

THE LIMITS OF THE *ESTADO DOCENTE*: EDUCATION AND POLITICAL PARTICIPATION IN PERU, 1876-1940*

LETICIA ARROYO ABAD
Middlebury College^a

ABSTRACT

The power of the elites became the dominant explanation of the extension of the franchise and expansion of the provision of public services. Peru from 1876 to 1940 presents a contrasting case. Although restricting political participation through literacy requirements, Peru saw an increase in literacy and schooling. Nevertheless, the relative power of the national and local elites articulated the national policies resulting in unequal provision of education. Constrained political access of the economic minority, the indigenous population, translated into a widening gap in terms of educational attainment.

Keywords: education, political participation, Peru

JEL Code: N36, P16

* Received 23 September 2014. Accepted 24 April 2015. The author would like to thank Peter Lindert for his comments and suggestions. Thanks to the participants of the Institute of Historical Research (University of London) seminar and the Department of Economic History at the *Universitat de Barcelona*, to three anonymous referees, and to the editors. Jeff Howarth helped immensely with GIS-related data. Funding for this project comes from the National Science Foundation and the American Philosophical Society. All errors are the author's own.

^a Department of Economics, Middlebury College, Middlebury, VT 05753, USA. larroyoabad@middlebury.edu

RESUMEN

El poder de las élites se ha convertido en el factor explicativo de la extensión del sufragio y de la provisión de servicios públicos. Perú desde 1876 a 1940 presenta un caso diferente. A pesar de un sistema de sufragio calificado, restringido a los alfabetos, hubo un aumento en las tasas de alfabetización y de escolaridad. El poder relativo de las élites nacionales y regionales se manifestó en la articulación de las políticas nacionales con un resultado desigual en la provisión de educación. La restricción en el acceso político de la minoría económica, la población indígena, se convirtió en una creciente brecha en materia educativa.

Palabras clave: educación, participación política, Perú

1. INTRODUCTION

At the end of the 19th century, many decades after declaring independence from Spain, the new tradition of inclusive political participation in Peru came to a close. As literacy requirements for suffrage emerged, the national government swiftly embarked on a campaign for national integration. A key element in this plan was the expansion of education as a strategy for inclusion in order to civilise the country's large indigenous population. With encouraging national results as literacy rates climbed from 18 per cent in 1876 to 42 per cent in 1940, sizable disparities came to light, in particular along ethnic lines.

What explains the unequal educational outcomes in Peru? It was a divided country not only by its geography (given the imposing Andes) but also by race and ethnicity¹. Of the three main regions, the coast, the sierra and the jungle, 62 per cent of the total population lived in the sierra with over 80 per cent of the indigenous population of the country in 1940². This divide translated into unequal political representation given the application of literacy requirements for suffrage. As literacy levels were lower in communities with higher shares of indigenous population, their preferences could not be directly expressed in the political system. Political voice mattered, more than economic structure or income. Given the restrictions imposed on suffrage, the economic minority, the indigenous group, was politically under-represented. As a result, the benefits of the expansion of the

¹ Klaren (1986) claims that, even today, geographic and social divides impede national integration.

² The coastal region was home to 29 per cent of the population. In terms of land area, this region accounts for 19 per cent of the total territory and the sierra for 62 per cent.

educational system were unequally distributed, widening the gap between the educational attainment of the white/mestizos and the indigenous population.

Despite fiscal centralisation, the central government lacked the capacity to monitor the entire country resulting in adaptations of national policies at local level. Within this framework, the central government's initiatives to expand mass schooling (the Teaching State, the *Estado Docente*)³ were lost in translation when articulated by local elites. Educational attainment improved under centralisation but with unequal reach within the territory. In this paper, I look at the characteristics and determinants of primary education provision in Peru from the late 19th century until 1940 by using district- and province-level data from the 1876 to 1940 national censuses and the 1902 educational census. This quantitative evidence is supplemented by qualitative accounts of the unequal provision of and access to education. The goal of this paper is to look at how political representation and ethnicity factored in the articulation of public educational campaigns within Peru. Looking at the local conditions, it is possible to identify how the elites articulated these policies at the local level and thus unveiling the limits of the *Estado Docente* given the unequal educational attainment within the country.

Traditionally, the power of the elites became the dominant explanation for the historical expansion of primary schooling provision (Acemoglu and Robinson 2000; Mariscal and Sokoloff 2000). However, new contributions claim that other forces were at play, especially when looking at the demand and supply of schooling. In the case of British India, Chaudhary (2009) found that the presence of caste and religious divisions contributed to a lower provision of schooling. Looking at the case of the United States, Go and Lindert (2010) found that decentralisation and political voice explain the expansion of mass schooling by 1850. Understanding the contributing factors to unequal educational attainment can help to explain the income gap between indigenous and non-indigenous populations in Peru. Given the links between human capital accumulation and economic growth, this paper can help to elucidate Peru's volatile long-term economic growth path.

To understand the unequal educational outcomes in Peru, I look at the evolution of school enrolment, attendance and literacy by province together with the major educational reforms during the 1876-1940 period. In particular, I study the determinants of schooling in 1940, decades after the introduction of restrictions to suffrage. The results suggest that lower school enrolment is associated with a higher share of the indigenous population and lower political representation. By looking at the regional narratives of this

³ «*Estado Docente*» is defined as the state assuming the organisation of the educational system. This move towards the articulation and implementation of educational policies took place within a larger role of the state as part of a liberal political organisation. The rise of the state as educator appeared in the 19th and early 20th centuries in Latin America. For a full account of the development, see Newland (1994), Narvaez (2005) and Ossenbach (2010).

period, the unequal expansion of the *Estado Docente* appears to be connected to the local elites.

The central government's national educational campaign was articulated by local elites leading to unequal access and provision of education. Decentralisation and inclusive political representations contributed to the expansion of mass education according to Go and Lindert (2010). Peru as an elite democracy provides a contrasting example.

In this paper, I first present the evolution of the educational system in Peru showing the overall trends in literacy and enrolment in comparative perspective together with the major institutional developments in education and political participation (sections 3 and 4). For 1940, I offer a simple theoretical framework to evaluate the determinants of enrolment in Peru for empirical analysis (section 5). Section 6 provides a deeper discussion of the unequal educational outcomes observed in the 1876-1940 period, whereas the following section offers some concluding remarks.

2. GENERAL TRENDS IN EDUCATION IN PERU IN COMPARATIVE PERSPECTIVE

Let us start with a bird's-eye view of the educational situation in Peru for the period of analysis. Clearly, literacy rates, defined as the share of adults that can read and write, improved substantially as in the late 19th century over 80 per cent of the population could not read or write (see Figure 1)⁴. By 1940, the literacy rate had doubled but almost 60 per cent of the population was still illiterate. Literacy rates are outcome variables; the question is what type of resources the government allocated to promote education. The data are scarce and do not cover the entire period; however, the number of schools climbed significantly from 2,300 in 1876 to reach almost 5,000 by 1940. However, scaled by the student body, in 1900 there were twenty-five schools per 1,000 students and only eight by 1940, a trend indicative of higher enrolment but insufficient infrastructure. Yet, the school system only attracted about one-third of all school-aged children (see Figure 2). These figures provide a dynamic, yet not particularly successful picture of the Peruvian educational system.

In comparative perspective, Peru figures within the second wave of mass education in Latin America, behind Argentina and Uruguay, but ahead of Central American countries. The expansion of education in Latin America arrived later than in the «West». For example, Germany and the United States pioneered the development of mass schooling at the beginning of the 19th century (Lindert 2004). The promotion of primary education in Peru was not unique in the region as the early decades of the 20th century were

⁴ Following a common practice in the late 19th century, the 1876 census compiled data on the population literacy based on the ability to read, to write and to read and write. The data used here correspond to the last category.

FIGURE 1
ILLITERACY RATES, 1876 AND 1940.



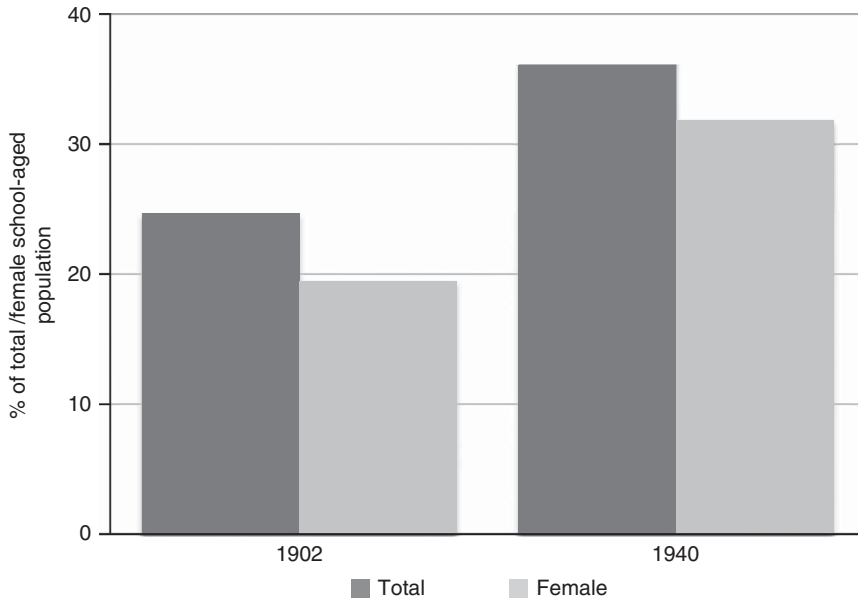
Sources: 1876: Dirección De Estadística (1878); 1940: Dirección De Estadística (1940).

marked by an increase in enrolment and literacy throughout Spanish Latin America (see Table 1). There is a systematic drop in illiteracy rates, with Argentina and Uruguay as frontrunners with less than 20 per cent of the population in the illiterate camp by 1940 (see Table 2). In contrast, by 1940 Peru's illiteracy rate was still 42 per cent. Despite the improvement in the early 20th century, these countries were far behind the United States, where the illiteracy rate was only 3 per cent. This wave was fuelled by an increase of public resources available for education and a decrease in the costs associated with school attendance (Benavot and Riddle (1988); Newland 1994).

Within Latin America, the allocation of resources towards the expansion of educational services commenced in the late 19th century under the auspices of a «civilising» trend. Following a modernisation trend, the state was in charge of fighting barbarism and of civilising the masses (Newland 1994). Education was, among others, a tool to achieve such a goal⁵. As a result,

⁵ See for example, Zimmermann (1992) and Graham (2010).

FIGURE 2
ENROLMENT RATES, 1902 AND 1940.



Sources: 1876: Dirección De Estadística (1878); 1940: Dirección De Estadística (1940).

TABLE 1
ENROLMENT RATES, SELECTED YEARS

	1870-75 (%)	1900 (%)	1920 (%)	1935-40 (%)
Argentina	20.9	33.9	52.5	58.2
Bolivia		7.9	15.1	15.5
Ecuador	9.6	21.5	26.8	36.3
Peru		29.2 ⁺		35.4
Uruguay	28.3	35.8	44.6	
South America	15.7	22.3	30.4	40.7

Sources: National censuses and Benavot and Riddle (1988).

Notes: ⁺This figure is, most likely, overestimating the actual enrolment given that the 1902 census failed to truly cover the entire territory.

TABLE 2
ILLITERACY RATES OF ADULTS AGE 16 AND ABOVE, SELECTED YEARS¹

	1900 (%)	1920 (%)	1940 (%)
Argentina	48	32	18
Bolivia	84	78	72
Mexico	77	65	53
Peru	76	67	58
Uruguay	41	30	19
Venezuela	81	68	58
United States	11	6	3

Sources: National censuses, Mitchell (1998), Carter *et al.* (2006).

Note: ¹Illiteracy defined as inability to read and write.

we observe a drive towards centralisation by taking the control of education away from municipalities and placing it into the hands of the central government in the first decades of the 20th century (Newland 1994). This move was intended to deliver a uniform push towards modernisation. Education received an increasing share of public funding reaching, as a share of the total budget, 13 per cent in Argentina, 14 per cent in Mexico and 20 per cent in Cuba. For primary education only, the shares were around 6 per cent in Peru and 12 per cent in Uruguay by the early 1920s (Dirección 1924; Godoy Urrutia 1952; Baez 1977).

The education sector is a clear example of the ebb and flow of centralisation in Latin America. In Peru, the 1873 law left elementary and secondary schools under the purview of local governments, but the progressive movement brought them back under the power of the central government. This movement culminated with law 162 in 1905, which inaugurated the «Teaching State» (*Estado Docente*) in Peru as defined earlier in the text.

3. DECENTRALISATION, CENTRALISATION AND EDUCATIONAL ATTAINMENT IN PERU

The first real effort to develop an educational apparatus in Peru came in the early 1860s. Fuelled by the proceeds from the commodity boom (principally guano), the expansion of the public sector translated into more funding for education. The central government retained a minor supervisory role, whereas allowing local governments to manage municipal schools, which included the design of curricula and the appointment of teachers (Valcarcel 1975).

From 1873 until 1905, the Peruvian education system was decentralised; however, the central government still, to some extent, enjoyed interventionist capabilities. The famous socialist Peruvian intellectual, Mariátegui, thought of decentralisation as a means to modernise the country by eliminating the colonial elite. It was President Pardo, in 1873, who promoted the first decentralising project with the Municipalities Act that allowed districts to collect local taxes and administer local services. The main focus of decentralisation was public education, public works, health services, welfare and civil registry (Presidente de la Republica 1873). In a message to Congress in 1876, President Pardo highlighted the role of decentralisation and education, stating that «what needed to be reformed was not the law but the people and this reform can only be obtained by education and by local management of these issues» (Planas Silva (2000), 237)⁶. According to Mariategui (1964), President Pardo made education the foundation for freedom in Peru.

Although the presidential message alluded to the benefits of decentralisation for policy effectiveness, the more encompassing decentralisation of 1886 was «almost a forced option» as the central government was in shambles after the War of the Pacific (Contreras 2002)⁷.

This was the first real reform in education prompted by the decline of the central government's main source of revenue, the exports of guano and then the War of the Pacific that had reduced the country's fiscal capacity dramatically (Contreras 2002; Espinoza 2013)⁸. Funding for these services would come from the transfer of two-thirds of the direct revenues to the municipalities. In addition, a new tax for school funding (*contribución de escuelas*) was levied on all males over twenty-one and import tariffs were increased by two percentage points⁹. It appears that the school tax never came to fruition (Contreras 2002).

With this initiative, each department was responsible for collecting its own taxes to pay for public spending from 1887 to 1896. As revenue, the departments had access to personal taxes, land tax, real estate *alcabala*, among others¹⁰. In return, the department was in charge of funding the police, the lower courts, elementary education and road maintenance

⁶ The 1876 code maintained the three divisions in education: primary (three grades), secondary (two grades, the first one of 4 years and the second of 2 years) and superior (Valcarcel 1975).

⁷ Public revenue decreased, in real terms, 72 per cent from 1874 to 1878.

⁸ For example, in 1873, President Pardo cancelled the transfers to municipal schools owing to the dire state of the fiscal accounts (Espinoza 2013).

⁹ The proceeds from this source of funding were distributed among the departments as follows: 10 per cent each to Lima and Cusco, 7.5 per cent each to Puno, Ancachs, Junin and Arequipa, 7 per cent each to Ayacucho, Moquegua and Libertad, 6 per cent to Cajamarca, 3 per cent each to Huancavelica, Callao, Piura, Tarapaca, Ica and Huanuco and 2.5 per cent each to Amazonas and Loreto (Presidente de la Republica 1873).

¹⁰ The central government allocated funds for primary education in the case of fiscal surplus starting in 1886 (Presidente de la Republica 1886). In the case of Ayacucho, a tax on salt of 5 cents/46 kg was fully devoted to primary education funding (Presidente de la Republica 1992a, 1992b).

(Contreras 1996a, 2002). However, this decentralising movement was still under the tutelage of the central government as departmental budgets were subject to the approval of Congress. Moreover, the chair of each departmental board was not locally appointed but also chosen by Congress. Given that the economic base for tax collection was thin, the old colonial tribute, renamed as poll tax was reinstated¹¹. Despite the central government's watchful eye, this was the most important decentralisation movement in Peru's history with departmental revenue reaching 24 per cent of central revenue in 1890 (Romero 1932; Basadre 1968)¹².

Education indicators improved, with literacy rising 14 percentage points from a low of 18 per cent in 1876 as almost a third of school-aged children enrolled in schools. With the exception of the War of the Pacific period, the central government's allocation to education oscillated round 4 per cent of the total budget, representing over 80 per cent of the total education budget at the department level (Portocarrero *et al.* 1992; Espinoza 2013).

Decentralisation was short lived¹³. During what historian Basadre calls the «aristocratic republic», the centralisation wave gained steam, calling for national consolidation through fiscal and administrative centralisation. It is under this centralised system that primary education became free and compulsory (see Table 3 for chronology of education laws and regulations).

The factors that fostered investment in public education, such as urbanisation, economic prosperity and nationalism (Newland 1994), were common to other Latin American countries. Indeed, early 20th century Peru was an urban and dynamic economy¹⁴. In Peru, this nationalistic movement attempted to promote integration, especially of the population in the sierra in order to create a more modern, prosperous and European-style nation (Valcarcel 1975; Contreras 1996b; Espinoza 2013). Minister of Education Polar in 1906 claimed, «Democracy cannot be a reality while education is not extended to all» (cited in Contreras 1996b). This law centralised education in terms of funding, management and supervision. It made primary education mandatory and free, requiring a school in every urban settlement of over 200 inhabitants. Selected revenue was earmarked to fund education

¹¹ Males between 21 and 60 years old paid two soles in the sierra and four soles on the coast.

¹² Scholars still debate the merits of this decentralisation movement. The critics claim that this movement left the interior in the hands of the «*gamonales*», seen as pre-modern elites and exploiters of the indigenous communities (Basadre 1968).

¹³ Earlier attempts at centralisation in 1901 were unsuccessful. The 1901 code kept funding decentralised but created more centralised powers in the form of overseeing institutions at departmental and national levels. These efforts were ineffective as the municipalities were unwilling to relinquish control while they continued to fund schools.

¹⁴ Annual total GDP growth averaged 5.5 per cent during the first decade of the 20th century (based on Seminario and Beltrán 1998). Almost 50 per cent of the population lived in urban centres (Dirección de Estadística 1940).

TABLE 3
MAIN PRIMARY EDUCATIONAL LAWS AND REGULATIONS

1850	National educational code
1870	Free primary schooling in district capitals
1873	Decentralisation of the school system
1876	Public education code
1905	Centralisation of public primary education
1905	Compulsory and free education
1920	Organic education law

Sources: Based on Barrantes (1989) and Peruvian laws and codes.

Notes: 1870: it also included a mandate of a school in each urban settlement of over 500 inhabitants (Presidente de la Republica 1870). 1905: for 6-14-year-old males and for 6-12-year-old females (Poder Ejecutivo 1905).

(such as *mojonazgo* — a consumption tax), but overall the central government committed 5 per cent of the total revenue and 30 per cent of the departmental revenue (Poder Ejecutivo 1905).

The 1920s and 1930s saw further centralisation in Peru, especially under the weight of the Great Depression in the 1930s. The 1920 education law attempted to grant more stability to the system in terms of funding and management. It also required the foundation of primary schools in each district and provincial capital¹⁵. The creation of the Central Bank and the Ministry of Education are examples of the increase of central government's power in terms of national policymaking. However, the experiments with centralisation and decentralisation were uniquely linked to the fiscal accounts. As the public coffers were deeply dependent on customs revenue, alternative taxes were secondary for raising revenue. As such, the fiscal destiny of the country depended on external conditions as domestic taxes were relegated to a secondary role (Contreras 2002)¹⁶. With the advent of improved economic conditions during the 1940s, the winds of decentralisation faded as the central government was flooded with customs revenue from the exports of sugar, cotton, copper, oil and iron. Yet, a 1940 congressional committee on education concluded that only 5 per cent of the mandates of the 1920 law were actually in effect.

¹⁵ Decentralisation efforts appeared in southern departments resulting in the foundation of the Decentralisation Party. Despite the decentralisation law of 1933, centralisation took hold, and the law became a dead letter (Contreras 2002).

¹⁶ Junin and Lima are exceptions as their domestic economies were dynamic enough to contribute more revenue (Contreras 2002).

4. TOWARDS EXCLUSION: THE ELECTORAL SYSTEM AND POLITICAL PARTICIPATION

As investment in education is the result of politics, any restrictions applied to political participation constrains representation and can lead to inequalitarian educational systems. During this period, the transformation of the electoral system in Peru is a reflection of the power struggle between local elites and the national government. During most of the 19th century, voting was open to adult males without a literacy distinction. This practice was a byproduct of the Cadiz Constitution in which all males over 24 years of age born in the Spanish domains could vote with the exception of those of African descent¹⁷. Unfortunately, there is no national electoral registry for the 19th century; however, from selected parishes, the figures indicate that universal male franchise was exercised. For example, a parish in the province of Huarochiri shows that 24.1 per cent of all inhabitants had the right to vote. More revealing is that 94.1 per cent of these voters were of indigenous origin (Nuñez 2005). This system remained in place throughout most of the 19th century as the new national leadership considered that the lack of literacy of the population was a colonial legacy. As such, it was unfair to exclude the illiterate population (Sobrevilla Perea 2011). This political landscape was disrupted in 1896 with the introduction of literacy as a requirement for political participation.

By 1896 ~70 per cent of the population remained illiterate. Hence, this law sidelined a large share of the population, in particular, the indigenous population. Given the geographical distribution of the population in Peru, this measure affected the different provinces unequally — the sierra being the most disenfranchised region in the country. In addition, this law also stipulated that the members of the electoral boards had to be chosen from a list of the largest taxpayers per province (Presidente de la República 1896).

This move guaranteed the representation of the most powerful economic players in the country. The electoral census of 1933 shows this disenfranchisement clearly: the districts with a majority of indigenous population had lower representation, measured as a share of the total (male) population. For example, in the province of Cusco, where the indigenous populations represented 70 per cent of the total population, less than one-third of the registered voters were of indigenous origin.

5. DETERMINANTS OF SCHOOLING UNDER CENTRALISATION IN A POLITICALLY CONSTRAINED ENVIRONMENT

From 1876 to 1940, Peru's total population increased by over 130 per cent, whereas the share of indigenous population declined from 58 per cent

¹⁷ Sorted in parishes, one representative for the Electoral College was elected per 200 citizens (Nuñez 2005).

to 46 per cent (see Figure 1). With this significant demographic growth, Peru also achieved progress in terms of education provision. However, the country-level trends mask the vast diversity in educational attainment and access in the different regions of Peru. Table 4 shows data on school enrolment and literacy by department when available (Figure 3).

The variation is substantial in terms of literacy: Apurimac and Puno start with very low literacy levels and only reach double digits in 1940. The areas start from a higher level; however, the improvement is such that Callao and Lima reached over 70 per cent literacy by 1940. Clearly, this is the result of a larger share of children attending school; the correlation between literacy and schooling is over 0.9 in 1940. Take, for example, Huanuco, in 1940; only 20 per cent of the school-aged children were actually enrolled in school. These figures also refer to enrolment, not attendance. The data on attendance are not available for most years but for the late 1920s, only two-thirds of the registered students actually attended school, with variations ranging from a low of 57 per cent for Cusco and Ica and a high of 73 per cent in Loreto. Geographically, the coastal region is much most successful, followed by the jungle region, and finally, the mountain one. This stark geographical division is more telling when considering that over 60 per cent of the population lived in the sierra region¹⁸. Surprisingly, attendance is not as variable among departments; the sierra region only trails the coastal region by two percentage points.

Although data by departments give us a more spatially tangible story, it is possible to look into the smallest political units, the districts. Comparing 1876 with 1940, the average literacy rate, at the district level, was 13 per cent and 30 per cent ($n(1876) = 688$ and $n(1940) = 1,059$), respectively. There was variability among districts; a few claimed almost perfect literacy with rates above 90 per cent (three districts in 1876 and five in 1940). At the other end of the spectrum were districts where there was no provision of education, that is, 0 per cent of the population was literate (three districts in 1876 and none in 1940).

From the previous data breakdown, it is clear that the spread of education was much slower in the sierra region. This is the same region where the bulk of the indigenous population lived. Looking at the data based on the share of the indigenous population shows the divergence of outcomes. In the districts where the share of the non-white population was lower than 25 per cent, the literacy rate was, on average, 27 per cent in 1876, whereas in the districts where this share was over 75 per cent, literacy was 15 percentage points lower. This gap widens in 1940, following the same breakdown; the literacy rate was 44 per cent compared with 13 per cent. The same pattern is evident in terms of enrolment with a larger share

¹⁸ The share of the total population amounted to 61.6 per cent and 56.1 per cent in 1876 and 1940, respectively.

TABLE 4
LITERACY¹ AND SCHOOLING² RATES, 1876, 1902, 1920S AND 1940 (%)

	Literacy ¹		Schooling ²		Attendance
	1876	1940	1902	1940	1920s
Amazonas	21.0	35.2	23.4	42.5	71.2
Ancachs	11.7	25.0	22.8	29.3	63.2
Apurimac	4.2	10.8	9.1	15.0	60.5
Arequipa	26.3	44.9	28.9	48.9	66.4
Ayacucho	8.8	12.1	15.3	15.7	63.4
Cajamarca	15.6	25.9	24.4	25.9	69.7
Callao	55.5	78.0	51.4	84.5	63.9
Cuzco	5.6	14.9	14.0	16.9	54.1
Huancavelica	6.1	12.7	13.6	12.4	61.8
Huanuco	9.8	20.0	12.1	20.4	58.8
Ica	35.7	58.4	38.8	61.9	54.1
Junin	10.9	31.7	20.8	34.3	66.7
La Libertad	18.4	35.9	29.2	39.4	66.1
Lambayeque	24.7	44.7	34.5	43.2	65.9
Lima	38.3	71.0	37.1	76.5	64.4
Loreto	13.4	37.3	33.3	44.5	75.1
Madre de Dios	n.a.	44.3	n.a.	62.0	61.3
Moquegua	22.4	34.4	20.3	37.0	65.5
Piura	17.3	33.8	18.2	35.0	63.2
Puno	3.0	11.0	12.5	11.8	63.7
San Martin	n.a.	44.2	30.3	54.3	63.9
Tacna	27.4	49.4	24.4	58.6	58.5
Tarapaca	35.2	n.a.	n.a.	n.a.	n.a.
Tumbes	n.a.	47.1	37.7	46.7	62.1
Coastal ³	28.4	78.0	31.6	84.5	64.2

TABLE 4 (Cont.)

	Literacy ¹		Schooling ²		Attendance
	1876	1940	1902	1940	1920s
Mountain ⁴	8.6	18.7	18.9	20.7	62.9
Jungle ⁵	16.0	36.9	28.8	44.3	69.4
Country	15.0	50.8	29.1	35.4	64.0

Sources: Dirección de Estadística (1878, 1940), Dirección De Primera Enseñanza (1903).

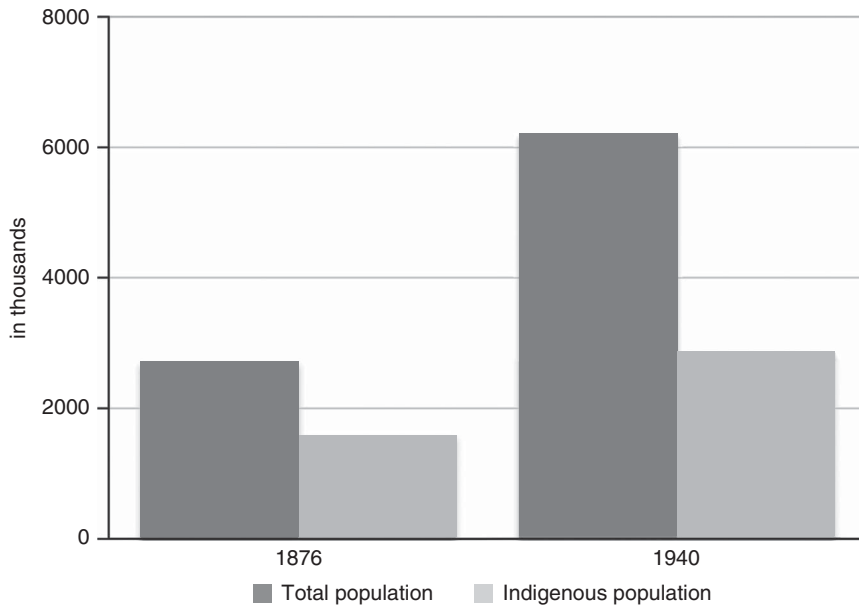
Notes: ¹Defined as the share of the adult population unable to read and write.

²Defined as the share of children enrolled in school as share of school-aged population.

³Includes Arequipa, Callao, Ica, Lambayeque, La Libertad, Lima, Moquegua, Piura, Tacna, Tarapaca and Tumbes.

⁴Includes Ancachs, Apurimac, Ayacucho, Cajamarca, Cuzco, Huancavelica, Huanuco, Junin and Puno.

⁵Includes Amazonas, Loreto, San Martin and Madre de Dios.

FIGURE 3
POPULATION GROWTH, 1876-1940.

Sources: Dirección de Estadística (1878, 1940).

of non-white children enrolled in school: 49 per cent vs. 15 per cent. Literacy and schooling decreased with a higher share of the non-white population.

To understand the unequal educational outcomes in Peru, I analyse the main determinants of primary schooling in 1940. Following the literature, I have looked at ways to capture the preferences for education and their articulation in this society (Chaudhary 2009; Go and Lindert 2010). As the provision of education depends on the preferences of the different groups within the districts and provinces, the variance in the educational outcomes within Peru could suggest different preferences with respect to education. However, these preferences are materialised through the political process and as a result the question of the extent of political representation is relevant. For example, the demand for education could be lower (relatively speaking) in mostly rural communities as schooling could be less desirable if child labour were necessary for household income. Child labour existed in Peru in 1940 and according to the census, 11.05 per cent of the school-aged population received remuneration for their work¹⁹. Occupational categories are useful to tease out preferences as it is expected that locations with larger shares of skilled population would demand more educational services for their offspring.

The heterogeneity of preferences can be exacerbated in fragmented societies. In India, for example, caste and religious affiliation provided useful information on preferences on school development (Chaudhary 2009). However, society in Peru was divided along ethnic and racial lines with significant differences in the ethnic composition throughout the country. The coastal provinces had the lowest share of indigenous population averaging 20.8 per cent, followed by the jungle provinces with 36.9 per cent, whereas in the sierra the indigenous share climbed to 60 per cent. The established ethnolinguistic fractionalisation literature suggests that high fractionalisation leads to poor quality institutions, underprovision of public services, lower investment and even lower economic growth owing to mismatched preferences and polarisation. In a highly diverse community, where ethnic and racial distinctions are also associated with economic power, this division could lead to suboptimal educational provision. This situation arises as the benefits from investment in schooling provision are not appropriated in an egalitarian manner (Mauro 1995; Easterly and Levine 1997; Alesina 2003).

Although the identification of preferences accounts for demand factors in school provision, the question is how these preferences are articulated in the political system. As such, political representation plays a dual role. It first expresses the preferences of those with access to the electoral process, but it also translates the educational initiatives from national to local levels. In Peru, the movement towards education centralisation tried to erode the local power on educational provision. The central government

¹⁹ Even though the 1920 education law prohibited child labour, the census notes that socio-economic factors forced children to work.

abolished the school councils and commissions that were in hands of local officials. However, local governments fought hard to regain some independence and succeeded, to an extent, with the reinstatement of municipal school inspectors (Espinoza 2013). As Go and Lindert (2010) showed for the case of the United States, decentralised governments with inclusive political representation were key factors in the expansion of mass education. Being an elite democracy, Peru is a study in contrast. Although education was a national centralised initiative, it was carried out in practice by local elites.

The analysis uses data from a variety of official sources. The educational attainment variable, enrolment measured as the share of school-aged children enrolled in school, is from the 1940 national census published by the Dirección de Estadística (1940). To analyse the issue of political representation, I used the electoral census of 1933 published by the Dirección de Estadística (1933)²⁰. All the data are at district or provincial level²¹.

The 1933 electoral census has detailed data on the number of registered voters at district level. However, at provincial level, the publication also reports race and ethnicity, voter turnout, education level of registered voters and occupations.

Exploiting the variety of educational outcomes within Peru, I estimate the impact of different factors on schooling provision for 1940²². The educational outcomes (E) used are enrolment, as the share of school-aged population, and literacy, as a share of total adult population²³. The determinants include political representation measured as voters as a share of total adults (*Voters*), ethnic/racial preferences represented by shares of the different ethnic categories (*Indigenous*, *White/Mestizo*, *Black* and *Asian* — *White/Mestizo* is the excluded category), social fragmentation by estimating an index of ethnic fractionalisation (EF)²⁴, occupational mix based on broad categories (*Agriculture*, *Manufacturing*, *Commerce* and *Professionals* — *Services* is the excluded category)²⁵, and a proxy for income represented by the urbanisation rate (*Urban*), measured as the share of the population living

²⁰ Other supplementary data, not at district level, include school attendance, number of schools and number of teachers, collected from an array of official statistical compendia.

²¹ The political division of Peru has three levels: the districts or municipalities are the smallest political units followed by provinces, which in turn, form departments.

²² The 1876 census only provides data on literacy. Although it would be interesting to explore a different approach, the main problem is that there are no data on political representation before 1933.

²³ The literature uses other outcome variables such as teachers or schools/1,000 pupils. Unfortunately the data are only available at the department level. Although literacy is, most likely, endogenous, as the voting was restricted to the literate male population, I offer the estimations using literacy as a dependent variable to provide an imperfect robustness check.

²⁴ This index is calculated as $EF = 1 - \sum_i \pi^2$ where π is the share of ethnic group i and refers only to ethnic/racial categories.

²⁵ This classification follows Chaudhary (2009) and includes livestock as part of agriculture.

in cities of at least 1,000 inhabitants²⁶. To account for the degree of autonomy of the provincial governments, I use the distance by road to Lima as a proxy, *Distance*. The rationale of this variable is that given the regional elites, the farther away the province was, the less likely that the central government in Lima could exert monitoring power. The distance is measured as the shortest route to Lima using the existing road system in the 1940s.

The reduced form for district or province *i* estimation is presented in equation [1] including department dummies (*X*) and geographical controls such as altitude, longitude, latitude and land area. Owing to the heterogeneity of all provinces the estimation included standard error clustering at province level.

$$\begin{aligned}
 E_i = & \beta_0 + \beta_1 \text{Voters} + \rho \text{Distance} + \omega_1 \text{Indigenous}_i + \omega_2 \text{Black}_i \\
 & + \omega_3 \text{Asians}_i + \phi \text{EF}_i + \varphi_1 \text{Agriculture}_i \\
 & + \varphi_2 \text{Manufacturing}_i + \varphi_3 \text{Commerce}_i \\
 & + \varphi_4 \text{Professionals}_i + \Theta \text{Urban}_i + \lambda X_i + \epsilon_i
 \end{aligned}$$

The main results are presented in Tables 5 and 6. The first table looks at the factors influencing the school enrolment rate defined as the share of school-aged children enrolled in school. Starting with political participation, it appears that a higher share of participation in the political system has a positive effect on enrolment. The coefficients are all significant even though they decrease with the addition of other factors. In the most conservative case, an increase in one standard deviation of voter share could have raised enrolment by almost five percentage points. Distance to Lima, a proxy for degree of autonomy, proves to have been detrimental to educational attainment; however, the coefficients are very small and mostly non-significant. This factor is more indicative of the latitude that local elites enjoyed to mould educational policies to local conditions.

The inclusion of demand factors contributes to attenuate the effect of political voice, as expected. In terms of occupational structure, the results indicate that a larger presence of professionals has a positive effect on enrolment. For the rest of occupations, the results are not significant. What is most striking is that the main determinant for enrolment is ethnic. The results suggest that the lack of political participation paired up with the extent of indigenous composition of the population drove enrolment. When using literacy as the dependent variable (see Table 6), the main results hold: the main determinants of literacy are political participation and indigenous share in the total population. Overall the estimations suggest that the lack of representation of indigenous populations affects

²⁶ Unfortunately the census did not collect data on income, tax incidence or tax revenue.

TABLE 5
OLS RESULTS (1)¹

¹The dependent variable is school enrolment.

	(1)	(2)	(3)	(4)	(5)
Voter	2.589 (0.798)**	1.478 (0.687)*	1.206 (0.712)*	1.165 (0.676)*	1.138 (0.684)*
Distance	-0.009 (0.006)	-0.011 (0.007)	-0.012 (0.006)	-0.010 (0.008)	-0.010 (0.008)
Indigenous		-0.345 (0.086)***	-0.325 (0.075)***	-0.251 (0.072)***	-0.247 (0.070)***
Black		-0.336 (0.847)	-0.0615 (0.792)	0.281 (0.667)	0.328 (0.682)
Asian		4.747 (1.869)**	3.998 (2.132)*	-0.00608 (3.459)	0.205 (3.570)
Urban			0.150 (0.075)**	0.0929 (0.072)	0.0943 (0.072)
Agriculture				0.0199 (0.241)	-0.0151 (0.266)
Manufacturing				-0.998 (0.751)	-0.949 (0.775)
Commerce				-0.415(1.108)	-0.475 (1.095)
Professionals				3.376 (1.469)**	3.158 (1.657)*
EF					-0.0313 (0.080)
Constant	0.120 (0.101)	1.202 (1.923)	0.598 (1.735)	-0.923 (1.611)	-0.788 (1.671)
<i>n</i>	113	113	111	111	111
Department dummies	Y	Y	Y	Y	Y
Geo controls	Y	Y	Y	Y	Y

Notes: Province level clustered standard errors are in parentheses.

Enrolment rate is defined as the share of the school-aged population enrolled in school, voter is the share of the voting adult population, distance is the shortest distance in millions of kilometres from the provincial capital city to Lima using the 1940 road network, indigenous, Black and Asian are as shares of the total population, *urban* is the share of the population living in cities of at least 1,000 inhabitants, *EF* is the index of ethnic fractionalisation, *Agriculture*, *Manufacturing*, *Commerce*, *Professionals* are shares of the total labour force, *geographic controls* include latitude, longitude, altitude and area.

*, ** and *** denote significance at 10%, 5% and 1%, respectively.

TABLE 6
OLS RESULTS (2)¹

¹The dependent variable is literacy rate.

	(1)	(2)	(3)	(4)	(5)
Voter	1.974 (0.503)***	1.196 (0.488)**	1.073 (0.478)**	1.109 (0.516)**	1.199 (0.497)**
Distance	0.0041 (-0.0047)	-0.0003 (-0.0050)	-0.0070 (-0.0044)	-0.0003 (-0.0054)	-0.0003 (-0.0056)
Indigenous		-0.291 (0.076)***	-0.281 (0.070)***	-0.248 (0.070)***	-0.260 (0.066)***
Black		0.33 (0.525)	0.463 (0.541)	0.27 (0.508)	0.113 (0.541)
Asian		4.837 (1.357)***	4.661 (1.434)***	2.91 (2.283)	2.211 (2.488)
Urban			0.0723 (0.057)	-0.00589 (0.060)	-0.0105 (0.062)
Agriculture				-0.0971 (0.206)	0.019 (0.232)
Manufacturing				0.467 (0.791)	0.301 (0.811)
Commerce				1.238 (0.843)	1.436 (0.847)*
Professionals				1.021 (1.405)	1.743 (1.541)
EF					0.104 (0.073)
Constant	0.073 (0.075)	3.141 (1.545)*	2.854 (1.566)	2.615 (1.582)	2.166 (1.542)
<i>n</i>	113	113	111	98	98
Department controls	Y	Y	Y	Y	Y
Geo controls	Y	Y	Y	Y	Y

Notes: Province level clustered standard errors are in parentheses.

Literacy rate is defined as the share of the adult population that can read and write, voter is the share of the voting adult population, distance is the shortest distance in millions of kilometres from the provincial capital city to Lima using the 1940 road network, indigenous, Black and Asian are as shares of the total population, *Urban* is the share of the population living in cities of at least 1,000 inhabitants, *EF* is the index of ethnic fractionalisation, *Agriculture*, *Manufacturing*, *Commerce*, *Professionals* are shares of the total labour force, *geographic controls* include latitude, longitude, altitude and area.

*, ** and *** denote significance at 10%, 5% and 1%, respectively.

educational outcomes²⁷. It appears that constrained access to the political system generated educational inequality along ethnic lines.

A common concern in this type of analysis is ignoring the potential effect of historical institutions on educational outcomes and political institutions. It is plausible that the degree of political representation is a manifestation of deeper inegalitarian institutions, possibly going back to colonial times. The ample literature on the persistence of institutions states that places with more «extractive» institutions have persisting detrimental effects in contemporary economic outcomes. In the case of Peru, the long arm of history would suggest that the regions with more oppressive colonial institutions would display worse economic outcomes today (Engerman and Sokoloff 1997; Acemoglu *et al.* 2001; Dell 2010; Gallego 2010). Following the persistence argument, these unfavourable effects should prevail throughout time. Hence, locations with more inegalitarian electoral institutions should be correlated with the historical presence of oppressive or extractive colonial institutions.

For Peru, it is possible to identify the existence of these institutions. Two institutions are of particular interest: the *mita* and the *encomienda*. The *encomienda* was a colonial practice by which the Spanish Crown granted the conquistadors and selected new settlers the service of indigenous peoples. The recipients had the duty to protect and educate the Indians in the Catholic faith. As nobility titles did not exist in the Spanish empire in the Americas, holding an *encomienda* became a source of prestige and power. However, this development led to the dissolution of this institution as it represented a threat to royal authority (Zavala 1935; Puente Brunke 1992). The Spaniards in Peru and Bolivia adapted the Incan *mita* to guarantee labour in the mines. Established by viceroy Toledo in the late 16th century, this system of coerced but remunerated labour involved one-seventh of the male adult population. It was only abolished in 1820 (Wiedner 1960; Cole 1984).

The geographical extension of these two institutions was not uniform. There were some locations that were subject to both, but many that did not have these obligations²⁸. To address the potential effect of colonial institutions on educational outcomes, I include the presence or absence of these two colonial institutions as independent variables. If colonial institutions were to have any explanatory power, they should appear significant in the regression²⁹. However, the presence of these extractive institutions in

²⁷ It could be argued that the level of literacy or schooling depends on linguistic issues. Indigenous households may not enrol their offspring at school if the only language spoken was of indigenous origin. Replacing the share of indigenous population by the share of population speaking only an indigenous language does not change the results.

²⁸ See Cole (1984), Manso De Velasco and Amat y Junient (1859) and Puente Brunke (1992) for the locations under the *mita* and *encomienda* systems.

²⁹ It should be noted that Dell's (2010) methodology is quite different from that used in this article. First, she applied a regression discontinuity framework and estimated the effects of the

the past does not shed any light on the educational outcomes in early 20th century Peru³⁰.

6. UNEQUAL PARTICIPATION, UNEQUAL OUTCOMES? EXPLAINING THE EDUCATIONAL OUTCOMES IN PERU

The educational inequality observed in Peru during this period is not unique. Chaudhary *et al.* (2012) report a similar pattern in Brazil, Russia, India and China (BRICs) in the early 20th century. For example, in Brazil, the state with highest enrolment in 1914 was the Federal District (32.7 per cent), whereas that with the lowest was Paraíba (6.3 per cent). To put these figures into perspective, in the case of Peru in 1902, the province with highest enrolment was Canta (a department of Lima) with 59 per cent and the lowest one was Caylloma (a department of Arequipa) with an enrolment rate of 3.7 per cent. This comparison, at first glance, shows the wider range of educational outcomes in Peru relative to highly unequal Brazil. A more systematic way to present this is by calculating the coefficient of variation. Peru displays more spatial variability with a coefficient of variation of 0.62, higher than any of the BRICs (0.5, 0.3, 0.4 and 0.5, respectively).

The low educational attainment in regions with higher concentrations of indigenous population could be read as the result of either low demand or low supply of educational services. In more rural districts with high shares of indigenous population, literacy rates are lower, on average, than in more urban settings. Looking at the subgroup of districts with urbanisation rates lower than 25 per cent and non-white population shares of over 75 per cent ($n = 116$), the literacy rate is 5.2 per cent in 1876. This could be the result of low participation in the educational systems: children are generally needed for labour in agriculture, for example. However, this problem should be reflected in attendance more than in enrolment, expecting lower attendance in more rural areas. Looking at the limited data on attendance at the department level, there is not much variability in overall attendance and there is no direct relationship between urbanisation rates and attendance. Moreover, the *indigenistas* in Puno and the Highlands were advocating for expansion of education to the indigenous population as early as the beginning of the 20th century. As this group acted as brokers between the indigenous population and local and central governments, this engagement

(footnote continued)

presence of the *mita* on districts at different distances from the «*mita* region». In this paper, I used this information as a dummy variable given that this coerced draft system was based on a province level. Second, as I am considering the entire country and not the «*mita* region», I also included a dummy variable denoting the presence of another colonial institution deemed by the literature as a privilege for the colonisers, the *encomienda*.

³⁰ Regressing political representation on these two institutions does not change the results.

suggests a high demand for education. However, this movement also represented a threat to the elite in this highly racially stratified society (Hazen 1978).

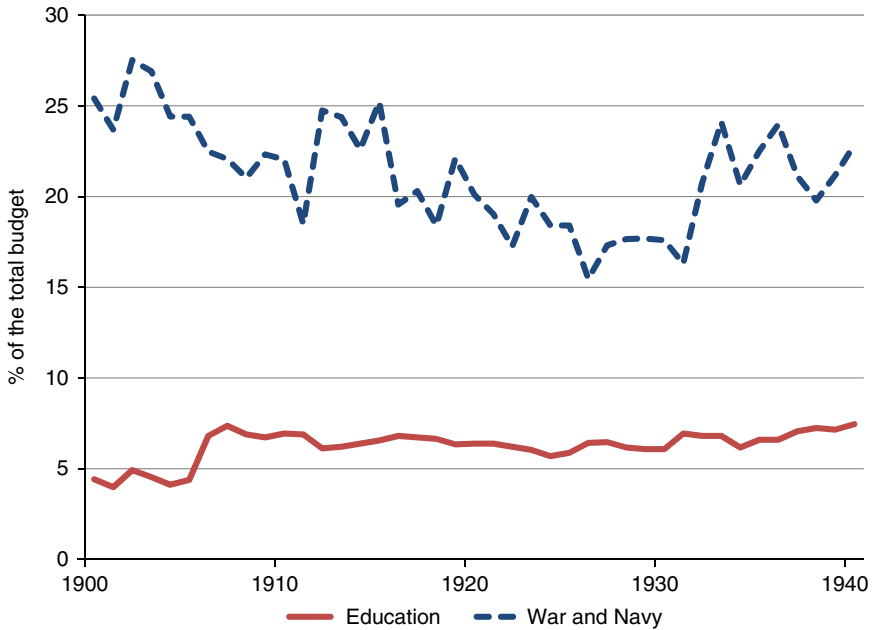
Indigenous demand for education was manifested in different ways; for example, through donations of lands for schools (Contreras 2002). In locations not served by the government, such as in several towns in Ancash and Chucuito, the indigenous communities asked the central government for funding for their schools and founded their own schools known as «free schools». Many of these initiatives did not last owing to financial considerations and strong local elite opposition (Contreras 2002; Ccahuana Córdova 2003). The demand for education was also part of the aspirations of local indigenous movements as literacy would bring political participation and better economic prospects, such as in Ayacucho (Heilman 2010).

As the demand for schooling does not seem to be the main culprit to explain the divergence of outcomes, it appears that there was an inadequate supply of educational services. The department-based data show that there was a wide variance in the number of schools. However, a better metric is the number of schools scaled by school-aged population as it reflects the infrastructure needed to serve the entire school-aged population. In Puno, the department with the lowest literacy level in 1940, there were only 1.8 schools/1,000 school-aged inhabitants, whereas a higher literacy level department such as Tacna had 8.4. These raw figures do not take into account the topography: in mountainous regions, more schools may be necessary to make access possible. The relationship between literacy and school availability is slightly positive; however, the operational link appears to be with enrolment: more children went to school where schools were more readily available. If this is a supply-side story, then it is necessary to look at the political factors affecting the provision of educational services in Peru during this period (Go and Lindert 2010).

A quick look at the federal budget illustrates the revealed preference of the federal government with respect to education. During the early 20th century, the federal government allocated less than 6 per cent of the total budget to education. This figure is low compared with the share of resources allocated to defence: around 20 per cent (see Figure 4). In real terms, the total budget grew rapidly from 1900 to 1940; however, so did population. The school-aged population soared from 340,000 children in 1902 to 1.6 million in 1940. Compared with similar countries in terms of ethnic makeup, such as Bolivia, Peru devoted a smaller share of its total budget to education and also in terms of GDP. Education spending was a meagre 0.15 per cent of GDP compared with 0.36 per cent in Bolivia during the 1900-1940 period (Pérez-Cajías 2013; Arroyo Abad and Lindert 2015).

During the decentralisation period, the sluggish progress in education is found in local governments. Education policy was under the control of local

FIGURE 4
EDUCATION* AND DEFENCE BUDGETS⁺.



Notes: *Primary and secondary education, + central government.

Sources: Based on Dirección de Estadística (1924) and Ministerio de Hacienda y Comercio (1918, 1943).

elites before and after the decentralisation of 1873. Municipal funds mostly financed education until 1850, when the central government allocated subsidies and the local administration was autonomous in terms of financial, administrative and financial matters. At the height of the guano boom (1850-1870), the central government aspired to exert more control over the local elites by redistributing the proceeds from guano; however, the authority on education remained at the local level. The local elites remained in charge as the central government lacked the capacity to monitor municipal education (Espinoza 2011).

With decentralisation, taxes at the departmental and municipal levels such as the *«contribución de escuelas»* had to fund education. Fear of unrest and political instability made the local elites reluctant to levy such taxes (Espinoza 2011). This is a reflection of the inexistence of local elites capable of or willing to lead efficient decentralised policies. In southern Peru, local officials ignored the directives put forth by Lima. In some instances, they

even failed to spend the departmental funds assigned for schooling. One of Lima's initiatives to appoint German teachers in Cuzco, Puno and Piura ended up with one of them in jail owing to «irascible and discourteous behavior» and in the end led to their dismissal (Contreras 2000; Muecke 2004, p. 181). The War of the Pacific with the destruction of the bureaucratic apparatus granted more power to the local elites (Espinoza 2011).

The education system in the Andes did not develop according to the central government's design but was shaped by local interests. The national educational plan was resisted by the local elites leading to its failure. In particular, the elites in the sierra, the sierra *gamonales*, dismantled the local initiatives to build schools and contract teachers (Contreras 1996a). Many elites had a negative view of the local population. When commenting on Puno, a railroad inspector claimed that «Four-fifths of the population are like wild animals, and the few who call themselves educated have — with the exception of four or five people — succumbed to vice» (Muecke 2004, p. 181). This is a textbook case of decentralisation gone wrong. The decentralisation movement attempted to confer legitimacy on local authorities. Yet, it resulted in conflicts for local control that eroded the potential benefits of such a movement. The competing groups fought over influence for personal (or family) economic and political gains. When the elites did not value education, they would not allocate funds to support it, leading to suboptimal educational outcomes, in particular in districts with a high concentration of the economic minority.

The centralisation movement had a nationalistic mindset, to bring different segments of the community to the nation; however, the project also intended to enhance the reach of the central government³¹. The expansion of the middle class with the post-war recovery also increased the demand for education, seeing educational attainment as a tool for social progress (Parker 1998)³². To achieve mass education, the government committed more funds than ever; as a share of total spending the allocation to education climbed three percentage points, from 3.7 to 6.7 per cent from 1904 to 1907. The increasing availability of funds was an integral component in making the expansion of education politically feasible. However, local elites used public funding to strengthen their patronage networks. Still, the transition to provision of education as mandated by central government was not seamless. The plan to increase monitoring by the central government through school inspectors, *preceptores*, was met with resistance to the point of their abolishment. Although the increase in education inputs (such as schools

³¹ Espinoza (2013) claims that positivism and nationalism were important factors in the centralisation movement; however, the main objective was to acquire more political power for the central government.

³² The middle class saw the expansion of education as a mixed blessing. On one hand a university degree was within reach; however, the higher completion rates of secondary education eroded their position in the labour market (Parker 1998).

and teachers) did result in an increase in enrolment and literacy, the expansion of education had uneven effects, as indigenous people were not considered full citizens but potential workers and soldiers (Espinoza 2013).

Looking at the entire period, the process of education provision in Peru is, at heart, a question of local vs. central political power. After the War of the Pacific, with the guano riches gone, the central government failed to achieve national consolidation and local elites regained local power (Klaren 1986)³³. The decentralisation period is consistent with Mariscal and Sokoloff's thesis. The local elites, when in charge of provision of public education, chose not to allocate resources to it. This result questions the literature on the merits of decentralisation as a vehicle for more efficient provision of education. As Hazen (1978, p. 428) comments, «Elementary instruction had formerly been a municipal responsibility. Not surprisingly, facilities were everywhere inadequate». With the move to centralisation, the elite, to some extent, acquiesced to the national education project, driven not just by the nationalistic sentiment born from the War of the Pacific but lured by increasing funds from the central government. In this sense, our finding challenges the Mariscal and Sokoloff (2000) hypothesis and the critics of centralisation. Nevertheless, the advance in educational outcomes during this period was not fully encompassing or integrative; in districts with high concentrations of indigenous population, progress was slow.

Although the central government envisioned a national education plan, the lack of political participation of the economic minority shaped the extent and spread of this plan. Only 25 per cent of the registered voters were either indigenous or black according to the electoral census (1933), whereas the total population share was about 50 per cent. In addition, the number of voters from departments with high concentrations of indigenous population also had lower representation relative to other departments. Lima was over-represented with 25 per cent of all the registered voters while concentrating on 14 per cent of the population. Cuzco, Huancavelica and Puno had 9 per cent of the total registered voters while having over 22 per cent of the total population. The 1940 census revealed the failure of the educational campaign; enrolment in the sierra, where the bulk of both the total population and the indigenous population lived, had barely increased since 1902 (see Table 4) and according to Contreras (2002), the local elite resistance was to blame for this outcome.

7. CONCLUSIONS

In this paper, I have looked at the different educational policies and their effects on educational outcomes in Peru from 1876 to 1940. During this

³³ The literature on this period clearly portrays Peru as a fragmented country, with powerful local elites. See for example, Basadre (1968), Burga and Flores Galindo (1979), Caravedo (1979), Cotler (1978). For Cajamarca, see Taylor (1986) and for Huancavelica, see Favre (1965).

period, Peru embarked on an expansion of education under different degrees of fiscal centralisation. The results of these policies were an increase in literacy from a low of 18 per cent in 1876 to 42 per cent in 1940.

With the advent of the centralisation movement in 1905, the central government took charge of education, devoting a higher share of resources. The expansion of education was achieved under a more restrictive system of political participation where only literate adult males could vote. Under the new «Teaching State» (*Estado Docente*) with the influence of positivism and the new nationalistic shift, the elites negotiated their role in the new education plan; however, the influx of resources turned into support of the existing patronage networks.

The resistance to the federal initiatives was at times challenged but it did not fully stop the expansion of educational services. Despite the efforts, the articulation of these policies at the local level was not evenly distributed. The achievement gap between areas with high and low indigenous populations widened. The empirical analysis suggests that the constrained political access of the economic minority resulted in a suboptimal provision of educational services. The results imply that the lack of political representation had an enduring imprint on the policies forged and implemented. Given the more restrictive nature of the electoral process, the indigenous population's participation in the political process was constrained and its voice muted.

Acemoglu and Robinson (2000) argue that the extension of the franchise in the West was a strategic move by the elites to prevent social unrest. By allowing a more inclusive franchise, the elites were trading off stability today with more redistribution tomorrow. In the case of Peru, the elites restricted voting rights while at the same time expanding social services. What is surprising about the Peruvian case is that together with the more restrictive electoral constraints, the expansion of the education system occurred; albeit with a non-egalitarian reach.

Looking at the Americas, Mariscal and Sokoloff (2000) claim that political inequality, measured as access to voting, had a positive effect on school enrolment. This work views the elite as an undifferentiated group when in reality, especially in Peru, there was a distinction between national and local elites. The degree of alliance or resistance between the national and local elites yields different forms of education provision. These findings are consistent with Chaudhary *et al.* (2012) as they explore the dynamics between local and national elites and provision of education in the BRIC countries. For developed countries, Lindert (2004) noted that an elite democracy in which less than 40 per cent of the male adults actually voted did not produce more primary schooling than a non-democracy. His insights are in line with the experience observed in Peru under a limited democracy where only a quarter of all adult males were actually registered to vote.

REFERENCES

- ACEMOGLU, D.; JOHNSON, S., and ROBINSON, J. (2001): «The Colonial Origins of Comparative Development: An Empirical Investigation». *American Economic Review*, 91 (5), pp. 1369-1401.
- ACEMOGLU, D., and ROBINSON, J. (2000): «Why Did the West Extend the Franchise?». *The Quarterly Journal of Economics*, 115 (4), pp. 1167-1199.
- ALESINA, A. (2003): «Fractionalization». *Journal of Economic Growth*, 8 (2), pp. 155-94.
- ARROYO ABAD, L., and LINDERT, P. (2015): «Fiscal Redistribution in Latin America Since the Nineteenth Century», in L. Bertola, and J. Williamson (eds), *Latin American Inequality in the Long Run*. (forthcoming).
- BAEZ, V. (1977): *La enciclopedia de Cuba*. San Juan: Enciclopedia y Clásicos Cubanos.
- BARRANTES, E. (1989): *Historia de la educación en el Perú*. Lima: Mosca Azul Editores.
- BASADRE, J. (1968): *Historia de la República del Perú, 1822-1933*. Lima: Editorial Universitaria.
- BENAVOT, A., and RIDDLE, P. (1988): «The Expansion of Primary Education, 1870-1940: Trends and Issues». *Sociology of Education*, 61 (3), pp. 191-210.
- BURGA, M., and FLORES GALINDO, A. (1979): *Apogeo y crisis de la república aristocrática*. Lima: IEP.
- CARAVEDO, B. (1979): «Poder Central y Descentralización. Perú, 1931». *Apuntes*, 5 (9), pp. 111-129.
- CARTER, S. B.; GARTNER, S. S.; HAINES, M. R.; OLMSTEAD, A. L.; SUTCH, R., and WRIGHT, G. (eds) (2006): *Historical Statistics of the United States: Earliest Times to the Present*. Cambridge: Cambridge University Press.
- CCAHUANA CÓRDOVA, J. (2003): «Según la capacidad intelectual de cada uno: élites, estado y educación indígena a inicios del siglo XX». Pontificia Universidad Católica del Perú, Lima, PhD dissertation.
- CHAUDHARY, L. (2009): «Determinants of Primary Schooling in British India». *The Journal of Economic History*, 69, pp. 269-302.
- CHAUDHARY, L.; MUSACCHIO, A.; NAFZIGER, S., and YAN, S. (2012): «Big BRICS, Weak Foundations: The Beginning of Public Elementary Education in Brazil, Russia, India, and China». *Explorations in Economic History*, 49, pp. 221-240.
- COLE, J. (1984): *The Potosí mita, 1573-1700*. Stanford, CA: Stanford University Press.
- CONTRERAS, C. (1996a): «La Descentralización Fiscal en el Perú Después de la Guerra Con Chile, 1886-1895». *Relaciones*, 67/68, pp. 203-231.
- CONTRERAS, C. (1996b): «Maestros, Mistis y Campesinos en el Perú Rural del Siglo XX». *IEP Documento de Trabajo*, 80.
- CONTRERAS, C. (2000): «Centralismo y Descentralismo en la Historia del Perú Independiente». *JCAS Occasional Paper*, 4.
- CONTRERAS, C. (2002): «El centralismo peruano en perspectiva histórica». *IEP Documento de Trabajo*, 127.
- COTLER, J. (1978): *Clases, estado y nación en el Perú*. Lima: IEP.
- DELL, M. (2010): «The Persistent Effects of Peru's Mining Mita». *Econometrica*, 78 (6), pp. 1863-1903.
- DIRECCIÓN DE ESTADÍSTICA. (1878): *Censo general de la República del Perú, formado en 1876*. Lima: Imprenta del Teatro.
- DIRECCIÓN DE ESTADÍSTICA. (1924): *Statistical Abstract of Peru*. Lima: Casa Editora.
- DIRECCIÓN DE ESTADÍSTICA. (1933): *Extracto estadístico y censo electoral de la república*. Lima: Taller de linotipia.

- DIRECCIÓN DE ESTADÍSTICA. (1940): *Censo nacional de población y ocupación, 1940*. Lima: Banco de Crédito del Perú.
- DIRECCIÓN DE PRIMERA ENSEÑANZA. (1903): *Censo escolar de la República Peruana correspondiente al año 1902*. Lima: Imp. Torres Aquirre.
- EASTERLY, W., and LEVINE, R. (1997): «Africa's Growth Tragedy: Policies and Ethnic Divisions». *Quarterly Journal of Economics*, 111 (4), pp. 1203-1250.
- ENGERMAN, S., and SOKOLOFF, K. (1997): «Inequality, Institutions and Differential Paths of Growth Among New World Economies», in S. Haber (ed.), *How Latin America Fell Behind*. Stanford, CA: Stanford University Press, pp. 260-304.
- ESPIÑOZA, G. A. (2011): «Estado, comunidades locales y escuelas primarias en el departamento de Lima, Peru (1821-1905)». *Cuadernos de Historia*, 34, pp. 83-108.
- ESPIÑOZA, G. A. (2013): *Education and the State in Modern Peru: Primary Schooling in Lima, 1821-c. 1921*. New York, NY: Palgrave Macmillan.
- FAVRE, H. (1965): *La evolución de la situación de las haciendas en la región de Huancavelica*. Lima, Peru: IEP.
- GALLEGO, F. (2010): «Historical origins of schooling: The role of democracy and political decentralization». *Review of Economics and Statistics*, 92 (2), pp. 228-243.
- GO, S., and LINDERT, P. H. (2010): «The Uneven Rise of American Public Schools to 1850». *The Journal of Economic History*, 70, pp. 1-26.
- GODOY URRUTIA, C. (1952): *Analfabetismo en América*. Guatemala: Ministerio de Educación Pública.
- GRAHAM, R. (2010): *The Idea of Race in Latin America: 1870-1940*. Austin: University of Texas Press.
- HAZEN, D. C. (1978): «The Politics of Schooling in the Nonliterate Third World: The Case of Highland Peru». *History of Education Quarterly*, 18 (4), pp. 419-443.
- HEILMAN, J. (2010): *Before the Shining Path: Politics in Rural Ayacucho, 1895-1980*. Stanford, CA: Stanford University Press.
- KLAREN, P. (1986): «The Origins of Modern Peru, 1880-1930», in L. Bethell (ed.), *The Cambridge History of Latin America*, vol. 5. Cambridge: Cambridge University Press, pp. 587-640.
- LINDERT, P. H. (2004): *Growing Public*. Cambridge: Cambridge University Press.
- LINDERT, P. H. (2010): «The Unequal Lag in Education in Latin America: Follow the Money». *Revista de Historia Económica*, 28 (2), pp. 375-405.
- MANSO DE VELASCO, J. A., and AMAT Y JUNIENT, M. (1859): *Memoria de los vireyes que han gobernado el Peru durante el tiempo del coloniaje español*. Callao: Tipografía de Agustín Mena.
- MARIATEGUI, J. C. (1964): *Siete ensayos de interpretación de la realidad peruana*. Lima: Biblioteca Amauta.
- MARISCAL, E., and SOKOLOFF, K. L. (2000): «Schooling, Suffrage, and Persistence of Inequality in the Americas, 1800-1945», in S. Haber (ed.), *Political Institutions and Economic Growth in Latin America*. Stanford, CA: Hoover Institution Press, pp. 159-217.
- MAURO, P. (1995): «Corruption and Growth». *Quarterly Journal of Economics*, 110 (3), pp. 681-712.
- MINISTERIO DE HACIENDA Y COMERCIO. (1918): *Extracto estadístico del Perú*. Lima: Casa Editora.
- MINISTERIO DE HACIENDA Y COMERCIO. (1943): *Extracto estadístico del Perú*. Lima: Casa Editora.
- MITCHELL, B. R. (1998): *International Historical Statistics: The Americas, 1750-1993*. London: Macmillan Press.

- MUECKE, U. (2004): *Political Culture in Nineteenth Century Peru*. Pittsburgh: Pittsburgh University Press.
- NARVÁEZ, E. (2005): «El Estado Docente: Reflexiones para el Análisis y una Mirada al Caso de Venezuela (Del siglo XIX a 1945-1948)». *Docencia Universitaria*, VI (1), pp. 9-36.
- NEWLAND, C. (1994): «The Estado Docente and its Expansion: Spanish American Elementary Education, 1900-1950». *Journal of Latin American Studies*, 26 (2), pp. 449-467.
- NUÑEZ, F. (2005): «La participación electoral indígena bajo la Corte de Cadiz (1812-1814)», in Cristóbal Aljovín de Losada, and Silesio López (eds), *Historia de las elecciones en el Perú: Estudios sobre el gobierno representativo*. Lima: Instituto de Estudios Peruanos, pp. 362-394.
- OSSENBACH, G. (2010): «Las Relaciones Entre estado y La Educación en América Latina Durante los Siglos XIX y XX». *Docencia*, 40, pp. 23-31.
- PARKER, D. S. (1998): *The Idea of the Middle Class: White-Collar Workers and Peruvian Society, 1900-1950*. University Park: Pennsylvania State University.
- PÉRES-CAJÍAS, J. (2013): «The Expansion of Mass Education in Bolivia: Did the Revolution Overcome the Colonial Legacy?». *Bolivian Public Finances, 1882-2007*, Barcelona, Universitat de Barcelona, PhD dissertation.
- PLANAS SILVA, P. (2000): *La Democracia Volátil*. Lima: F. E. Stiftung.
- PODER EJECUTIVO. (1905): «Ley Nro. 162 - Reforma de la instrucción elemental».
- PORTOCARRERO, F.; BELTRÁN, A., and ROMERO, M. E. (1992): *Compendio estadístico del Perú, 1900-1990*. Lima: Universidad del Pacífico.
- PRESIDENTE DE LA REPÚBLICA. (1870): «Estableciendo en la capital de distrito, escuelas gratuitas de instrucción primaria».
- PRESIDENTE DE LA REPÚBLICA. (1873): «Ley orgánica de municipalidades».
- PRESIDENTE DE LA REPÚBLICA. (1886): «Disponiendo que el superávit del presupuesto se aplicará al sosteniendo de la instrucción primaria».
- PRESIDENTE DE LA REPÚBLICA. (1892a): «Estableciendo un impuesto a la sal que se extraiga de las Salinas de Ayacucho».
- PRESIDENTE DE LA REPÚBLICA. (1892b): «Reformando la Ley Electoral».
- PRESIDENTE DE LA REPÚBLICA. (1896): «Ley Electoral».
- PSACHAROPOULOS, G., and PATRINOS, H. (1994): *Indigenous People and Poverty in Latin America: An Empirical Analysis*. Washington, DC: World Bank.
- PUNTE BRUNKE, J. D. L. (1992): *Encomienda y encomenderos en el Perú*. Sevilla: Excma. Diputación de Sevilla.
- ROMERO, E. (1932): *El descentralismo*. Lima: Perú Actual.
- SEMINARIO, B., and BELTRÁN, A. (1998): *Crecimiento económico en el Perú: 1896-1995*. Lima: Universidad del Pacífico.
- SOBREVILLA PEREA, N. (2011): «Elecciones y Conflicto en la Historia del Perú». *Elecciones*, 10 (11), pp. 9-32.
- TAYLOR, L. (1986): «Bandits and Politics in Peru: Landlord and Peasant Violence in Hualgayoc 1900-30». *Cambridge Latin American Miniatures*, vol. 2. Cambridge: Centre of Latin American Studies, University of Cambridge.
- VALCARCEL, C. (1975): *Breve historia de la educación peruana*. Lima: Educación.
- WIEDNER, D. L. (1960): «Forced Labor in Colonial Peru». *The Americas*, 16 (4), pp. 357-383.
- ZAVALA, S. (1935): *La encomienda indiana*. Madrid: Imprenta Helénica.
- ZIMMERMANN, E. A. (1992): «Racial Ideas and Social Reform: Argentina, 1890-1916». *The Hispanic American Historical Review*, 72 (1), pp. 23-46.