

**Reading, Writing, and Religion:
Explaining Hindu and Muslim Literacy Differences in Colonial India**

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Abstract

In this paper, we analyze the factors underlying differences in Hindu and Muslim literacy rates in colonial India. Using a novel data set, we find the striking result that Muslim literacy is strongly and negatively correlated with the proportion of Muslims in the district. We then econometrically test three potential hypotheses to account for this result: the presence of lower returns to education for Muslims in Muslim-dominant districts; colonial education policies interacting with local preferences to stifle the development of primary schools; a “legacy of dependence” between religious and political authorities in districts formerly ruled by Muslim emperors, entailing significant power for Muslim scholars, many of whom encouraged Qur’an memorization rather than literacy.

INTRODUCTION

Human capital is often linked with higher income per-capita, greater worker productivity, higher life expectancy, and other factors positively associated with economic growth and development (see Schultz 1983, Dreze and Sen 1998 among others). Despite the social and private benefits of education, several countries, religions, and social groups have experienced significant hurdles in trying to increase their level of schooling.¹ In this paper, we analyze historical differences in educational attainment between Hindus and Muslims in British India and explore a variety of socio-economic explanations to account for the differential patterns of human capital accumulation observed across the two groups.

Although the economic and educational differences between Brahmans (the traditional elite caste of Hindus) and socially marginalized groups (such as the lower castes and tribes) have received some attention in the literature (Ghurye 1961; Srinivas 1998), we know little about the factors underlying the differences between Hindus and Muslims. We address this limitation by constructing a new historical dataset that merges information on Hindu and Muslim specific literacy rates with various economic and social characteristics of Indian districts in the major provinces of British India in the early 20th century.

Average Muslim literacy was below average Hindu literacy in this period (in 1911, the male Hindu literacy rate was 13.1% and the male Muslim literacy rate was 6.8%), but there was tremendous heterogeneity between provinces. For example, in Bengal 20.3% of Hindu males were able to read and write in any language as compared to only 7.7% of Muslim males. However, in other provinces such as Madras and the United Provinces, Muslims enjoyed comparable or even slightly higher literacy than Hindus. Female literacy was very low for both

¹ Fernandez and Rodrick (1991), Galor and Moav (2006), and Rajan (2009), among many others, focus on the role of policy.

religious groups, but the provincial patterns are very similar to those for males. These statistics suggest that the Muslim experience was not uniform within British India, and that perhaps local conditions interacted with historical and institutional factors, leading to marked differences in the patterns of human capital development across the two religious groups in different parts of the sub-continent.

At an individual level, the choice to invest in becoming literate involves a cost-benefit calculation whereby individual characteristics – namely ability, religious affiliation, and parental income and education – interact with community or district characteristics such as the level of local development and public spending on education. Outcomes at the district level are thus an aggregate measure of the underlying individual decisions, assuming that the probability that an individual who invests in education or literacy becomes literate is the same across groups, holding all else constant. With this simple education production function in mind, we econometrically explore the effects of different socio-economic variables on Hindu and Muslim literacy rates.

The preliminary findings suggest that both religions were responsive to demand side conditions such as the level of development and local occupational structure. However, Muslim literacy is *negatively* associated with the presence of other Muslims in the district, while there is little evidence of a similar relationship relating Hindu literacy to the presence of other Hindus in the area. The proportion of Muslims has a large and statistically significant correlation with overall Muslim literacy, gender-specific Muslim literacy, and age cohort-specific Muslim literacy. Moreover, this negative effect of the share of Muslims on Muslim literacy persists even after we control for unobservable differences across Indian provinces by including province fixed effects. We also find that Hindu literacy is *positively* associated with the presence of

Muslims in the district, which suggests a possible crowding out of Muslims (from the educational system), a crowding in of Hindus, or some combination of the two.

Our baseline regressions (without any economic and social controls) reveal that a 10 percentage point increase in the share of Muslims leads to a 1.2 to 1.8 percentage point decrease in the Muslim literacy rate and a 0.8 to 1.3 percentage increase in Hindu literacy, *ceteris paribus*. A variety of explanations can account for these interesting and important results.² First, it could simply be the case that returns to education for Muslims in Muslim dominant districts were lower in the colonial period as compared to the returns for Muslims in districts with a smaller population of Muslims. To address this issue, we add a variety of controls associated with district-level development that also may be correlated with literacy, such as urban population share, and the district occupational structure. Adding these controls weakens, but does not eliminate, the negative effect of the presence of Muslims on Muslim literacy, although it greatly weakens the positive association between the presence of Muslims and Hindu literacy.

Second, we test whether colonial educational policies interacted with local preferences to either ameliorate or exacerbate private demand for education. In order to improve outcomes among groups with below average literacy, the Imperial Government often set up model schools in districts with a larger proportion of Muslims, lower castes, and tribal groups. However, Chaudhary (2009a) shows that this policy was not particularly effective at increasing literacy among these groups. Primary schools were correlated with subsequent literacy, but colonial policy often focused on providing secondary schools that did not translate into substantial

² Our results bear a striking resemblance to other studies that have found similar negative effects on the educational attainment of minority groups living in areas heavily populated by their own group such as blacks in the United States (Margo 1990; Hanushek, Kain, and Rivkin 2004). While the explanations for some of these findings in US studies are related to differences in the supply of schooling, it could also be related to differential preferences within minority groups living in non-minority versus minority areas (Fryer and Austen-Smith 2005). We concentrate primarily on the former type of explanation in this paper.

increases in overall literacy. While a small number of educated Muslims may have benefited from these secondary schools, these policies may have hurt the development of Muslim literacy by not providing a larger number of primary schools. To address the effects of colonial policies, we include public spending on rural primary education as an additional control and also study the relationship between public schools and fraction Muslim. Our results are robust to the inclusion of public educational expenditures and as expected we find that districts with a larger share of Muslims *also* had more public schools. Hence, colonial policies cannot account for the negative Muslim effect.

Third and finally, there could be an omitted or unobservable factor driving these patterns on Muslim literacy. Any variable that differentially affects Muslim literacy in Muslim-dominant districts versus other districts can account for the negative result on the proportion of Muslims and Muslim literacy. For example, previous scholarship on Islam, from Max Weber to Bernard Lewis, suggests that attributes of Islamic culture – its “conservative” or “mystical” nature – may explain our finding by differentially affecting incentives to obtain education and literacy. Though we cannot disprove such hypotheses econometrically, we show that a more nuanced, historically motivated approach may help explain literacy differences.

Specifically, we argue that where Muslim political authorities ruled in India over long periods of time, especially during the Mughal reign (1526-1858), there was a strong relationship between political and religious (Muslim) authority that was an *exogenous* remnant of the birth of Islam and the type of institutions that it encouraged (for more, see Rubin 2009). When the Mughal Empire declined in the eighteenth century, the religious authorities entered the power vacuum and propagated their own agenda. One way it may have done this was by establishing

important institutions (Qur'an reading schools and madrasahs) that encouraged the memorization of the Qur'an, but may not have necessarily encouraged literacy.

This history suggests that the share of Muslims in a district may merely proxy for the historical situation in which certain Muslim-dominant regions established institutions that may have discouraged literacy. If this is true, then areas with weak Islamic political influence should be less affected by Muslim schools and thus the fraction of Muslims should not contribute to lower literacy in these districts. We test this hypothesis by controlling for the number of years that the district was under Muslim rule. Though this is admittedly a noisy proxy, we find that this variable has a negative and statistically significant effect on Muslim literacy and a positive and (mostly) statistically significant effect on Hindu literacy. The presence of other Muslims still has a negative and statistically significant effect on Muslim literacy, but the magnitude of the coefficient is smaller. A more nuanced approach that incorporates the effects of institutions on actions and outcomes may thus provide a more complete picture of the relationship between Hindu-Muslim literacy in this period, which has important implications for the differential economic development of these two groups within India over the 20th century.

HISTORICAL BACKGROUND: EDUCATION, COLONIZATION, AND LITERACY

Beginning in the mid-19th century, the former indigenous system of Indian schooling was largely replaced by a new state system of schooling introduced by the East India Company and developed further by the colonial government after the East India Company's rule came to an end in 1857. Schools were of two types under the former indigenous system: elite religious schools for students interested in a lifetime of higher education and local elementary schools where village boys were taught the 3 R's in the vernacular medium. The religious schools were

differentiated by religion (Hindu or Muslim) with upper caste Brahman teachers and pupils dominating the Hindu (i.e. Sanskrit) religious schools, although Hindus did occasionally teach at some of the Muslim schools (madrasahs). The local schools also encompassed Qur'an schools (i.e. maktabas) where Muslim boys learned to read the Qur'an. Some historians suggest that 8 to 12 percent of the male population was literate, but we interpret these estimates with caution, as a systematic enumeration of literacy did not begin until the early 20th century.³

Under the British system of education, publicly financed and managed schools (government and local board schools) functioned alongside privately managed aided and unaided schools. Private aided schools received public subsidies despite being privately managed, while private unaided schools did not receive any public money. Privately managed schools came under the authority of the state school system, as they conformed to official education standards and their students were allowed to take public examinations. Although many of the former indigenous schools disappeared over this period, some were successfully converted into public aided schools and the rest were classified as private unrecognized schools.⁴

The emphasis on both public and private schools is also reflected in the composition of educational spending in this period. Public sources of revenues represented 50 percent of total spending on education, increasing to 60 percent by the 1940s, while fees and private contributions accounted for the remaining 50 percent. Differences in land revenues were primarily responsible for differences in public revenues both across and within provinces. Districts had limited fiscal independence to set tax rates and they received a fraction of their land revenues to finance public investments on schools and local infrastructure. Although the tax rates

³ See Nurullah and Naik (1951) and Basu (1982) for details. Basu (1982) suggests that literacy was more commonplace among Brahmans and other upper caste males. Unfortunately, there is no systematic data available to gauge the spread of schooling or estimate the degree of literacy in the population.

⁴ See Progress of Education, Quinquennial Reviews (volumes 1897-1927). See Nurullah and Naik (1951), Basu (1974) and Ghosh (2000) for a historical examination of colonial Indian education.

were fixed for districts within the same province, they did vary across provinces. In general, the eastern provinces of Bengal and Bihar had lower public spending compared to the other provinces since they received lower land revenues due to the Permanent Settlement of 1793 that fixed land revenues in cash for perpetuity (Chaudhary 2009b).

As the new state system of education developed over the colonial period, there was a dramatic increase in spending, number of schools per-capita, and enrollment rates (Chaudhary 2009b). Per-capita spending increased nine-fold between 1881 and 1931 from 95 to 1000 rupees per 1000 persons and enrollment rates increased to 30 percent of the school age population by 1931. However, literacy patterns did not mirror these gains and less than 10 percent of the population of British India could read and write as late as 1931.⁵

However, the averages for British India mask the substantial heterogeneity across regions and across religions. Amongst Hindus, literacy patterns generally followed the social hierarchy of the caste system with Brahmans (the traditional upper castes) enjoying above average literacy compared to the lower castes. There were also significant differences in enrollment rates and literacy between Hindus more generally and Muslims, however, with Muslim literacy rates being lower on average than Hindu literacy rates. Moreover, Hindu-Muslim enrollment differentials were particularly large at the secondary and post-secondary level. Official reports often point to religion and poverty to account for the relative educational backwardness of Muslims in the colonial period. For example, the Fifth Quinquennial review (p. 282) states,

the backwardness [of Muslims] is attributable partly to poverty, partly to indifference, and partly to their educational wants not being the same as those of the remainder of the population amongst whom they live. They require their children to learn the Koran by rote at an age when other children are beginning to make progress in secular education, and they have a preference for the use of

⁵ To account for this discrepancy between enrollment and literacy, British officials frequently noted the general wastage and inefficiency of the Indian education system. See Progress of Education, Tenth Quinquennial Review (1927-32).

Urdu as a medium of instruction, even when it is not the vernacular language of the locality. Both these causes operate to make the common schools less attractive to Muhammadans than to members of other creeds and also to make it more difficult for Government to provide schools suited to their special needs.

Colonial policies tried to bridge the gap between the two religions by offering scholarships to Muslim students and public subsidies to indigenous Muslim religious schools that were willing to introduce secular education. However, they often faced heavy resistance from local Muslim communities that did not view the new state schools in the same positive light as Hindus. Although colonial efforts were partially successful in raising Muslim primary school enrollment, Hindu-Muslim differences in both secondary school enrollment and literacy persisted till the end of colonial rule.

Why did these differences in enrollment and literacy exist and continue to persist over the colonial period? Were the British correct in attributing the differences to the relative poverty of Muslims as well as a difference in “educational wants”? Numerous factors may have caused these differences. In the following sections we attempt to isolate these factors, employing a unique data set of Hindu and Muslim literacy rates in the early twentieth century as well as various socio-economic indicators in order to shed light on the causes underlying differences in Hindu and Muslim literacy rates.

DATA DESCRIPTION

For the empirical analysis, we assemble a new dataset that merges information from the Indian censuses of 1911 and 1921 to data reported in the Indian District Gazetteers. The dataset covers all districts in the provinces of Assam, Bengal, Bihar and Orissa, Bombay, Central

Province and Berar, Madras, Punjab and United Provinces.⁶ These provinces jointly account for more than 95 percent of the population of British India. We extract data on the social, educational, occupational, and developmental structure of each district from the colonial censuses and rely on the Indian district gazetteers for the number of schools, pupils, income and land tax revenues, and public spending on rural primary education.

Although literacy was enumerated in the earlier censuses, we begin the analysis in 1911 because the definition and enumeration of literates in previous censuses was inconsistent across provinces. Beginning in 1911, a uniform definition of literacy was adopted whereby an individual that could both read and write in any language was enumerated as literate. Official discussions suggest that the definition was clearly understood by the enumerators and the literacy data are considered reasonably accurate.⁷ However, the censuses do note that Muslims were occasionally frustrated by this definition because even though they could read certain passages from the Qur'an, the enumerators recorded them as illiterate because they could not write.⁸ We focus on measures of total, gender-specific, and cohort-specific (for the population aged 10 to 20) literacy in 1911 and 1921 disaggregated for Hindus and Muslims.

The age-specific measures of literacy may also raise concerns of measurement error because individuals often did not know their age. Since numeracy and literacy generally go hand

⁶ The analysis excludes the pure urban cities of Bombay, Calcutta and Madras because they were so different socially and economically from the largely rural districts of British India. We also exclude the remote North Western Frontier Province, Baluchistan, and Burma.

⁷ In the pre-1911 censuses no specific guidelines were given to enumerators to test for literacy, which led to substantial variation in the methods adopted across provinces. Although officials point to certain problems with the post-1911 enumeration such as enumerators on occasion adopting school standards, they do indicate, "the simple criterion laid down was easily understood and sensibly interpreted" (Census of India 1921, Volume I – Report, Chapter VIII).

⁸ Although this may lead to measurement error in the Muslim literacy rate data, there is no reason to believe that this error would differ in high-Muslim versus low-Muslim districts. If anything, measurement error of this type should make it more difficult to find a negative effect of Muslims on Muslim literacy because districts with more Muslims were more likely to have Muslim census enumerators that may have been sympathetic to this argument.

in hand, this is to be expected for a country like India in the early 20th century.⁹ Census discussions suggest that uncertainty about age was the primary reason for the inaccuracy, so the measurement error in the cohort specific measure should be classical in nature that still yields consistent OLS estimates.

In addition to literacy, we used the 1911 and 1921 censuses to construct measures of development such as urban population share, population density, and the district occupational structure. Scholars have suggested that some of the smaller occupational categories may be inaccurate, hence we focus on broader categories: the share of the population supported by agriculture, commerce, industry, and professionals. We also extracted information on the population share of important caste and religious groups: Muslims, Christians, and tribes. Moreover, we also constructed a measure of caste and religious fragmentation to capture the level of diversity that has been linked to an under-provision of public goods in a variety of contexts including British India.¹⁰

From the district gazetteers, we extracted data on public educational spending by rural district boards and income tax revenues.¹¹ Income taxes and district board expenditures were missing for several districts in the 1921 cross-section. We used the 1911 income taxes for the 1921 cross-section in provinces where this data was missing since the variation within provinces is similar although the levels may have increased between 1911 and 1921.¹² Income taxes are a crude proxy of district income and should be interpreted with caution because these taxes were

⁹ Numeracy was a common statistical problem with the 19th century European censuses as well.

¹⁰ See Chaudhary (2009a).

¹¹ Rural districts boards were constituted in the early 1880's and managed the provision of local public goods such as infrastructure, education, and medical services at the district level.

¹² Likewise, we only use 1911 district board expenditures in the analysis, because public spending changed in this decade due to the Montague Chelmsford reforms, which ushered in the period of Dyarchy under which British administrators worked alongside elected Indian ministers in provincial legislatures. See Kumar (1982) for an overview of the colonial fiscal system.

levied on a very small share of individuals in the formal sector of the economy. Nonetheless, this is the best available local measure of historical income.

Table 1 reports the summary statistics of the main variables. Hindu and Muslim literacy rates as well as the population share of each religion are shown separately by province in the top half of the table, while the different socio-economic variables are shown by year in the bottom half. Overall literacy was very low in British India both among Hindus and Muslims averaging around 7 percent across districts and religions. The average masks the substantial regional variations with Muslim literacy ranging from as high as 12 percent in the southern province of Madras to as low as 2.6 percent in the northern province of Punjab. Some of this variation is related to the Muslim population share. For example, Muslims enjoy above average literacy in provinces where they form a smaller share of the population such as Madras and Central Provinces (4.2 and 6.7 percent respectively) versus provinces such as Bengal and Punjab where they comprise almost fifty percent of the population. We explore this relationship between Hindu-Muslim literacy and their respective population shares in more detail in the next section.¹³

[INSERT TABLE 1 HERE]

LITERACY RATES AND RELIGIOUS POPULATION

The summary statistics shown in Table 1 suggest that the Muslim population share may influence Hindu and Muslim literacy rates in British India. To examine this relationship, we run a baseline regression relating the share of the Hindu and Muslim population to Hindu and Muslim literacy in 1911 and 1921. Table 2A reports the findings for 1911 in the top panel and

¹³ Similar to literacy, other socio-economic indicators such as urbanization and the share of the commercial population are relatively stagnant between 1911 and 1921. Moreover, the low levels of urbanization and commercialization highlight the remarkable dominance of agriculture in the early 20th century Indian economy (agriculture is the omitted occupational group in the table).

for 1921 in the bottom panel. It is evident that the Muslim population is strongly correlated with the educational performance of both Hindus and Muslims. Columns 1 and 2 suggest that a larger proportion of Muslims has a positive and statistically significant impact on Hindu literacy but a negative impact on Muslim literacy in both the 1911 and 1921 cross-sections. A 10 percentage point increase in fraction Muslim is associated with a 1 percentage point increase in 1911 Hindu literacy and a 1.4 percentage point decrease in 1911 Muslim literacy. We test for potential non-linearities in the relationship between literacy and religious population share in columns 3 and 4 by including the square of fraction Hindu and Muslim. The coefficients on the squared terms suggest that the relationship between Muslim literacy and fraction Muslims is highly non-linear with more Muslims contributing to lower Muslim literacy at decreasing rate. The relationship between fraction Muslim and Hindu literacy is not robust to including the squared terms in the 1911 panel, but it remains robust in the 1921 panel.

[INSERT TABLE 2A HERE]

To test whether positive regional selection alone is driving the results on Fraction Muslim, columns five to eight control for province fixed effects and focus on the within province variation. The correlation between fraction Muslim and both Hindu and Muslim literacy remains negative and statistically significant at the 1 percent level for both the 1911 and 1921 cross-sections although the result for Hindu literacy is insignificant for the 1911 cross-section. Fraction Muslim thus appears to be a significant determinant of Muslim literacy in the colonial period. Muslims were more likely to be literate in districts where they comprised a smaller share of the population.

Tables 2B and 2C report similar patterns on age and gender-specific literacy rates. As seen in table 2B, fraction Muslim is negatively correlated with Muslim literacy rates in the

population aged 10 to 20 although the magnitude of the effect is slightly larger for total literacy. Moreover, fraction Muslim also negatively affects both Muslim male and female literacy rates (table 2C). The results are remarkably robust across the two cross-sections and across specifications that include province dummies. Why does fraction Muslim have a negative effect on Muslim literacy? We do not observe any such negative impact of fraction Hindus on Hindu literacy. Is fraction Muslim a proxy for differential returns to literacy in Muslim dominant districts or is colonial policy interacting with fraction Muslim to produce this correlation? In the next section, we dig deeper into this result.

[INSERT TABLES 2B AND 2C HERE]

WHY DOES THE PRESENCE OF MUSLIMS AFFECT LITERACY?

At an individual level, the decision to invest in literacy involves a simple cost and benefit calculation. If the benefits or returns to literacy (higher wages, social status, and so forth) exceed the costs (opportunity cost of time, school fees, and the like), then an individual will invest in literacy. This decision making process is a function of individual characteristics such as ability, family background, parental education, and social and religious affiliation as well as community or district characteristics such as economic conditions and public educational investments. Literacy rates at the district-level are thus a function of the aggregate costs and benefits of literacy.

Given this framework, one obvious explanation of our finding on Muslim literacy is that fraction Muslim is capturing some aspect of lower returns to Muslim literacy. For example, if Muslims lived in less developed or poorer districts, then fraction Muslim may just be capturing the negative effects of poverty on education. Colonial discussions often note the poor economic

status of Muslims in certain parts of the subcontinent such as Bengal where they were more likely to be poor agricultural laborers (Census of India 1911). To test whether fraction Muslim is just a proxy for lower returns to Muslim literacy, we include a variety of variables to capture differences in the costs and benefits of literacy.

First, parental education is a critical input into the schooling decision, so we control for the population share supported by professionals (doctors, lawyers, and so forth) in a district. This is perhaps a lower bound on the effect of family education since it limits the educated parental population to the set of professionals, but it is the best available measure given data constraints. We also introduce variables to capture the share of the population supported by commerce and industry because economic structure can also affect schooling. For example, the opportunity cost of time for a rural child who worked in the field was likely higher than for other children.¹⁴

Because of the high degree of social heterogeneity in India, we also include a measure of caste and religious fragmentation that has a strong negative effect on the supply of private primary schools in the colonial period (Chaudhary 2009a) and could potentially affect the demand for education in Muslim majority districts. In addition, we control for other religious minorities, namely tribal groups and Christians. To control for differences in income and development, we include income tax revenues per-capita, the urbanization rate, and a dummy for coastal districts. In the absence of more detailed data, these three measures jointly are a good proxy for average income in the district.

Tables 3A, 3B, and 3C report the findings on Hindu and Muslim literacy controlling for the social and development variables described above. The literacy outcomes in these tables are the same as in tables 2A, 2B, and 2C. Although the coefficients on fraction Muslim are

¹⁴ The population share supported by agriculture is the omitted category in all the regressions.

somewhat smaller in table 3A as compared to table 2A, they still have a negative and statistically significant impact on Muslim literacy.¹⁵ A 10 percent increase in fraction Muslim translates into a 0.8 percentage point decrease in 1911 Muslim literacy without province fixed effects (column 2) and a 1.4 percentage point decrease controlling for province dummies (column 6). Our socio-economic controls thus cut down almost 40 percent of the fraction Muslim effect in the inter-province specifications (no province FE), but the difference in coefficients is not as striking for the within province comparisons. The results are again robust to different cross-sections (1911 or 1921), to province fixed effects, and to alternate literacy measures namely literacy in the population aged 10 to 20 (table 3B) and gender-specific literacy (table 3C).

[INSERT TABLES 3A, 3B AND 3C HERE]

Despite our vast set of controls, we cannot rule out that fraction Muslim is capturing some dimension of unobservable heterogeneity related to lower returns. For example, our occupational measures only control for overall commercial and professional population of the districts and not the Muslim-specific commercial or professional occupation. Clearly, the Muslim specific occupational controls would be preferable but they are very likely to be correlated to our existing controls and it is hard to imagine an omitted variable related to differential returns but completely uncorrelated with our economic controls. Thus, while these regressions do not completely rule out low returns as an explanation, they do suggest that returns alone are likely not driving the fraction Muslim result.

Another potential explanation could be the interaction between colonial policies and fraction Muslim. British officials were cognizant of the substantial differences between Hindu and Muslim educational outcomes in certain provinces and they adopted a variety of policies to increase enrollment rates and literacy in Muslim dominant districts. As part of these policies,

¹⁵ We do not report coefficients on the individual controls, but they are available upon request.

Muslim students were eligible for scholarships and reduced fees in public schools, and the colonial government established a number of schools in Muslim majority districts (Progress of Education in India, Quinquennial Reviews, 1897-1927).

This suggests that colonial policies would make it more unlikely to find a negative coefficient on the fraction Muslim variable in the Muslim literacy regressions because of the larger presence of public schools. Table 4 includes per-capita public educational expenditures by rural district boards as a control variable and the findings confirm this hypothesis. Although rural district board expenditures do not capture total public spending on education, they were an important category of public investments and accounted for almost 75 percent of public spending on rural primary education. The coefficient on fraction Muslim in table 4 is lower in the specification without province FE (column 2), but the coefficient on fraction Muslim (column 6) is comparable to table 3A and higher than table 2A in specifications that control for province FE. Moreover, our socio-economic variables appear to soak up most of the variation associated with public investments in the within province comparisons, as the coefficients on Muslim are similar across tables 3A and 4. We do not report the results separately for the 10 to 20 aged literacy rate or the gender-specific rates, but the results on fraction Muslim are robust to including public educational expenditures for those outcomes as well. Table 4 thus broadly confirms that public investments are not driving the negative effect of fraction Muslim on Muslim literacy.

[INSERT TABLE 4 HERE]

Another potential channel from fraction Muslim to lower literacy is that districts with larger Muslim populations may have lower Muslim enrollment due to the unavailability of schools. A related hypothesis is that there may be comparable enrollment between Hindus and Muslims, but Muslims may attend certain kind of schools that are not effective at increasing

literacy. To shed light on these possibilities, we collected data on different school-types and Muslim enrollment rates for a subset of districts where the data were available.¹⁶ In table 5, we explore the relationship between fraction Muslim and the different school-types in the colonial period and the results broadly confirm the historical evidence on colonial policy. Fraction Muslim is positively correlated with public schools that were set up by the colonial government, negatively correlated with recognized private schools, and positively correlated with unrecognized Qur'an reading schools.

[INSERT TABLE 5 HERE]

The regressions suggest that the presence of Muslims has a negative effect on literacy *despite* being positively associated with greater per-capita public schooling. One explanation for lower Muslim literacy in Muslim dominant districts may be that they contain a smaller number of recognized private schools; Chaudhary (2009a) finds that recognized schools were positively correlated with subsequent literacy compared to unrecognized schools. Moreover, table 5 shows that Muslims were more likely to establish religious schools as opposed to recognized private schools with secular curricula. Since Muslim enrollment rates were also smaller in districts with a larger proportion of Muslims, this suggests that areas with more Muslims had fewer schools *and* the wrong types of schools from a literacy perspective. That is, fewer Muslims attended any school in districts with more Muslims and they were more likely to attend either religious schools or public government schools.¹⁷

¹⁶ The data on public and private schools is reported for districts in Bengal, Bihar and Orissa, Bombay, Madras and Punjab. Information on Qur'an schools was only available for Bengal and Bihar and Orissa. The number of Muslim students was reported for Bengal, Bihar and Orissa, and Bombay. The main results on fraction Muslim and Muslim literacy hold for the sample of districts with the more detailed school data. These results are available upon request.

¹⁷ However, the public schools may not have conferred substantial benefits to Muslim literacy because they were often secondary schools that were not as strongly associated with higher literacy in this period relative to primary schools (Chaudhary 2009a).

The presence of other Muslims remains significantly correlated with Muslim literacy even after accounting for social and developmental differences across districts and the effects of colonial policies. How should we interpret this finding? The above analysis on schools offers a potential mechanism linking the two, namely highly Muslim regions had fewer schools that were positively associated with literacy. This begs a larger question: *why* did Muslim dominant districts contain fewer schools that promoted literacy (after controlling for social and development characteristics)? Are there certain institutional features that discouraged the provision of such schools in highly Muslim regions? If so, the “fraction Muslim” variable could be a proxy for a broader institutional relationship that undermined the development of human capital. In the following section we investigate one such institutional relationship (between Islamic political and religious authorities) which may have had a salient effect on incentives to acquire education.

THE LASTING EFFECTS OF RELIGIOUS AND POLITICAL INSTITUTIONS

The observed differences in literacy rates may be a result of institutional arrangements that the previous regressions do not account for. In particular, educational institutions in regions where Islamic religious authorities were historically strong may have provided a strong disincentive for Muslims to attain skills that promote literacy while perhaps simultaneously crowding in Hindus to the public school system.

The logic underlying this hypothesis follows implicitly from Rubin (2009), who analyzes the legitimizing function of Muslim religious authorities vis-à-vis political authorities.¹⁸ Rubin suggests that a high degree of dependence on religious authorities entails a situation in which

¹⁸ For more on the role that religious authorities have played in legitimizing the state in the Islamic world, see Greif (2002), Rubin (2009), Coşgel, Miceli, and Ahmed (2009), and Coşgel, Miceli, and Rubin (2009). For more on Hinduism as a legitimizing force in India in Colonial India, see Buultjens (1986).

economically inhibitive laws and norms, such as those discouraging literacy, became self-enforcing: there was less incentive for individuals to transgress religious dictates (since doing so involved both worldly and other-worldly costs) which in turn placed little pressure on political and religious authorities to update laws and doctrine. In turn, there were few avenues through which such societies could “escape” inhibitive equilibria.

This logic may shed light on the case of the colonial India. Previous Muslim rulers in India, especially the Mughals, had roots closely tied to previous Middle Eastern empires, sharing institutions, learned languages, ideology, and ruling personnel (Metcalf 1982; Eaton 1993; Kozlowski 1995). Like other Islamic rulers, Mughal leadership was based on what Greif (2002) calls “faith-based legitimacy”, whereby political rule was legitimate only when it complied with Islamic dictates.¹⁹ This entailed a situation in which Muslim religious authorities had some power vis-à-vis political authorities, though the latter dominated for much of the Mughal reign. One way that this dynamic manifested itself was through significant donations, often via the *waqf*, given to religious authorities and institutions by political authorities in order to legitimate their power (Kozlowski 1985, 1995; Eaton 1993).²⁰ This encouraged further donations by the nobility, gentry, and merchants and hence greatly increased the scope of religious power.

In India, this relationship became especially important in the 18th century, when the Mughal Empire began to decline. In the ensuing power vacuum, religious authorities were easily able to step in and increase their power, entailing a dramatic expansion of their prerogatives in relation to social, economic, and educational institutions. British policies facilitated this change, as they promoted the use of Islamic law for Muslims. Although some aspects of British law

¹⁹ Anderson (1993) and Eaton (1993) stress the importance of abiding by Muslim dictates for maintaining legitimacy amongst Islamic leaders in India.

²⁰ Funding of religious schools has been an important legitimizing force throughout Islamic history. For more, see Kozlowski (1995) and Berkey (2007).

eventually prevailed, the ‘ulama (legal-religious scholars) were the only group who could fill this void in the absence of a Muslim state (Metcalf 1982, ch. 1-2; Anderson 1993).

One result of this institutional heritage was a marked increase in Islamic schools (madrasahs, maktabas, and Qur’an reading schools) in areas formerly ruled by Muslims. Although the curriculum of these schools varied widely throughout India, anecdotal evidence suggests that these schools encouraged the ability to read and write to a much lesser extent than the public schools established by colonial authorities. Many of these schools promoted Qur’an memorization and recitation of other religious sciences instead of skills associated with literacy (Kozlowski 1985).²¹ This was a result of the significance of oral transmission in Islamic history, which was the most important means by which religious scholars maintained their monopoly on knowledge (Eaton 1993; Berkey 2007).²² Islamic schools were popular in many parts of India and were able to support themselves using private contributions instead of British grant-in-aids, which would have permitted the British control over the curriculum (Metcalf 1982, ch.3). This permitted religious learning to remain the core of the curriculum since the British policy of religious neutrality meant that formal religious study was supposed to be excluded from instruction in publicly funded schools (Zaman 1999).

Theoretically, this phenomenon has two implications. For one, it suggests that Muslim literacy should be lower in areas where Islamic (and especially Mughal) political authorities

²¹ This by no means entails that all Islamic schools discouraged literacy or even those that did never offered anything in the curriculum which would promote literacy. Though this was particularly true of the Deobandi school that Metcalf (1982) analyzed in great detail. Indeed, Metcalf (1982), Kozlowski (1985), and Zaman (1999) show instances of Islamic schools which promoted literacy. However, on the margin, the probability of a student becoming literate who attended a public funded school must have been greater than one who attended an Islamic school, for reasons provided above. For example, the British formed the ill-fated Delhi College in 1825 because the private madrasahs spent too much time on the Qur’an and there was no regular system of attendance (Metcalf 1982). The British did sponsor some madrasahs, as long as the content of the curriculum was deemed sufficiently “useful” (Zaman 1999).

²² Eaton (1993, p. 296) provides anecdotal evidence that many Indian mullās themselves could not read, but that they were understood by the villagers to be tapping into a deeper, otherworldly source of power.

dominated in the past. This may help explain the result that Muslim literacy rate is negatively associated with the presence of other Muslims, as regions formerly ruled by Muslims have somewhat higher Muslim populations (the correlation between years of Muslim rule and fraction Muslim is 0.206). Moreover, because these schools primarily relied on private donations, they needed a sufficiently large (and wealthy) Muslim population for financial support. The other implication is that this phenomenon may have “crowded in” Hindus into the public school system. With more Muslims going to private Muslim schools, public money may have been diverted toward non-Muslim students, which could help explain the positive coefficient on fraction Muslim in the Hindu literacy regressions. These predictions are aligned with Kozlowski’s (1985, p. 64-65) insights:

In the second half of the nineteenth century ... Hindus began to abandon some of the traditions of the Mughal elite and enrol (sic) in schools established on the British model which concentrated on learning English. ... [D]espite the competition from “modern” schools, many Muslims continued to send their sons to schools which taught the old curriculum by the old methods of recitation and memorization.

To test this hypothesis, we construct a new variable, “years of Muslim rule” using maps from Robinson (1982, p. 59, 113), who delineates the range for the years of onset of Muslim rule and the years of conclusion of Muslim rule throughout British India.²³ We employ the average beginning and end date in our regressions, but the results are robust to using lower or upper bounds of Muslim rule. Summary statistics of this variable broken down by province are shown in Table 6.

[INSERT TABLE 6 HERE]

²³ The dates for the onset of Muslim rule are pre-1530, 1530-1605, and 1605-1707. The dates for the cessation of Muslim rule are pre-1765, 1765-1805, and post-1805. We assume that the upper bound for the onset of Muslim rule begins in 1200 and the upper bound for the cessation of Muslim rule is 1850.

We employ this variable as a proxy for the entrenchment of Muslim political authority. The logic laid out above suggests that where Muslim political authority were entrenched, religious authorities were also propagated, permitting them to enter the power vacuum left by the fall of the Mughals. In turn, schools which discouraged literacy should be more prevalent in these regions, since these schools were established by religious authorities to maintain their monopoly over religious learning and thus maintain their position vis-à-vis secular authorities.

Tables 7A through 7C report the findings on Hindu and Muslim literacy controlling for years of Muslim rule and the same set of socio-economic variables as in tables 3A through 3C. We find in all regressions (except for those on female literacy) that the years of Muslim rule has a negative and significant effect on literacy. That is, a legacy of Muslim rule entails a situation in which incentive to attain literacy is diminished. Moreover, the results also confirm other testable predictions arising from the suggested link between Muslim rule and literacy. For one, the coefficient on Muslim rule in the Hindu literacy regression is positive and significant in the 1921 cross-section after accounting for province fixed effects, suggesting that Hindus may have been “crowded in” to the public school system where Muslims ruled. This result follows from the above logic because it is in these regions that Muslims chose private schools while the British provided greater funding for public schools. Moreover, these results are robust to within province or across province comparisons. As seen in table 6, the within province variation in length of Muslim rule is relatively small relative to the across province variation, which suggests that even though intra-province variation is much less than inter-province variation, small differences in years of Muslim rule has a salient effect on literacy rates.

[INSERT TABLES 7A, 7B AND 7C HERE]

The coefficients on fraction Muslim, while still significant in many of these regressions, have a smaller magnitude and significance level in all regressions (except for female literacy) compared to those in tables 3A-3C (which are the same as 7A-7C but without the years of Muslim rule variable). In the fixed effect regressions (column 6 in table 7A and 7B, column 2 in table 7C), the coefficient on fraction Muslim drops between 29% and 49% compared to regressions in which years of Muslim rule is not employed as a control. Hence, although the addition of this control does not eliminate the importance of the presence of Muslims on literacy, it significantly diminishes the importance of this coefficient.

The findings on gender-specific literacy are also of interest. An increase of 100 years of Muslim rule translates into a 0.26 to 0.30 percentage point decrease in male literacy, which is non-trivial considering that some regions of India were subject to Muslim rule for over five centuries. On the other hand, Muslim rule does not have a significant effect on literacy for Muslim or Hindu females. This is expected – the religious schools that attracted Muslim youths (and discouraged literacy) were almost solely open to males. Hence, the pathway through which Muslim rule affects literacy should only affect male literacy, not female literacy. The regressions thus confirm the testable predictions arising from the historical narrative: length of Muslim rule negatively affected male Muslim literacy, positively affected Hindu literacy, and did not affect female literacy.

Years of Muslim rule is an admittedly crude proxy for the pathway by which a “legacy of dependence” permitted religious authorities to usurp power and thus promote schools that discouraged literacy. There are numerous cultural, economic, religious, and militaristic phenomena associated with years of Muslim rule that are not associated with the pathway proposed in this paper. However, we view the use of this proxy as a successful first-order attempt

at showing that broader, institutional features may underlie the diverging paths of human capital accumulation between groups rather than purely cultural factors. Though there are possibly other ways that “years of Muslim rule” may affect literacy rates in the 20th century, we believe that the institutional pathway that we propose in this section is the most reasonable one. Although these results highlight the need of a more nuanced, formally modeled and specified approach, this exercise suggests that we can start chipping away at explanations relying on cultural explanations with even the bluntest of institutional controls.

BROADER SIGNIFICANCE

Differences in human capital accumulation are vital components of differences in broader economic outcomes both across countries and across different groups within the same country. In this paper, we attempt to shed light on the conditions under which Muslims (a minority group) attained less human capital than Hindus (the majority group) in early 20th-century India. Are the factors leading to these differences cultural, institutional, demographic, or something else?

Our baseline specifications suggest that Muslim literacy rates are negatively associated with the presence of other Muslims in the district. This result is robust to various social, economic, and educational controls, although adding these controls weakens the result. We also suggest that the institutional history of the region may have played a role in discouraging literacy amongst Muslims. Our analysis shows that this history did indeed play a salient role in determining literacy rates, but it does not completely eliminate the negative Muslim effect on Muslim literacy.

What, then, can account for this result? Is there something “inherent in Islam” that discourages economically beneficial actions (as those in the Weberian school believe), or are our

results not capturing all of the salient features that affect literacy? We urge extreme caution in accepting the former view, and instead side with the latter. One major reason we are not ready to accept purely cultural explanations is that data constraints prevent us from testing two important avenues which may have affected Muslim literacy. First, the regional variation in fraction Muslim could be reflective of the positive conversion of Muslims in certain parts of the subcontinent, which continues to influence educational outcomes as late as the 20th century. If lower caste Hindus converted to Islam in order to escape the social and economic degradation imposed by the caste system, then it may be the case that Muslims have poor economic status (and hence less access to human capital) because individuals of lower socio-economic status *selected* into Islam, not the other way around.²⁴ Our development variables can only partially control for this phenomenon – we have data at the district level, but it is not delineated by religion. This hypothesis suggests that at least part of our result may stem from a negative selection of Muslims in Muslim-dominant districts, and that we should control for Muslim occupational structure within a district instead of average district-level occupational structures. Future research should shed light on the importance of this hypothesis.

Second, we stress that our institutional proxy, “years of Muslim rule”, is extremely noisy. The number of years that a district was subject to Muslim rule may entail any number of phenomena, though we argue (through analytical narrative and anecdotal evidence) that the most salient and direct effect of this variable was discouraging Muslim literacy via the promotion of Islamic schools. Thus, while we suggest that the “fraction Muslim” variable may be a proxy for this phenomenon, our variable on years of Muslim rule is yet another proxy albeit a more precise one. Indeed, the great degree of significance on the years of Muslim rule coefficient, even

²⁴ It is unlikely that selection bias arose from migration of Muslims, as migration levels were very low in British India.

controlling for province fixed effects, suggests that this variable (and in turn the institutional arrangement it proxies for) is a salient factor in determining Muslim literacy. A more direct measure of historical political and religious institutions would help shed more light on this relationship, but must be left for future research, as data constraints currently prohibit us from creating such a variable.

In sum, we view this paper as a first step in understanding the factors which affect human capital accumulation across different groups. We are able to chip away at cultural explanations that could rely on the argument, “where there are more Muslims, there are worse economic outcomes.” We show that controlling for socio-economic variables and particularly institutional variables helps reduce, but not eliminate, the effect of the presence of Muslims on Muslim literacy. More broadly, this analysis suggests that the “long hand of history” has played some role in subsequent differences in literacy rates through the persistence of institutions which discouraged literacy. However, we cannot at the moment say just how large of a role this institutional history has played. To do this, we need a more nuanced approach that analyzes the direct pathways linking institutional history to literacy outcomes, which we leave for future research.

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TABLES

TABLE 1: SUMMARY STATISTICS

Variable	Hindu			Muslim		
	Obs.	Mean	Std Dev	Obs	Mean	Std Dev
Literacy Rate	410	7.4%	5.6%	396	6.8%	5.2%
<i>Assam</i>	16	7.0%	2.0%	13	5.2%	3.2%
<i>Bengal</i>	54	11.9%	3.5%	52	5.8%	2.8%
<i>Bihar and Orissa</i>	42	4.5%	1.4%	38	5.9%	3.8%
<i>Bombay and Sind</i>	49	9.2%	5.6%	49	8.3%	5.7%
<i>Central Provinces</i>	44	4.3%	1.4%	39	11.9%	4.2%
<i>Madras</i>	50	8.3%	4.7%	50	12.3%	6.1%
<i>Punjab</i>	59	11.5%	9.1%	59	2.6%	3.4%
<i>United Provinces</i>	96	3.6%	1.5%	96	4.6%	2.8%
Population Share	410	69.7%	27.3%	410	23.6%	26.2%
<i>Assam</i>	16	64.9%	13.3%	16	20.4%	18.9%
<i>Bengal</i>	54	46.0%	23.1%	54	47.4%	26.5%
<i>Bihar and Orissa</i>	42	81.2%	17.3%	42	9.0%	8.5%
<i>Bombay and Sind</i>	49	71.1%	29.3%	49	25.9%	30.3%
<i>Central Provinces</i>	44	80.7%	13.2%	44	4.2%	2.7%
<i>Madras</i>	50	89.0%	7.6%	50	6.7%	6.3%
<i>Punjab</i>	59	33.1%	26.5%	59	55.8%	26.7%
<i>United Provinces</i>	96	85.3%	8.6%	96	13.7%	8.0%
		1911			1921	
Hindu Literacy Rate	204	7.1%	6.2%	206	7.7%	5.0%
Muslim Literacy Rate	195	6.2%	4.8%	201	7.3%	5.6%
Fraction Hindu	204	69.9%	27.2%	206	69.4%	27.4%
Fraction Brahman	204	5.0%	4.3%	206	5.0%	4.3%
Fraction Low Castes	204	15.8%	8.1%	206	14.5%	8.3%
Fraction Muslim	204	23.2%	26.2%	206	23.9%	26.3%
Fraction Christian	204	1.0%	2.0%	206	1.2%	2.2%
Fraction Tribes	204	3.7%	9.5%	206	3.3%	8.5%
Caste and Religious Fragmentation	204	0.74	0.18	206	0.73	0.19
Fraction Urban	204	9.9%	10.5%	206	10.9%	11.5%
Fraction Commercial	204	7.0%	3.6%	206	6.7%	3.2%
Fraction Industry	204	12.2%	6.3%	206	11.6%	6.4%
Fraction Professionals	204	1.6%	0.9%	206	1.6%	1.2%
Income Tax Revenues per-capita	200	0.06	0.10	200	0.20	0.64

Source: Census of India (1911 and 1921) and Imperial District Gazetteer Series (income tax revenues per-capita variable).

See text for more details on dataset.

TABLE 2A: TOTAL LITERACY RATES

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	Hindu	Muslim	Hindu	Muslim	Hindu	Muslim	Hindu	Muslim
<u>1911 CROSS-SECTION</u>								
Fraction Hindu	-0.056*	-0.047	-0.269	0.266***	-0.054*	-0.036	-0.274	0.084
	[0.030]	[0.032]	[0.279]	[0.086]	[0.028]	[0.030]	[0.305]	[0.134]
Fraction Muslim	0.095***	-0.141***	0.01	-0.477***	0.085***	-0.126***	0.014	-0.355***
	[0.020]	[0.033]	[0.126]	[0.079]	[0.023]	[0.028]	[0.160]	[0.080]
Fraction Hindu ²			0.176	-0.250***			0.184	-0.102
			[0.199]	[0.081]			[0.224]	[0.110]
Fraction Muslim ²			0.079	0.458***			0.057	0.276***
			[0.208]	[0.077]			[0.245]	[0.093]
Province FE	No	No	No	No	Yes	Yes	Yes	Yes
Observations	204	195	204	195	204	195	204	195
Adj. R-squared	0.39	0.28	0.43	0.38	0.45	0.50	0.48	0.54
<u>1921 CROSS-SECTION</u>								
Fraction Hindu	0.001	-0.073*	0.185**	0.316***	0.009	-0.025	0.111	0.116
	[0.013]	[0.037]	[0.087]	[0.089]	[0.015]	[0.030]	[0.094]	[0.146]
Fraction Muslim	0.127***	-0.184***	-0.111**	-0.606***	0.124***	-0.135***	-0.095**	-0.419***
	[0.015]	[0.038]	[0.048]	[0.074]	[0.017]	[0.028]	[0.047]	[0.081]
Fraction Hindu ²			-0.146**	-0.314***			-0.082	-0.125
			[0.065]	[0.077]			[0.071]	[0.117]
Fraction Muslim ²			0.323***	0.575***			0.268***	0.337***
			[0.063]	[0.072]			[0.066]	[0.092]
Province FE	No	No	No	No	Yes	Yes	Yes	Yes
Observations	206	201	206	201	206	201	206	201
Adj. R-squared	0.43	0.30	0.49	0.42	0.59	0.52	0.63	0.57

Robust standard errors in brackets, *** p<0.01, ** p<0.05, * p<0.1

TABLE 2B: LITERACY RATES FOR THE POPULATION AGED 10 TO 20

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	Hindu	Muslim	Hindu	Muslim	Hindu	Muslim	Hindu	Muslim
<u>1911 CROSS-SECTION</u>								
Fraction Hindu	-0.055 [0.033]	-0.059 [0.039]	-0.176 [0.304]	0.326*** [0.096]	-0.047 [0.034]	-0.04 [0.034]	-0.265 [0.349]	0.039 [0.128]
Fraction Muslim	0.104*** [0.023]	-0.171*** [0.040]	-0.006 [0.135]	-0.574*** [0.089]	0.098*** [0.029]	-0.139*** [0.033]	0.042 [0.171]	-0.381*** [0.086]
Fraction Hindu ²			0.103 [0.217]	-0.307*** [0.090]			0.181 [0.254]	-0.072 [0.108]
Fraction Muslim ²			0.124 [0.224]	0.552*** [0.085]			0.039 [0.267]	0.279*** [0.093]
Province FE	No	No	No	No	Yes	Yes	Yes	Yes
Observations	204	195	204	195	204	195	204	195
Adj. R-squared	0.35	0.29	0.37	0.40	0.41	0.49	0.42	0.52
<u>1921 CROSS-SECTION</u>								
Fraction Hindu	-0.009 [0.018]	-0.109** [0.048]	0.209* [0.121]	0.375*** [0.110]	0.004 [0.019]	-0.026 [0.034]	0.051 [0.134]	0.066 [0.154]
Fraction Muslim	0.142*** [0.021]	-0.236*** [0.050]	-0.113* [0.063]	-0.751*** [0.102]	0.137*** [0.021]	-0.145*** [0.032]	-0.052 [0.069]	-0.429*** [0.096]
Fraction Hindu ²			-0.173* [0.089]	-0.390*** [0.096]			-0.038 [0.101]	-0.087 [0.127]
Fraction Muslim ²			0.349*** [0.087]	0.702*** [0.098]			0.226** [0.097]	0.327*** [0.105]
Province FE	No	No	No	No	Yes	Yes	Yes	Yes
Observations	206	201	206	201	206	201	206	201
Adj. R-squared	0.40	0.28	0.44	0.42	0.56	0.53	0.58	0.56

Robust standard errors in brackets, *** p<0.01, ** p<0.05, * p<0.1

TABLE 2C: MALE AND FEMALE LITERACY RATES

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	Male				Female			
	Hindu	Muslim	Hindu	Muslim	Hindu	Muslim	Hindu	Muslim
<u>1911 CROSS-SECTION</u>								
Fraction Hindu	-0.032 [0.024]	-0.05 [0.048]	0.131 [0.119]	0.054 [0.186]	-0.07 [0.067]	-0.003 [0.005]	-0.782 [0.783]	0.005 [0.031]
Fraction Muslim	0.185*** [0.031]	-0.206*** [0.045]	-0.315*** [0.078]	-0.562*** [0.120]	-0.028 [0.050]	-0.018*** [0.005]	0.429 [0.401]	-0.052*** [0.016]
Fraction Hindu ²			-0.119 [0.097]	-0.097 [0.156]			0.574 [0.571]	-0.008 [0.025]
Fraction Muslim ²			0.615*** [0.107]	0.409*** [0.135]			-0.633 [0.623]	0.039** [0.019]
Province FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	204	195	204	195	204	195	204	195
Adj. R-squared	0.57	0.55	0.66	0.58	0.01	0.29	0.04	0.31
<u>1921 CROSS-SECTION</u>								
Fraction Hindu	0.049* [0.027]	-0.028 [0.048]	0.188 [0.146]	0.093 [0.190]	-0.019 [0.017]	-0.011 [0.010]	0.047 [0.043]	0.04 [0.056]
Fraction Muslim	0.222*** [0.030]	-0.210*** [0.045]	-0.170** [0.079]	-0.645*** [0.118]	0.018 [0.016]	-0.034*** [0.009]	-0.018 [0.033]	-0.106*** [0.030]
Fraction Hindu ²			-0.113 [0.111]	-0.119 [0.155]			-0.053 [0.036]	-0.044 [0.046]
Fraction Muslim ²			0.476*** [0.109]	0.496*** [0.127]			0.051 [0.034]	0.088** [0.035]
Province FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	206	201	206	201	206	201	206	201
Adj. R-squared	0.59	0.56	0.64	0.60	0.35	0.32	0.35	0.34

Robust standard errors in brackets, *** p<0.01, ** p<0.05, * p<0.1

TABLE 3A: ARE LOW RETURNS CONTRIBUTING TO LOWER MUSLIM LITERACY?

	TOTAL LITERACY RATES							
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	Hindu	Muslim	Hindu	Muslim	Hindu	Muslim	Hindu	Muslim
	<u>1911 CROSS-SECTION</u>							
Fraction Hindu	-0.061	0.081***	-0.463	0.310***	-0.05	0.000	-0.606	0.000
	[0.176]	[0.027]	[0.481]	[0.117]	[0.173]	[0.033]	[0.614]	[0.099]
Fraction Muslim	-0.004	-0.080**	0.256	-0.542***	0.007	-0.140***	0.305	-0.361**
	[0.162]	[0.037]	[0.303]	[0.164]	[0.164]	[0.050]	[0.477]	[0.150]
Fraction Hindu ²			0.416	-0.312**			0.549	-0.054
			[0.389]	[0.134]			[0.546]	[0.114]
Fraction Muslim ²			-0.175	0.456***			-0.232	0.229*
			[0.371]	[0.158]			[0.542]	[0.137]
Observations	200	193	200	193	200	193	200	193
Adj. R-squared	0.52	0.56	0.55	0.58	0.51	0.65	0.55	0.67
	<u>1921 CROSS-SECTION</u>							
Fraction Hindu	0.052	0.036	0.094	0.338***	0.025	-0.024	-0.029	-0.004
	[0.055]	[0.029]	[0.089]	[0.127]	[0.054]	[0.042]	[0.078]	[0.108]
Fraction Muslim	0.124**	-0.159***	-0.067	-0.773***	0.081	-0.204***	-0.195	-0.466***
	[0.062]	[0.043]	[0.127]	[0.192]	[0.061]	[0.054]	[0.122]	[0.170]
Fraction Hindu ²			-0.085	-0.421***			-0.023	-0.084
			[0.090]	[0.150]			[0.087]	[0.124]
Fraction Muslim ²			0.194**	0.582***			0.282***	0.258*
			[0.094]	[0.179]			[0.094]	[0.153]
Observations	200	197	200	197	200	197	200	197
Adj. R-squared	0.75	0.57	0.76	0.60	0.80	0.67	0.83	0.68
Province FE	No	No	No	No	Yes	Yes	Yes	Yes
Social Controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Development Controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

Robust standard errors in brackets, *** p<0.01, ** p<0.05, * p<0.1

Social controls include the population share of Christians, tribes, Buddhists and CRFI. Development controls include income taxes per-capita, urbanization rate, a dummy for coastal districts, population share supported by commerce, population share supported by industry and population share supported by professionals. See text for details.

TABLE 3B: ARE LOW RETURNS CONTRIBUTING TO LOWER MUSLIM LITERACY?
LITERACY RATES POPULATION AGED 10 TO 20

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	Hindu	Muslim	Hindu	Muslim	Hindu	Muslim	Hindu	Muslim
<u>1911 CROSS-SECTION</u>								
Fraction Hindu	-0.04 [0.190]	0.107*** [0.038]	-0.481 [0.513]	0.402*** [0.147]	-0.068 [0.191]	0.004 [0.045]	-0.764 [0.648]	-0.014 [0.116]
Fraction Muslim	0.037 [0.176]	-0.071 [0.052]	0.325 [0.330]	-0.718*** [0.208]	-0.002 [0.183]	-0.145** [0.072]	0.386 [0.508]	-0.456** [0.195]
Fraction Hindu ²			0.457 [0.417]	-0.415** [0.169]			0.69 [0.576]	-0.061 [0.136]
Fraction Muslim ²			-0.194 [0.397]	0.648*** [0.200]			-0.304 [0.571]	0.325* [0.171]
Observations	200	193	200	193	200	193	200	193
Adj. R-squared	0.49	0.48	0.51	0.52	0.48	0.57	0.54	0.60
<u>1921 CROSS-SECTION</u>								
Fraction Hindu	0.023 [0.071]	0.009 [0.038]	0.122 [0.122]	0.462** [0.180]	-0.011 [0.078]	-0.043 [0.051]	-0.125 [0.121]	-0.021 [0.147]
Fraction Muslim	0.12 [0.081]	-0.214*** [0.055]	-0.172 [0.166]	-1.145*** [0.276]	0.066 [0.085]	-0.239*** [0.067]	-0.217 [0.168]	-0.575** [0.225]
Fraction Hindu ²			-0.16 [0.125]	-0.635*** [0.213]			0.028 [0.124]	-0.104 [0.169]
Fraction Muslim ²			0.289** [0.128]	0.883*** [0.253]			0.298** [0.133]	0.332 [0.201]
Observations	200	197	200	197	200	197	200	197
Adj. R-squared	0.71	0.47	0.71	0.52	0.76	0.62	0.79	0.63
Province FE	No	No	No	No	Yes	Yes	Yes	Yes
Social Controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Development Controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

Robust standard errors in brackets, *** p<0.01, ** p<0.05, * p<0.1

Social controls include the population share of Christians, tribes, Buddhists and CRFI. Development controls include income taxes per-capita, urbanization rate, a dummy for coastal districts, population share supported by commerce, population share supported by industry and population share supported by professionals. See text for details.

TABLE 3C: ARE LOW RETURNS CONTRIBUTING TO LOWER MUSLIM LITERACY?
MALE AND FEMALE LITERACY

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	Male				Female			
	Hindu	Muslim	Hindu	Muslim	Hindu	Muslim	Hindu	Muslim
<u>1911 CROSS-SECTION</u>								
Fraction Hindu	0.253**	0.036	0.267*	-0.017	-0.43	-0.003	-1.365	-0.005
	[0.103]	[0.061]	[0.143]	[0.171]	[0.453]	[0.005]	[1.189]	[0.018]
Fraction Muslim	0.304**	-0.194**	-0.403**	-0.570**	-0.366	-0.032***	0.800	-0.060***
	[0.120]	[0.092]	[0.195]	[0.263]	[0.419]	[0.008]	[0.707]	[0.023]
Fraction Hindu ²			-0.184	-0.045			1.105	-0.004
			[0.138]	[0.197]			[0.944]	[0.020]
Fraction Muslim ²			0.726***	0.396			-1.034	0.033
			[0.161]	[0.243]			[0.897]	[0.023]
Observations	200	193	200	193	200	193	200	193
Adj. R-squared	0.77	0.64	0.82	0.66	0.04	0.53	0.09	0.54
<u>1921 CROSS-SECTION</u>								
Fraction Hindu	0.07	-0.012	0.054	-0.031	-0.002	-0.030**	-0.059	-0.011
	[0.093]	[0.071]	[0.131]	[0.179]	[0.017]	[0.013]	[0.043]	[0.037]
Fraction Muslim	0.132	-0.312***	-0.421**	-0.741**	0.03	-0.077***	0.031	-0.133**
	[0.105]	[0.088]	[0.193]	[0.289]	[0.020]	[0.019]	[0.059]	[0.052]
Fraction Hindu ²			-0.126	-0.091			0.051	-0.031
			[0.139]	[0.206]			[0.046]	[0.042]
Fraction Muslim ²			0.554***	0.43			0.007	0.053
			[0.156]	[0.262]			[0.049]	[0.046]
Observations	200	197	200	197	200	197	200	197
Adj. R-squared	0.78	0.66	0.82	0.67	0.60	0.54	0.61	0.54
Province FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Social Controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Development Controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

Robust standard errors in brackets, *** p<0.01, ** p<0.05, * p<0.1

Social controls include the population share of Christians, tribes, Buddhists and CRFI. Development controls include income taxes per-capita, urbanization rate, a dummy for coastal districts, population share supported by commerce, population share supported by industry and population share supported by professionals. See text for details.

TABLE 4: CONTROLLING FOR PUBLIC EXPENDITURES ON EDUCATION
TOTAL LITERACY RATES

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	Hindu	Muslim	Hindu	Muslim	Hindu	Muslim	Hindu	Muslim
<u>1911 CROSS-SECTION</u>								
Fraction Hindu	-0.047 [0.175]	0.079*** [0.029]	-0.5 [0.517]	0.302** [0.131]	-0.049 [0.177]	-0.003 [0.035]	-0.663 [0.652]	0.003 [0.110]
Fraction Muslim	0.015 [0.161]	-0.077* [0.042]	0.362 [0.388]	-0.545*** [0.195]	0.011 [0.169]	-0.141*** [0.049]	0.379 [0.570]	-0.413** [0.165]
Fraction Hindu ²			0.487 [0.447]	-0.310** [0.154]			0.618 [0.604]	-0.071 [0.127]
Fraction Muslim ²			-0.242 [0.437]	0.456** [0.178]			-0.287 [0.617]	0.276* [0.149]
Observations	189	185	189	185	189	185	189	185
Adj. R-squared	0.52	0.56	0.55	0.58	0.51	0.66	0.56	0.68
<u>1921 CROSS-SECTION</u>								
Fraction Hindu	0.051 [0.055]	0.039 [0.029]	0.096 [0.095]	0.293** [0.127]	0.018 [0.051]	-0.015 [0.040]	-0.033 [0.081]	-0.03 [0.110]
Fraction Muslim	0.116* [0.064]	-0.135*** [0.047]	-0.096 [0.147]	-0.683*** [0.197]	0.072 [0.059]	-0.180*** [0.054]	-0.244* [0.134]	-0.455*** [0.173]
Fraction Hindu ²			-0.092 [0.106]	-0.361** [0.150]			-0.033 [0.094]	-0.054 [0.127]
Fraction Muslim ²			0.215* [0.110]	0.516*** [0.181]			0.323*** [0.109]	0.277* [0.159]
Observations	187	186	187	186	187	186	187	186
Adj. R-squared	0.75	0.58	0.76	0.61	0.80	0.68	0.84	0.69
Province FE	No	No	No	No	Yes	Yes	Yes	Yes
Education Expenditures	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Social Controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Development Controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

Robust standard errors in brackets, *** p<0.01, ** p<0.05, * p<0.1

Social controls include the population share of Christians, tribes, Buddhists and CRFI. Development controls include income taxes per-capita, urbanization rate, a dummy for coastal districts, population share supported by commerce, population share supported by industry and population share supported by professionals. We control for public educational expenditures per-capita incurred by the rural district boards in all the specifications. See text for details.

TABLE 5: FEWER SCHOOLS or WRONG SCHOOLS?

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	Public Schools per-capita		Recognized Private Schools per-capita		Unrecognized Koran Schools per-capita		Muslim Students per Muslim population	
Fraction Muslim	-0.235*	0.280**	-0.471	-0.870***	0.066*	0.075*	-0.026***	-0.037***
	[0.134]	[0.135]	[0.287]	[0.287]	[0.039]	[0.043]	[0.006]	[0.005]
Province FE	No	Yes	No	Yes	No	Yes	No	Yes
Social Controls	Yes	Yes	Yes	Yes	No	No	No	No
Income Controls	Yes	Yes	Yes	Yes	No	No	No	No
Development Controls	Yes	Yes	Yes	Yes	No	No	No	No
Observations	114	114	114	114	47	47	66	66
Adjusted R-squared	0.43	0.85	0.47	0.77	0.086	0.067	0.20	0.31

Robust standard errors in brackets, *** p<0.01, ** p<0.05, * p<0.1

Source: Data for 1911 cross-section only. Specifications on public schools and recognized private schools are for districts in Bengal, Bihar and Orissa, Bombay, Madras and Punjab. This data was unreported for the other provinces. Information on the number of Koran Schools was only available for districts in Bengal and Bihar and Orissa. The number of Muslim students was only reported for Bengal, Bihar and Orissa, and Bombay. Social controls include the population share of Brahman, low castes, Christians, tribes, Buddhists and CRFI. Development controls include income taxes per-capita, urbanization rate, a dummy for coastal districts, population share supported by commerce, population share supported by industry and population share supported by professionals.

TABLE 6: SUMMARY STATISTICS

Variable	Obs.	Mean	Std Dev
Hundreds of Years of Muslim Rule (Average)	206	2.75	1.39
<i>Assam</i>	8	1.69	0.00
<i>Bengal</i>	27	1.69	0.00
<i>Bihar and Orissa</i>	21	3.30	0.94
<i>Bombay and Sind</i>	25	1.70	0.77
<i>Central Provinces</i>	22	1.69	0.68
<i>Madras</i>	25	1.09	0.45
<i>Punjab</i>	30	4.20	0.31
<i>United Provinces</i>	48	4.28	0.29
Hundreds of Years of Muslim Rule (Upper Bound)	206	3.97	1.97
Hundreds of Years of Muslim Rule (Lower Bound)	206	1.53	0.85

Source: Robinson (1982)

TABLE 7A: DOES A LEGACY OF MUSLIM RULE AFFECT LITERACY?

		TOTAL LITERACY RATES							
		(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
		Hindu	Muslim	Hindu	Muslim	Hindu	Muslim	Hindu	Muslim
<u>1911 CROSS-SECTION</u>									
Fraction Hindu		-0.068	0.042*	-0.566	0.054	-0.06	0.022	-0.615	0.027
		[0.175]	[0.025]	[0.513]	[0.101]	[0.175]	[0.036]	[0.615]	[0.096]
Fraction Muslim		-0.005	-0.085**	0.355	-0.296**	-0.013	-0.099*	0.282	-0.326**
		[0.163]	[0.036]	[0.332]	[0.137]	[0.168]	[0.056]	[0.477]	[0.144]
Fraction Hindu ²				0.516	-0.062			0.547	-0.059
				[0.420]	[0.116]			[0.547]	[0.109]
Fraction Muslim ²				-0.265	0.237*			-0.228	0.235*
				[0.400]	[0.132]			[0.542]	[0.130]
Years of Muslim Rule		-0.002	-0.012***	-0.005**	-0.012***	0.006	-0.011*	0.006	-0.011*
		[0.001]	[0.002]	[0.002]	[0.002]	[0.004]	[0.006]	[0.004]	[0.006]
Observations		200	193	200	193	200	193	200	193
Adj. R-squared		0.52	0.66	0.55	0.67	0.51	0.66	0.55	0.68
<u>1921 CROSS-SECTION</u>									
Fraction Hindu		0.047	0.022	-0.001	0.12	0.011	0.006	-0.049	0.033
		[0.052]	[0.030]	[0.086]	[0.109]	[0.054]	[0.041]	[0.078]	[0.103]
Fraction Muslim		0.134**	-0.135***	0.045	-0.522***	0.052	-0.145**	-0.217*	-0.416**
		[0.060]	[0.045]	[0.133]	[0.157]	[0.062]	[0.060]	[0.122]	[0.162]
Fraction Hindu ²				0.02	-0.183			-0.017	-0.092
				[0.091]	[0.127]			[0.086]	[0.119]
Fraction Muslim ²				0.106	0.389***			0.277***	0.266*
				[0.096]	[0.145]			[0.094]	[0.144]
Years of Muslim Rule		-0.006***	-0.015***	-0.006***	-0.014***	0.007*	-0.014**	0.007**	-0.014**
		[0.001]	[0.002]	[0.002]	[0.002]	[0.004]	[0.007]	[0.003]	[0.007]
Observations		200	197	200	197	200	197	200	197
Adj. R-squared		0.77	0.66	0.78	0.68	0.80	0.68	0.83	0.69
Province FE		No	No	No	No	Yes	Yes	Yes	Yes
Social Controls		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Development Controls		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

Robust standard errors in brackets, *** p<0.01, ** p<0.05, * p<0.1

Social controls include the population share of Christians, tribes, Buddhists and CRFI. Development controls include income taxes per-capita, urbanization rate, a dummy for coastal districts, population share supported by commerce, population share supported by industry and population share supported by professionals. The years of Muslim Rule coefficient is in terms of hundreds of years. See text for details.

TABLE 7B: DOES A LEGACY OF MUSLIM RULE AFFECT LITERACY?
LITERACY RATES POPULATION AGED 10 TO 20

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	Hindu	Muslim	Hindu	Muslim	Hindu	Muslim	Hindu	Muslim
<u>1911 CROSS-SECTION</u>								
Fraction Hindu	-0.057 [0.189]	0.061* [0.036]	-0.657 [0.543]	0.103 [0.122]	-0.076 [0.193]	0.031 [0.049]	-0.771 [0.650]	0.02 [0.112]
Fraction Muslim	0.034 [0.177]	-0.076 [0.052]	0.495 [0.357]	-0.431** [0.173]	-0.017 [0.187]	-0.094 [0.078]	0.367 [0.509]	-0.413** [0.189]
Fraction Hindu ²			0.629 [0.447]	-0.122 [0.141]			0.688 [0.578]	-0.068 [0.130]
Fraction Muslim ²			-0.349 [0.424]	0.392** [0.166]			-0.302 [0.573]	0.332** [0.163]
Years of Muslim Rule	-0.005*** [0.002]	-0.014*** [0.003]	-0.008*** [0.002]	-0.014*** [0.002]	0.004 [0.005]	-0.014* [0.008]	0.004 [0.005]	-0.014* [0.007]
Observations	200	193	200	193	200	193	200	193
Adj. R-squared	0.49	0.57	0.53	0.61	0.48	0.58	0.54	0.61
<u>1921 CROSS-SECTION</u>								
Fraction Hindu	0.015 [0.070]	-0.008 [0.045]	-0.028 [0.120]	0.185 [0.153]	-0.028 [0.078]	0.001 [0.052]	-0.149 [0.120]	0.034 [0.138]
Fraction Muslim	0.136* [0.079]	-0.183*** [0.062]	0.004 [0.170]	-0.824*** [0.222]	0.032 [0.088]	-0.150* [0.078]	-0.243 [0.169]	-0.500** [0.214]
Fraction Hindu ²			0.004 [0.125]	-0.331* [0.175]			0.035 [0.123]	-0.116 [0.160]
Fraction Muslim ²			0.152 [0.129]	0.636*** [0.202]			0.291** [0.133]	0.343* [0.188]
Years of Muslim Rule	-0.009*** [0.002]	-0.019*** [0.003]	-0.010*** [0.002]	-0.018*** [0.003]	0.008* [0.005]	-0.021** [0.009]	0.008* [0.005]	-0.021** [0.009]
Observations	200	197	200	197	200	197	200	197
Adj. R-squared	0.74	0.57	0.75	0.61	0.76	0.63	0.79	0.65
Province FE	No	No	No	No	Yes	Yes	Yes	Yes
Social Controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Development Controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

Robust standard errors in brackets, *** p<0.01, ** p<0.05, * p<0.1

Social controls include the population share of Christians, tribes, Buddhists and CRFI. Development controls include income taxes per-capita, urbanization rate, a dummy for coastal districts, population share supported by commerce, population share supported by industry and population share supported by professionals. The years of Muslim Rule coefficient is in terms of hundreds of years. See text for details.

TABLE 7C: DOES A LEGACY OF MUSLIM RULE AFFECT LITERACY?
MALE AND FEMALE LITERACY

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	Male				Female			
	Hindu	Muslim	Hindu	Muslim	Hindu	Muslim	Hindu	Muslim
<u>1911 CROSS-SECTION</u>								
Fraction Hindu	0.239**	0.088	0.253*	0.046	-0.402	-0.01	-1.731	-0.02
	[0.104]	[0.067]	[0.141]	[0.163]	[0.438]	[0.007]	[1.482]	[0.019]
Fraction Muslim	0.278**	-0.098	-0.437**	-0.488**	-0.35	-0.038***	1.266	-0.067***
	[0.121]	[0.102]	[0.197]	[0.247]	[0.416]	[0.010]	[1.123]	[0.024]
Fraction Hindu ²			-0.187	-0.058			1.533	0.001
			[0.136]	[0.184]			[1.308]	[0.020]
Fraction Muslim ²			0.731***	0.410*			-1.48	0.032
			[0.160]	[0.225]			[1.295]	[0.023]
Years of Muslim Rule	0.008	-0.026**	0.008	-0.026**	0.002	0	0.001	0
	[0.007]	[0.011]	[0.006]	[0.010]	[0.004]	[0.001]	[0.006]	[0.001]
Observations	200	193	200	193	200	193	200	193
Adj. R-squared	0.77	0.65	0.82	0.67	0.01	0.52	0.08	0.54
<u>1921 CROSS-SECTION</u>								
Fraction Hindu	0.052	0.05	0.03	0.046	-0.006	-0.027*	-0.066	-0.006
	[0.094]	[0.067]	[0.132]	[0.167]	[0.017]	[0.015]	[0.042]	[0.036]
Fraction Muslim	0.096	-0.188*	-0.449**	-0.635**	0.021	-0.070***	0.024	-0.127**
	[0.108]	[0.096]	[0.194]	[0.268]	[0.020]	[0.024]	[0.059]	[0.054]
Fraction Hindu ²			-0.119	-0.109			0.053	-0.032
			[0.138]	[0.193]			[0.046]	[0.041]
Fraction Muslim ²			0.547***	0.445*			0.006	0.054
			[0.156]	[0.242]			[0.049]	[0.045]
Years of Muslim Rule	0.009	-0.030**	0.009	-0.030***	0.002	-0.002	0.002	-0.002
	[0.007]	[0.011]	[0.006]	[0.011]	[0.002]	[0.002]	[0.002]	[0.002]
Observations	200	197	200	197	200	197	200	197
Adj. R-squared	0.78	0.68	0.82	0.69	0.60	0.54	0.62	0.54
Province FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Social Controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Development Controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

Robust standard errors in brackets, *** p<0.01, ** p<0.05, * p<0.1

Social controls include the population share of Christians, tribes, Buddhists and CRFI. Development controls include income taxes per-capita, urbanization rate, a dummy for coastal districts, population share supported by commerce, population share supported by industry and population share supported by professionals. The years of Muslim Rule coefficient is in terms of hundreds of years. See text for details.