% level in some specifications (results are not reported on the table). However, asserting that there are not non-observables that affect all states in a given year is a very demanding assumption. F-tests also endorse the use of time fixed effects. With regard to state fixed effects, the proportion of voters or people eligible to vote is also statistically significant under the assumption of random effects, but this would be even more demanding in terms of identification hypotheses. Previous literature also recommends that state fixed effects are used, since it is expected that there are state specific non-observable exogenous characteristics that are invariant through time (Wooldridge, 2001).

Despite all limitations, evidence seems to show that the influence of increasing political demand through the expansion of suffrage was *not* a relevant factor in explaining the variation of enrolment rates during that period. The low level of influence of political participation in general may be associated with the lack of finances on the part of state governments and municipalities, which depended on the federal government for investments in education. In addition, the limited level of suffrage resulted in a lack of political power for those who would actually benefit most from the expansion of primary education.

Our empirical assessment does not support the hypothesis that suffrage had influence on Brazilian educational outcomes between 1945 and 1962. States legislatures did not care about voters because at least the fraction of the population that had voting rights did not demand universal public primary schooling. Two hypotheses may explain it: either (a) the rest of the population did not have enough political voice, since voting rights were restricted to the literate population or (b) the entire population did not demand primary schooling. In any event, this is a typical elite democracy pattern: the proportion of voters does not influence the provision of public services such as schooling.

5. Concluding remarks

Contrary to what happened in developed countries, our qualitative and quantitative evidence indicates that Brazil's education developed within a context of a highly elitist democracy, in which the expansion of suffrage had little effect on the supply of schools. According to our political economy story, voting rights were restricted to a fraction of the population, weakening the political voice of the majority that could demand universal primary schooling. As a result, states governments, which were responsible for providing primary schools, had few incentives to substantially increase the supply of primary schooling. Consequently, Brazilian education was left behind. The growth of enrollment rates during the period was mainly due to increasing urbanization.

Besides our econometric analysis on what happened at the state level, we cannot dismiss the importance of the federal government on educational matters. Since the federal government was responsible for most financial revenues, it had a crucial role in determining the availability of resources. An analysis of the actions of the federal government concerning primary education shows that the federal government mattered but primary education was not a priority for this level of government and was consequently left behind with respect to other levels of education. History shows that from 1945 onwards –after the end of an authoritarian regime – education was often marginalized by federal governments. Further research shall address more carefully the role of the federal government.

We can also raise counterfactual hypotheses regarding school finance and the spread of mass education: had the Brazilian most progressive states had more financial autonomy, the results might well have been better in those states. On the other hand, the situation in more backward states would not have changed that much. High levels of financial

centralization meant an important role for the federal government, which, however, was not very interested in educating the masses.

Demand for schooling is also an issue that must be more carefully addressed in further research. Despite the high marginal benefits of schooling in Brazil, high drop-out rates, grade repetition and social stratification may have diminished the benefits of schooling as perceived by the population, and this might have reduced the demand for schooling. Some initial evidence on the topic concerning this historical period can be found in Kang (2012).

In line with Wegenast (2010) results for the 19th century, we also support the hypothesis that colonial origins may have had an enduring influence on the 20th century Brazilian primary education enrollment rates. But even in the most progressive southern states that received many immigrants, enrollment rates were lower than in Argentina or Uruguay, since federal policies mattered in those states as well. Therefore, comparative approaches may help to answer the question we have partially tried to answer: why, in a context of rapid economic growth and industrialization, Brazil had lower enrollment rates than even its poorer Latin American neighbors. Our evidence suggests that the answer lies in the lack of political voice of the population.

References

- Acemoglu, D. *et al.* (2005) "From Education to Democracy?" *American Economic Review*, v. 95, n. 2, pp. 44-49.
- Acemoglu, D., Johnson, S., Robinson, J. (2001). "The Colonial Origins of Comparative Development: An Empirical Investigation", *American Economic Review*, Vol. 91, No. 5, pp. 1369-1401.
- Acemoglu, D., Johnson, S., Robinson, J. (2005). "Institutions as the Fundamental Cause of Long-Run Growth". In Aghion, P. and Durlauf, S. (eds). *Handbook of Economic Growth*, Amsterdam: North-Holland.
- Astorga, P., Bergés, A., FitzGerald, V. (2005). "The Standard of Living in Latin America during the Twentieth Century". *Economic History Review*. v. 58, n. 4, pp. 765-796, November.
- Barbosa, R. (1883). *Obras completas*, v. 10. Rio de Janeiro: Ministério da Educação e Saúde.
- Bardhan, P. (2002), "Decentralization of Governance and Development". *Journal of Economic Perspectives*, v. 16, p. 185-205.

Bardhan, P., Mookherjee, D. (2006), “Decentralization, Corruption, and Government Accountability: an Overview”. In: Rose-Ackerman, S. *International Handbook on the Economics of Corruption*. Cheltenham: Edward Elgar Publishing.

Barro, R., Lee, J. H. (2011). *Barro-Lee Educational Attainment Dataset*, 2011. Disponível em: <http://www.barrolee.com/>

Barros, R. P., Foguel, M., Ulyssea, G. (org.), *Desigualdade de renda no Brasil: uma análise da queda recente*. Brasília: IPEA.

Bourguignon, F., Verdier, T. (2000), "Oligarchy, democracy, inequality and growth," *Journal of Development Economics*, vol. 62, n.1 p. 285-313.

Brasil – MEC (1967). *Ministério da Educação e Cultura: principais atividades e realizações – 1930-1967*. Rio de Janeiro: MEC.

Bomeny, H. (2008a). “A Educação no Segundo Governo Vargas”. Available at: http://www.cpdoc.fgv.br/nav_gv/htm/3E_ele_voltou/Cenario_educacional.asp. 17 Jul. 2008.

Bomeny, H. (2008b). “Educação e desenvolvimento: o debate nos anos 50”. Available at: http://www.cpdoc.fgv.br/nav_jk/htm/O_Brasil_de_JK/Educacao_e_desenvolvimento_o_debate_nos_anos_1950.asp. 17 Jul. 2008.

Colistete, R. P. (2001). *Labour Relations and Industrial Performance in Brazil: Greater São Paulo, 1945-1960*. 1 ed. London: Macmillan.

De Carvalho Filho, I., Colistete, R. (2010) “Education Performance: Was It All Determined 100 Years Ago? Evidence From São Paulo, Brazil”. Unpublished.

De Carvalho Filho, I., Monasterio, L. (2011). “Immigration and the origins of regional inequality: Government-sponsored European migration to southern Brazil before World War”, *Regional Science and Urban Economics*, forthcoming.

Engerman, S., Sokoloff, K. (1997). “Factor Endowments, Institutions, and Differential Paths of Growth among New World Economies: a View from Economic Historians of the United States”. In Haber, S. *How Latin America Fell Behind*. Stanford: Stanford University Press, pp. 260-304.

Engerman, S., Sokoloff, K. (2005). “The Evolution of Suffrage Institutions in the New World”. *The Journal of Economic History*, Vol. 65, No. 4, December, pp. 891-921.

Engerman, S., Sokoloff, K. (2010). *Economic Development in the Americas since 1500: Endowments and Institutions*. New York: Cambridge University Press.

Engerman, S., Mariscal, E. V., Sokoloff, K. (2009). “The Evolution of Schooling Institutions in the Americas, 1800-1925”. In Eltis, D., Lewis, F., and Sokoloff, K. (eds.), *Human Capital and Institutions: A Long Run View*, Ch.4. Cambridge: Cambridge University Press.

Farhat, S. (1996). *Dicionário parlamentar e político: o processo político e legislativo no Brasil*. São Paulo: Melhoramentos; Fundação Petrópolis.

- Frankema, E. (2010). "The Expansion of Mass Education in Twentieth Century Latin America: A Global Comparative Perspective". *Journal of Iberian and Latin American Economic History*, XXVII, 3, pp. 359-396.
- Gallego, F. (2010) "Historical Origins of Schooling: The Role of Democracy and Political Decentralization", *Review of Economics and Statistics*, 92 (2), pp. 228-243.
- Goldin, C. and Katz, L. (2008). *The Race Between Education and Technology*. Cambridge, MA: Harvard University Press.
- Goulart, J. (1963). *Mensagem ao Congresso Nacional*. Brasília. Available at: <http://brazil.crl.edu/bsd/bsd/u1345/contents.html>.
- Hoffmann, R. *Contribuição à Análise da Distribuição da Renda e da Posse da Terra no Brasil*. Thesis (livre docência) - Universidade de São Paulo. Escola Superior de Agricultura Luiz de Queiroz, Piracicaba: 1971
- Horta, J. S. B. (2000). "A I Conferência Nacional de Educação ou de como monologar sobre educação na presença de educadores". In Gomes, A. C. (org). *Capanema: o ministro e seu ministério*. Rio de Janeiro: FGV, pp. 147-172.
- Instituto Brasileiro de Geografia e Estatística – IBGE. *Anuários Estatísticos do Brasil*, vários números. Rio de Janeiro: IBGE
- Instituto Brasileiro de Geografia e Estatística – IBGE. *Censo Demográfico 1950*. Rio de Janeiro: IBGE, 1952.
- Kang, T. H. (2011). "Descentralização e Financiamento da Educação Brasileira: Uma Análise Comparativa, 1930-1964". *Estudos Econômicos*, vol. 31, n. 3, 2011a, p. 573-598.
- Kang, T. H. (2012). "Vícios e Virtudes da Educação Primária no Brasil, 1930-1964". In Botelho, T. R., Van Leeuwen, M. H. D. (orgs.). *Desigualdades sociais e econômicas na história*. Belo Horizonte: Veredas&Cenários (forthcoming).
- Lafer, C. (2002). *JK e o programa de metas, 1956-1961: processo de planejamento e sistema político no Brasil*. Rio de Janeiro: FGV.
- Leal, V. N. (1975). *Coronelismo, enxada e voto: o município e o regime representativo no Brasil*. São Paulo: Alfa-Ômega.
- Lindert, P. H. (1978). *Fertility and Scarcity in America*. Princeton: Princeton University Press.
- Lindert, P. H. (2004). *Growing Public: Social Spending and Economic Growth since the Eighteenth Century*. Volume 1 and 2. Cambridge: Cambridge University Press.
- Lindert, P. H. (2010), "The unequal lag in Latin American schooling since 1900: follow the money", *Revista de Historia Económica*, v. 28, no. 2, p. 375-405.
- Lopes, L. (1991). *Memórias do Desenvolvimento*. Rio de Janeiro: CMEB.
- Love, J. L. (1970). "Political Participation in Brazil, 1881-1969". *Luso-Brazilian Review*, Vol. 7, No. 2 (December), pp. 3-24.

- Lucas, R. E., (1988), “On the mechanics of economic development”, *Journal of Monetary Economics*, Vol. 22, no. 1, p. 3-42
- Martinez-Fritscher, A., Musacchio, A., Viarengo, M. (2010). “The Great Leap Forward: The Political Economy of Education in Brazil, 1889-1930”. (Mimeo).
- Nicolau, J. (2002) A participação eleitoral no Brasil, in L. W. Vianna ed., *A Democracia e os Três Poderes no Brasil*. Belo Horizonte: Ed. UFMG, p. 255-296.
- Pires, J. M. (1996) *A Política Social no Período Populista*. São Paulo: IPE-USP.
- Prado Jr., C. (1942). *Formação do Brasil Contemporâneo: colônia*. São Paulo: Brasiliense, 1942.
- Romer, P. M. (1986), “Increasing Returns and Long-run Growth”, *Journal of Political Economy*, Vol. 94, No. 5, p. 1002-37
- Romer, P. M. (1990), “Endogenous Technological Change”, *Journal of Political Economy*, Vol. 98, No. 5, p. S71-102
- Santos, W. G. (1997). “Da Oligarquia à Poliarquia – Competição Eleitoral e Processos ‘Não-Encarceráveis’”. *Série Estudos*, n. 95. Rio de Janeiro: IUPERJ/SBI
- Schwartzman, S., Bomeny, H. M. B., Costa, V. M. R. (2000). *Tempos de Capanema*. 2 ed. São Paulo: Paz e Terra/FGV.
- Silva, S. B. (2008). “50 anos em 5: a odisséia desenvolvimentista do Plano de Metas”. Available at: http://www.cpdoc.fgv.br/nav_jk/htm/o_brasil_de_jk/50_anos_em_5_o_plano_de_metas.asp. 18 Jul. 2008.
- Skidmore, T. E. (1982). *Brasil: de Getúlio a Castelo, 1930-1964*. 7 ed. Rio de Janeiro: Paz e Terra.
- Wegenast, T. (2010) “Cana, café, cacau: agrarian structure and education in Brazil”, *Revista de Historia Económica*, v. 28, no. 1, p. 103-137.
- Wooldridge, J. (2001). *Econometric Analysis of Cross-Section and Panel Data*. Cambridge, MA: MIT Press.

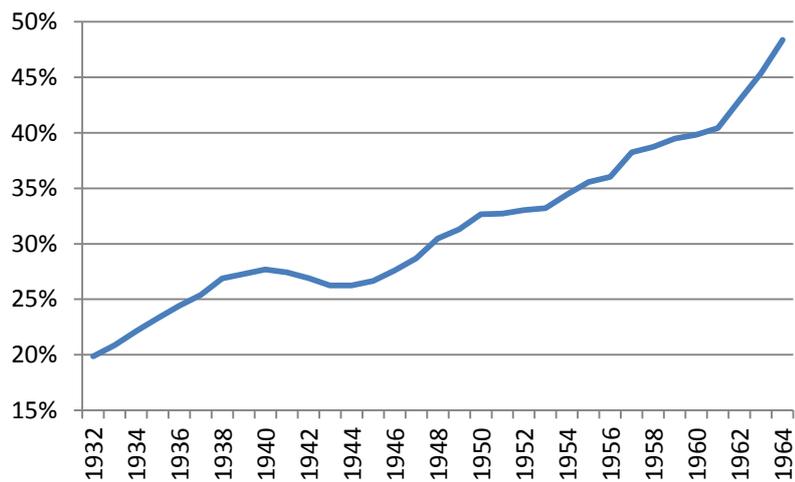


Figure 1. Enrolment rates of “basic primary schools”, by school-age population, 1932-1964
 Source: IBGE – Anuários Estatísticos do Brasil (several issues)

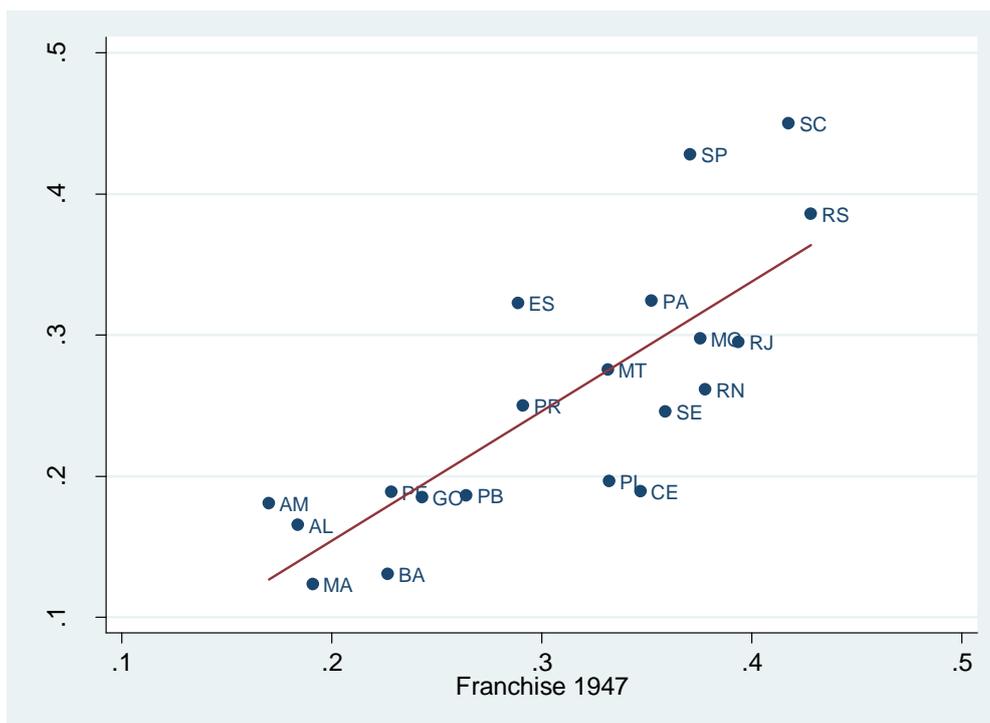


Figure 2. Percentage of enfranchised people and primary school enrolment rates for each state, Brazil, 1947

Source: IBGE. *Anuário Estatístico do Brasil*, 1950

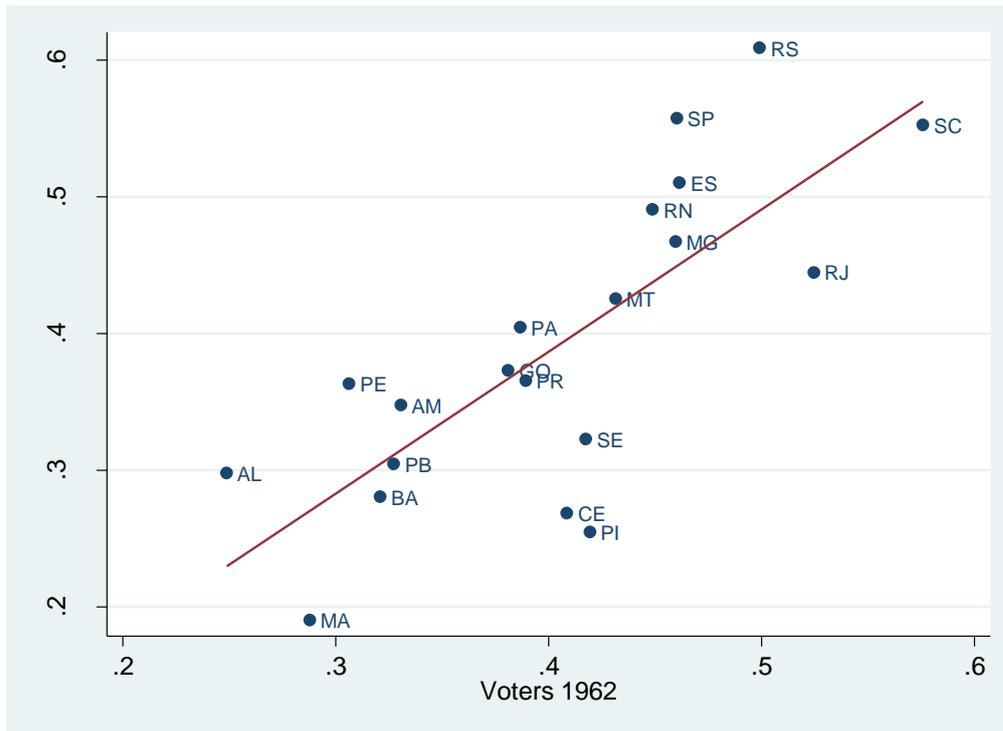


Figure 3. Percentage of enfranchised people and primary school enrolment rates for each state, Brazil, 1962

Source: IBGE. *Anuário Estatístico do Brasil*, 1964

Table 1 Descriptive statistics

Variable	Obs	Average	Standard Deviation	Minimum	Maximum
<i>enrol</i>	105	0,330	0,121	0,123	0,625
<i>franchise</i>	105	0,459	0,122	0,170	0,709
<i>voters</i>	105	0,340	0,100	0,110	0,579
<i>urban</i>	105	0,356	0,170	0,160	0,980
<i>polcomp</i>	105	0,648	1.103	-0,360	4.290
<i>popshare</i>	105	0,585	0,081	0,284	0,713

Table 1b Descriptive statistics (without Guanabara)

Variable	Obs	Average	Standard Deviation	Minimum	Maximum
<i>enrol</i>	100	0,320	0,113	0,123	0,609
<i>franchise</i>	100	0,455	0,123	0,170	0,709
<i>voters</i>	100	0,335	0,099	0,110	0,579
<i>urban</i>	100	0,325	0,103	0,160	0,658
<i>polcomp</i>	100	0,523	0.934	-0,360	3.860
<i>popshare</i>	100	0,598	0,054	0,450	0,713

Table 2. Schooling data, electoral data, and population data, Brazil, 1947-1962

	Year	Enrolment rate (%) (a)	Enfranchised people (%) (b)	Voters (%) (c)	Electoral competition index (d)	Population share in school age (5-14) (e)	Urbanization rates (f)
Brazil	1947	28.7	34.6	22.3	-0.20	56.7	31.0
	1950	32.7	46.3	30.8	-0.19	56.2	32.1
	1954	34.4	53.8	32.7	0.23	58.0	35.0
	1958	38.7	43.3	36.8	1.53	60.0	38.2
	1962	42.9	52.0	41.3	1.70	61.3	41.6

Sources: Enrollment rates: IBGE. *Anuário Estatístico do Brasil* (vários anos); Voters and franchising: LEEX/IUPERJ e IBGE. *Anuário Estatístico do Brasil* (vários anos); Electoral competition: LEEX/IUPERJ.

NOTAS:

- (a) Enrolment rate: percentage of students enrolled in primary schools (ensino primário fundamental comum) with respect to the estimated population in school age (5-14);
- (b) Enfranchised: percentage of enfranchised people with respect to the total adult population (over 20 years old);
- (c) Voters: percentage of voters with respect to the total adult population (over 20);
- (d) Electoral competition index (Santos, 1997).
- (e) Fraction of the population between 5-14 years of age.
- (f) Fraction of the population living within the municipality office area. It is an administrative definition that probably underestimates the level of urbanization.

Table 3. Panel data regressions with state fixed effects (political participation variable: proportion of actual voters)

Dependent variable: Enrollment rates in primary schools (5-14 years of age)						
	(1)	(2)	(3)	(4)	(5)	(6)
Proportion of voters	0.139 (0.117)	0.144 (0.127)	0.195 (0.127)	0.159 (0.135)	0.164 (0.125)	0.129 (0.131)
Urbanization rate	0.443* (0.245)	0.598 ** (0.239)	0.549*** (0.173)	0.623*** (0.202)	0.595*** (0.186)	0.672*** (0.211)
Share of school-age population	-0.093 (0.136)	-0.108 (0.140)	-0.144 (0.261)	-0.124 (0.133)	-	-
Electoral competition	0.011 (0.007)	0.003 (0.008)	-	-	-	-
Guanabara included	Y	N	Y	N	Y	N
Time fixed effects	Y	Y	Y	Y	Y	Y
State fixed effects	Y	Y	Y	Y	Y	Y
Number of observations	105	100	105	100	105	100
R-squared	0.56	0.52	0.56	0.52	0.55	0.50
Notes: * (<10%), ** (<5%), ***(<1%)						

Table 4. Panel data regressions with state fixed effects (political participation variable: proportion of people eligible to vote)

Dependent variable: Enrollment rates in primary schools (5-14 years of age)						
	(1)	(2)	(3)	(4)	(5)	(6)
Proportion of people eligible to vote	0.007 (0.090)	0.033 (0.092)	0.029 (0.088)	0.045 (0.095)	0.020 (0.079)	0.033 (0.083)
Urbanization rate	0.497* (0.249)	0.661*** (0.233)	0.640*** (0.171)	0.710*** (0.194)	0.653*** (0.174)	0.729*** (0.191)
Share of school-age population	-0.011 (0.167)	-0.043 (0.178)	-0.049 (0.167)	-0.063 (0.176)	-	-
Electoral competition	0.013* (0.007)	0.004 (0.008)	-	-	-	-
Guanabara included	Y	N	Y	N	Y	N
Time fixed effects	Y	Y	Y	Y	Y	Y
State fixed effects	Y	Y	Y	Y	Y	Y
Number of observations	105	100	105	100	105	100
R-squared	0.50	0.46	0.50	0.46	0.50	0.45
Notes: * (<10%), ** (<5%), ***(<1%)						