To madrasahs or not to madrasahs: The question and correlates of enrolment in Islamic schools in Bangladesh

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ABSTRACT

This paper provides the first comparative assessment of the market share and socio-demographic correlates of children’s enrolment in madrasahs in rural Bangladesh using data from a purposefully designed household and community surveys and census conducted in 12 districts. We find that unrecognized madrasahs do have a large presence in rural areas in terms of total numbers but their enrolment share is small. Recognized madrasahs on the other hand has a much larger share in overall student enrolment, particularly in secondary education. Sample households primarily report religious concerns as the motivation for sending children to madrasahs. Yet, only in 7% of households do all school-aged children attend madrasahs implying that religious preference matters but is not the single most important motivation for madrasah education. Therefore we formally investigate the individual, household and community related correlates of madrasah enrolment among 6–18 years old children using Probit regression model. We find a relatively weak effect of gender implying that rural madrasahs attract both boys and girls. Older children are more likely to be enrolled in madrasahs. A statistically significant and negative relationship is found between madrasah enrolment and household income as well as household’s access to electricity. Among community-specific factors, children living in locations with fewer non-madrasah schools are more likely to attend madrasahs. Presence of NGOs and availability of satellite dish connection also significantly reduce enrolment in madrasahs. We additionally use nationally representative household survey data to validate some of these findings.

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1. Introduction

Since the terrorist attacks of 9/11, there is growing global interest in Islamic faith schools (aka madrasahs). Because national education statistics on Muslim communities rarely include reliable information on Islamic schools, size and significance of this segment of the education sector has been subject to tremendous controversy and debate. The rise of religious “extremism” and intolerance in Bangladesh, India and Pakistan has been traced to the growth of madrasah education system (e.g. Stern, 2001; Lintner, 2003; Ahmed, 2005; Griswold, 2005; Riaz, 2008). The upsurge of religious militancy in Bangladesh manifested itself in a series of suicide bombings in 2005, killing scores of local judges and lawyers. Madrasah education sub-sector in Bangladesh is growing fast, allegedly making up for the long-term lack of government provision (Evans, 2008). Unsurprisingly, the local and international media has singled out madrasahs as the key to the radical Islamisation of Pakistan and Bangladesh.

There are additional reasons to be concerned about madrasah education. Madrasah attendance is associated with a learning disadvantage in some areas such as English (Asadullah, Chaudhury and Dar, 2007; Asadullah, 2015; World Bank, 2010). Analysis of
labour market data for Bangladesh also suggests a negative correlation between madrasah education and wage earnings (Asadullah, 2009). Lastly, when compared to peers educated in non-madrasah schools, female students graduating from madrasah are less in favour of higher education for girls and working mothers, and indicate a preference for large families (Asadullah and Chaudhury, 2010). Taken together, this raises questions about why parents continue to send their children to madrasahs.

In the global debate on madrasahs in South Asia, it is maintained that these schools thrive in poor and isolated communities. Enrolment in madrasahs, it is argued, is high and increasing. However, such popular claims regarding incidence of religious schooling often have weak empirical basis. When subject to careful scrutiny, for instance, it is found that enrolment rates in Pakistani madrasahs are neither high nor on the rise (Andrabi et al., 2006). In addition to the lack of research on size and structure of the madrasah sector, little is known on reasons for madrasah enrolment. We do not know why Muslim households choose to send children to these schools. Household’s choice of religious schooling is popularly perceived in terms of poverty and an inadequacy of mainstream schools (Evans, 2006, 2008; Giovacca and Wazed, 2008). The weight of the evidence from existing research indicates that non-madrasah1 schools are of better quality so that children are likely to enrol in madrasahs only in areas where there is a severe shortage of non-madrasah schools. Nonetheless, enrolment decisions can be reversed owing to economic considerations even in better provided areas. Madrasahs arguably present a cheaper alternative to non-madrasah schools and hence likely to appeal to relatively poorer households. Household poverty and school supply aside, religious preference and community characteristics may matter in explaining madrasah enrolment in rural Bangladesh. In sum, both demand and supply-side factors should matter for choice of madrasah education. However, these issues remain unexamined given limited large-scale field surveys on madrasah enrolment in South Asia2.

For historical reasons, Bangladesh was endowed with a much larger madrasah system (Ahmad, 2004; Riaz, 2008). Some of these operate with complete oversight of the government whilst the education imparted by the other is not recognized by the state3. While some information on recognized madrasah is available from published sources, almost nothing is known about unrecognized madrasahs in Bangladesh. Issues such as market share, enrolment patterns and household demand for madrasah education remains unknown owing to the absence of household survey based information on student enrolment by school type.

In this study, therefore, we use data from a purposefully designed rural household survey, QSSMEB (Quality of Secondary School Madrasah Education in Bangladesh), and address the question of incidence of madrasah education in rural Bangladesh. The QSSMEB survey was designed to present definitive statements regarding the choice of madrasahs among households as a schooling choice. More specifically, we examine four important questions related to madrasah enrolment: (a) What proportion of educational institutions comprises of unrecognized madrasahs? (b) What is the proportion of children (both of school age and enrolled) attending madrasahs? (c) Does madrasah enrolment show upward trends? (d) What are the geographic, social and demographic correlates of madrasah enrolment at the household level and how do they vary across rural communities?

A closely related study is Asadullah et al. (2015) which develops a mathematical model of recognized Islamic school choice and tests the related theoretical predictions at the household level for an older sub-sample (11–18 years old). Our analysis is different from Asadullah et al. in several ways. First, we estimate the determinants of madrasah enrolment at the child level and broaden the definition of madrasah attendance to both registered and unregistered madrasahs. Second, we use an expanded age group thereby analysing data on 6–18 years old children. Third, we additionally estimate the regression model using an alternative survey dataset, Household Income and Expenditure Survey (HIES) 2005, collected by the Bangladesh Bureau of Statistics. Lastly, we tally the number of unrecognized madrasahs which are said to range from 4000 to 40,000, based on a census of educational institutions conducted in sample sub-districts.

The rest of the paper is organized as follows. Section 2 presents an overview of the madrasah education system in Bangladesh explaining the main drivers of change, key reform measures introduced by the government and the size and composition of the sector. Section 3 explains the survey and data. Section 4 presents the main results in two steps. First, we present estimates of market share and size (Sections 4.1 and 4.2) and describe time trends in madrasah enrolment (Section 4.3). Second, we present descriptive evidence on the correlation between madrasah enrolment and household and community characteristics in Sections 4.4–4.6. Section 5 presents regression results on the determinants of madrasa enrolment. We conclude in Section 6.

2. Background

The schooling system in Pakistan and Bangladesh (including selected states in India) runs in two parallel streams: the private/public non-madrasah schools and the religious seminaries. In addition to mainstream formal education, students can choose to study at madrasahs, which offer Islamic education at primary, secondary and higher levels. Anecdotal evidence suggests that the majority is allegedly run on the Deobandi line4. Historically, these madrasahs have relied on own assets and charities to finance day to day activities. This is because, financial autonomy concerns five of eight fundamental principles laid down by Maulana Muhammad Qasim at the founding of Deoband in 1867 (Ladbury, 2004; Metcalf, 1978). Madrasahs in the Indian sub-continent, therefore, are alleged to exclusively rely on external finance and private donations made for religious purposes. Many of these madrasahs also house and educate orphans and children from poor families. But it is not known exactly how they differ in their interpretations of religious doctrine. No single curriculum applies to these madrasahs so that some divisions prevail in terms of course contents. Some of these madrasahs focus more on reciting the Koran and learning the duties of the Mauvi in order to prepare students for the running of mosques’ day-to-day operations. In Bangladesh, these madrasahs are known as Qommi madrasahs. Bangladesh however is unique in South Asia in that it is also home to a large number of state-recognized madrasahs. In this section, we describe the size and structure of madrasah education sector in Bangladesh and outline possible reasons for growth in the number of state-supported madrasahs.

1 “Non-madrasah” school admits students from all faith groups and emphasises on non-religious education. On the other hand, madrasahs focus on Islamic education and rarely enrol children from non-Muslim faith groups.

2 Two related studies are Rao (2011) on Bangladesh and Andrabi et al. (2006) on Pakistan. Rao (2011) use qualitative data from a Bangladeshi village to highlight a hitherto ignored economic factor for Islamic school enrolment. Madrasah education, through its emphasis on Arabic language, can facilitate overseas migration to the Gulf countries. This can be an important channel for upward social mobility in rural Bangladesh. On the other hand, Andrabi et al find that madrasah enrolment by households in Pakistan is neither driven solely by poverty, nor by the religious mindedness of households. However, as explained later, madrasah enrolment share in Pakistan data is too small to allow detailed statistical analysis.

3 Many Indian states (e.g. West Bengal) also have a similar madrasah sector. However, very little published information is available on this issue.

4 The Deoband (Darul Ulum) system, introduced in 1866 in Northern India, is considered by many as a reaction to the Anglo-Oriental education in colonial India.
2.1. Institutional and pedagogic structure of madrasas

As in other South Asian countries, Bangladesh’s education system consists of four main levels: primary schools (five years of study), secondary schools (five years), and higher secondary education (two years) and tertiary education. In this study, we focus on primary and secondary education sub-sectors. Islamic schools in Bangladesh are almost entirely in the non-state sector, operating in both primary and secondary levels. There are just 3 state-owned religious seminaries in the country. There is a perceived difference among the various madrasas in terms of in-school conduct and curriculum content. Madrasas operating in Bangladesh are classified in two broad categories: Aliyah madrasas and Quomi madrasas.

The establishment of Aliyah madrasas and their activities follow government regulations as prescribed by the Madrasah Education Board. The Board provides grants to different levels of madrasas and conducts public examinations and scholarship examinations. It also approves curriculum and lesson plans for all recognized madrasas from primary (i.e. Ebtidai) to masters (i.e. Kamil) level. Aliyah madrasas teach both religious education and general education. The secondary level of Aliyah stream is known as Dakhil which spans grades 6 to 10. Under direct supervision of the government Board, students appear in a public examination at the end of Dakhil and Alim education after the completion of ten and twelve years of education respectively.

There are four Dakhil madrasah curriculum groupings: (a) General group where the focus is on subjects such as languages, mathematics, religious studies, and social studies; (b) Science group where in addition to languages, mathematics, and religious studies, students are examined in computer science, physics, chemistry, and biology; (c) Muzzabib group and (d) Hifzu Koran group. Students belonging to the latter two groups specialize in Islamic education. Similarly, students in non-madrasah secondary schools can opt for three group specializations—science, arts and commerce. However, they cannot specialize in religious studies despite the fact that Muslim students in non-madrasah schools are taught Islamic studies on a compulsory basis. Therefore, in comparison to non-madrasah schools, Aliyah madrasas gives students the option to specialize in non-religious stream as well as Islamic theology.

Quomi madrasas, a remnant of Bangladesh’s unrecognized Muslim educational system, operate completely outside the state sector. The majority of them are allegedly run along the Deobandi line. This is the same ideological pedigree of most madrasas in India and Pakistan. They shun modern scientific and technical education. Despite not following government approved curriculums, they went through significant changes in post-1971 period. Most today teach in the medium of Bangla instead of Urdu. Some have even included elementary English and mathematics in the curriculum. A large number of Quomi madrasas are registered with a private board known as ‘Befaqul Madarisil Aarabia Bangladesh’ which regulates the curriculum, conducts examinations and awards degrees. Completion of the final stage of the Quomi madrasah education takes between 14 and 16 years.

Lastly, there is another group of Quomi-type unrecognized institutions, Nurani madrasa and Furqania/Hafizia madrasas, largely offering pre-primary education (Abdalla et al., 2004). Nurani madrasas impart four to six years of education. The curriculum includes basic Arabic, Quran recitation, and selected Hadith, among other subjects. On the other hand, Furqania/Hafizia produces Hafiz (where the graduate has memorized the Quran) or Qari (where the graduate has learnt to recite the Quran correctly). They are usually attached to mosques.

2.2. Growth of the recognized madrasah sector: The role of financial incentives, history and politics

The rise of recognized madrasahs has been one of the most significant developments in the secondary education sector in Bangladesh in the last twenty years. Popular perception is that most of this growth took place in post-1971 period. This view overlooks the fact that for historical reasons, Bangladesh was endowed with a handful of government-supported madrasas as well as a large unrecognized madrasah system. The root of Aliyah (i.e. state-aided) madrasas goes back to a unique event during the British Raj as well. Governor Warren Hastings of Bengal established the first ever madrasah in the public sector in the sub-continent in 1780, namely Calcutta Aliyah madrasah. Following the India–Pakistan Partition in 1947, the Calcutta Aliya Madrasah, with all its records, documents, valuable books and furniture, moved to Dhaka. This led to differential growth in the number of state-recognized madrasahs in Bangladesh (East Pakistan) compared to (West) Pakistan. Inspired by the Calcutta madrasah model, many madrasas were set up which later popularly became known as Aliyah madrasah. However, many of these converted into formal schools over time (Sattar, 2004). It is therefore unclear how many of them continued as Aliyah-type madrasahs when Bangladesh broke away from Pakistan.

Nonetheless, the madrasah sector did grow in post-1971 years and this can be attributed to a variety of supply-side interventions to mainstream madrasah education in the country. Unregistered madrasahs in Bangladesh were induced to reform and register with the state using financial incentives. Main features of the madrasah reform programme in Bangladesh are (a) subsidy towards teacher salary7 (introduced in the mid-1980s) and (b) grant received for enrolling female students (introduced in the mid-1990s). This aided the growth of registered madrasah sector.

To fully understand the growth pattern, time-series data on all registered and unregistered madrasahs in the country is needed. In the absence of such data, Asadullah and Chaudhury (2009) used information on years when a madrasah was established and registered with the government. Two patterns are noteworthy from their analysis. First, a large proportion of the madrasahs were established between 1978 and mid-1980s. This is the period when (a) the Madrasah Education Board was established and (b) degrees of board-registered madrasas were given state recognition. The government introduced fiscal incentives in the early 1980s to traditional/unregistered predominantly all-male madrasah high-schools to register and teach secular subjects such as English, Bengali, Science and Mathematics alongside religion-related subjects and languages8. All secondary schools, both non-madrasah and religious institutions, were eligible for government subsidies towards teacher pay under the Private-Public Partnership (PPP) model as long as they registered with the state and accepted this change in the curriculum. Subsidies would finance salary of all teachers similar to aided non-madrasah schools. Therefore, government used subsidies to modernize the madrasah

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7 Given that teacher pay accounts for most of the recurrent budget of schools in rural Bangladesh, the incentive to convert is significant: recognized madrasahs receive regular financial aid from the government on a monthly basis to essentially cover its wage bill.

8 In pre-modernisation era, students in most (Quomi) madrasahs in the country were taught Urdu (instead of Bengali), Persian and Arabic as madrasah curricula continued to follow the Deoband-style. Their registered counterparts, albeit few in numbers, followed state approved curriculum.
education system as curriculum reform was a precondition of the registration process.

Second, there was an additional growth spell around the mid-1990s which coincided with the launch of the gender-targeted school subsidy scheme. In addition to the salary support scheme, the government provided financial incentives in 1994 to registered madrasah high-schools conditional on admitting female students. This followed from the introduction of the Female Stipend Scheme, an “integrated package approach” incorporating multiple interventions to close the gender gap in secondary education with two key features. First, it provided conditional cash transfers to all secondary school female students attending grades 6–10 in a formally registered (non-religious or religious) school in non-metropolitan areas. Second, the scheme created direct financial incentives for madrasahs to expand by accepting female students as girls’ tuition (as part of the stipend programme) was paid directly by the state to all registered secondary schools and madrasahs. The scheme also provided additional funding to all registered secondary schools and madrasahs depending on the number of female students enrolled. The scheme created direct financial incentives for madrasahs to grow by accepting female students. In return, girls’ tuition (as part of the stipend programme) was paid directly by the state to registered madrasahs and additional funding was provided depending on the number of female students enrolled. In doing so, the scheme transformed the country’s registered madrasah system from a predominantly all-male institution to a largely co-educational system (Asadullah and Chaudhury, 2009: World Bank, 2010). The relative share of females in madrasahs jumped from 7.7% in 1990 to 52% in the year 2008. On the other hand, the share of female students in registered secondary schools in the country rose from 34% to 54% by during the same period.

The above discussion implies that through a combination of demand-side and supply-side incentives, registered madrasah sector grow by inducing pre-existing, predominantly all-male unrecognized madrasahs to adopt the state-supported curriculum and admit a large number of female students. The effect of the incentive-based reform programme on the growth of the madrasah sector, however, also needs to be understood in the broader political context. The growth in the registered madrasah sector appears to coincide with certain political episodes. There was a big jump in the number of new madrasahs in the first half of the 1980s when the country was under military ruler that used Islam for political gains. For instance, through the Fifth Amendment, Islam was given prominence in the constitution during the reign of President Ziaur Rahman. He also institutionalized religious education by establishing the Madrasah Board in 1978. Subsequently, the regime of General Ershad (spanning 1982–1990) recognized degrees issued by the Madrasah Board around the mid-1980s and declared Islam the state religion in 1988. These institutional and political developments presented an opportunity for Islamic political parties such as Jamaat-e-Islami (JI) to thrive, arguably exploiting its link with students and teachers of the registered madrasah network. One can additionally put forward a political explanation for the expansion of the madrasah sector during the 1990s. A significant proportion of the existing Ahlij madrasahs were set up during the first half of the 1980s when the pro-Islamic Bangladesh Nationalist Party came to power. For political expediency, the secular Bangladesh Awami League also collaborated with JI to unseat the BNP through popular agitation in 1996. The madrasah sector continued to grow during the tenure of the Awami League though the rate of growth was modest (when compared to the early 1990s).

In sum, the correlations between growth in the number of recognized madrasahs and political regimes discussed in this section suggest that the underlying political processes should be considered even when assessing the rise of the recognized madrasah sector in terms of responses to fiscal incentives. At the same time, our discussion highlights the need to look beyond politics and consider the historical factors when unpacking the growth pattern. A significant portion of the current stock of madrasahs was actually established during the post-independence (i.e. 1971) period. This confirms the influence of history—these madrasahs were not set-up in response to the pro-Islamic political regimes that the country experienced in post-1975 period. Instead, they largely comprise of previously unrecognized madrasahs that later chose to convert to registered madrasahs following introduction of the incentive based reform schemes of the 1980s and 1990s (Asadullah and Chaudhury, 2009).

Lastly, the picture is less clear when it comes to growth of the unrecognized madrasah sector. Many of these madrasahs were set up in pre-1971 period. But it is possible that the socio-political developments after 1975 provided a conducive environment for their growth. For instance, according to Riaz (2008), these madrasahs proliferated under the patronage of the Islamic Oikya Jote (IoJ), an orthodox Islamic political party with significant presence in eastern Bangladesh. On the basis of anecdotal evidence and media reports, Riaz (2008) additionally identified externally financed Islamic NGOs and political developments (influx of Muslim refugees and Rohingya rebels from Myanmar on the one hand and Bengali settlers to counter tribal rebels on the other) in the northeastern region of Bangladesh as important catalysts that aided expansion of Quomi madrasahs. The author also conjectures that Quomi madrasah growth was aided by remittances sent by Bangladeshi migrant workers in the Middle East though no evidence is provided to support the claim. Similar unsubstantiated claims are made about Islamic groups such as the ‘Ahl-e-Hadith Movement Bangladesh’ (AHAB) running a vast network of unrecognized madrasahs (see Riaz, 2008; p.124). Whilst another study (Ahmad, 2006) reports 2000 AHAB-affiliated madrasahs in the country the author could not ascertain what proportion of these comprise of Quomi units.

### 2.3. Size of the madrasah education sector

As per published government education statistics for the year 2005, there were approximately 6800 Ebitdai (primary)3 madrasahs and over 9214 Aliyah (post-primary) madrasahs recognized by the state. These figures increased to 8199 and 9341 by 2014 (BANBEIS, 2014). However, data on Quomi (unrecognized secondary) madrasahs is scarce. Historically, these madrasahs have avoided contact with the government. Their exact numbers are unknown. According to one source, there are about 8000 madrasahs of this type in Bangladesh (Mercer et al., 2006), while using information collected from officials from one Quomi Madrasah Association, Abdus Sattar (2004, p 352) puts the figure at 4000. Sattar’s figure is consistent with BANBEIS (2008) which obtained an updated figure of 5250 Quomi madrasahs from Befaqul Madarisal Aarabia Bangladesh. An estimated 1.4 million student was reported to be enrolled in these madrasahs. However, in Ahmed’s (2005) expert testimony prepared on behalf of the International Crisis Group for the US Senate Foreign Relations Committee Hearing on ‘Combating Terrorism through Education’, she claims that Bangladesh’s madrasah sector has an estimated 64,000 madrasahs which operate with little if any government oversight. The author does not disclose the source of this statistics. As a matter of fact, nearly 15,000 recognized madrasahs operate

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3 However this figure mostly relates to Aliyah-attached Ebitdai madrasahs since independent Ebitdai madrasahs were under-enumerated. A recent government sponsored field survey in 16 districts identified 1104 active unattached Ebitdai madrasahs (see BANBEIS, 2010).
with complete government oversight. Therefore, if the number quoted in Ahmed (2005) is correct, there are at least 48,000 madrasas outside the state-sector in Bangladesh. In a more recent publication, the total number of unrecognized madrasas is reported to be 60,000 (Riaz, 2008; p17) 10. In other words, the existing estimates of the number of *Quomi* madrasas in the country ranges from 4000 to approximately 60,000. This implies a significant market share enjoyed by these madrasas in the country. However, the large variation in the estimated total of *Quomi* madrasas also arises from the fact that there are various types of community religious institutions – a large proportion of which are simply lessons for young children on religious rituals and reading the Quran – which may or may not be included in different counts of *Quomi* institutions. A proportion of the young children also attend some of these religious schools in the morning and mainstream school during the day. We look present evidence on some of these issues in Section 4.1.

3. Survey design and data

While we do know a lot about the incidence of recognized madrasas from government statistics, the exact market share of unrecognized madrasas has hitherto remained unknown as none of the available national datasets provide reliable information on different types of madrasah enrolment. Therefore, the World Bank commissioned a multi-purpose sample survey to gather detailed information on all types of secondary schools in rural Bangladesh. The QSSMEB study includes a full census of all educational institutions in 48 sample unions11 that were drawn from 12 out of a possible 64 districts and spread across 6 divisions in Bangladesh. The sample districts are Bogra, Kurigram, Jessore, Barisal, Faridpur, Mymensingh, Sylhet, Moulovibazar, Comilla, Chandpur, Lakshmipur and Chittagong. The survey work was carried out during 2007–2008. Apart from a detailed survey of secondary school and madrasah students, a complete household census was carried out in sample villages, followed by a detailed survey of households with children of secondary school-going age in 96 villages. The village sample comprised of all households where there is at least one child aged between 6 and 18 years. The census on the other hand covers all households in the sample villages irrespective of the presence of a school aged child. Consequently, it yields a much bigger sample on madrasah enrolment to examine correlations with household attributes in a meaningful manner. Moreover, we are able to use two different types of data (household survey and census) to verify our estimates and determine how sensitive they are to changes in definition.

Our survey and census questionnaires ask about madrasah enrolment in a comparable manner. Both the QSSMEB survey and the census directly ask, “Is the child enrolled in a madrasa or an Islamic education school?” Both also retrospectively enquire about any madrasah/school the child may have attended previously. In addition, the survey questionnaire has a detailed module on past school/madrasah choice for all children of school age (World Bank, 2010). Lastly, schooling information is collected not only for resident children, but also for children of the head who do not live in the household. This is an important issue for many madrasas in South Asia are boarding schools so that ignoring non-resident children would lead to an under-estimate of the true enrolment share of madrasahs.

For the above reasons, we are able to define madrasah enrolment in broad terms—we go beyond current enrolment by using data on ever enrolment and use information on resident as well as non-resident children of school age. The distinction between current and ever enrolment is an important and yet frequently ignored issue in the extant debate on madrasah enrolment in Bangladesh. In rural areas, most secondary schools start from grade 6 whilst most government-assisted secondary madrasahs have primary grades. Therefore, many secondary school aged children use both types—schools as well as madrasas. In addition to current enrolment patterns in madrasahs, therefore, we also report the percentage of children “ever enrolled” in madrasahs.

Another peculiarity of Bangladesh is presence of a sizable non-Muslim population. Since madrasas exclusively cater to Muslim population, market share must be analyzed with respect to school age children from Muslim communities only. Lastly, the international debate uses the word madrasah as a catchall term. However, as is evident from the preceding section, depending on level of education and/or government recognition, madrasas differ in types. First, a madrasah can mean something as simple as a pre-school institution where children learn the Koran alongside a few religious practices. Second, it can mean a primary or secondary school that serve as a substitute for mainstream vernacular education. Third, it can also be a seminary established to train proper clerics in classical Islamic religious knowledge. Therefore, we define madrasah enrolment by types. But for the sake of brevity, we do not always distinguish between primary and post-primary madrasahs unless stated otherwise. Lastly, we ask households to report the principal school that the child attends and primarily use this data on ascertain market share of madrasahs. The scope for multiple-schooling is only limited to the case where children could attend pre-school madrasahs in the evening after day sessions in vernacular schools. Although we do not use this information directly, we nonetheless assess how this could bias our estimates of market share of madrasahs.

4. Main findings

4.1. Incidence: Size of the madrasah sector

By means of a complete census of educational institutions in our 48 sample unions, we could locate a total of 2229 schools of which 26% and 54% of were pre-primary and primary educational institutions, respectively. The rest were secondary educational institutions. A crude measure of the numeric size of madrasah sector is its relative sample share in pre-primary, primary and secondary sectors. Starting with the pre-primary sector, madrasahs retain the largest share accounting for 71.28% of all educational institutions. However, as little as 1.2% of these are formally attached to a *Quomi* madrasah; the remaining are Nurania, Furkania and Hafizia madrasahs. Turning to the primary level, the sector is represented by a variety of institutions—government, government-aided and NGO schools. Only 9.26% of all the primary educational institutions are of *Quomi* stream/attached while 3.02% of them are "Ebitda" (i.e. they belong to *Aliyah* stream)12. Numerical share of the madrasah sector is largest if we restrict attention to secondary level. *Aliyah* and *Quomi* together account for 49% of the total secondary educational institutions in our study area. However, the largest share belongs to *Aliyah* madrasahs (30% of the sample total).

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10 However on the basis of an interview with leader of Bangladesh *Quomi* Madrasah Education Board the same study also reports a much lower figure of 15,250 unrecognized madrasas.
11 Union is an administrative unit bigger than village but smaller than sub-district.
12 As per government statistics, there were 2673 independent and 5526 secondary school attached primary madrasahs in Bangladesh in 2014 (rural and urban combined). This implies 7.5% of the total number (i.e. 108,537) of primary schools belonged to the registered madrasa sector (BANBEIS, 2014). However, if we restrict to independent registered madrasahs, the share reduces to 2.4%.
Assessing the madrasah sector simply in terms of the number of existing madrasas can be misleading. A more relevant metric is the enrolment share of madrasas. If madrasah sector is sizable, as indicated by their sample share in the distribution of total educational institutions in our study area, households should also report a large fraction of children being enrolled in madrasahs in our sample villages. We address this point in the next section.

4.2. Incidence: Enrolment share of madrasahs

According to the QSSMEB household census, there are 32,372 children between the ages of 6 and 18 of which 17.52% (i.e. 5763 children) reports the last school attended as a madrasah. However, many students may have first enrolled in madrasah but have subsequently moved to a school. When accounting for this fact, 19.78% (N = 6404 children) have at least once enrolled in madrasahs in the past. Lastly, when restricted to the population of 24,440 children who are currently enrolled, share of madrasahs rises to 18.79%.

Table 1 reports market share of madrasahs by levels of education. In terms of census records, Quomi madrasahs account for only 1.9% of the total primary enrolment (5.4% when ‘other’ madrasahs that are non-formal in nature and offer exclusively religious education are added). These numbers are very small when compared to enrolment in a similar non-religious, non-state school that also caters to children from poor families e.g. Non-Government Organization (NGO) schools account for 8.2% of the primary enrolment in our study. Share of Aliyah madrasah, however, is significant: They account for 8.4% of the total primary enrolment. Overall madrasah enrolment as a share of total primary enrolment is 13.8% when we take into account enrolment in ‘other’ madrasahs. Thus, while as a group the number of madrasahs might be less than the number of NGO run schools, the share of enrolment in madrasahs is significant and larger than the NGO share. Turning to the secondary education segment, Quomis have a slightly higher share, accounting for 2.2% of the total enrolment. In case of Aliyaha, the market share is much larger, almost 19%.

Overall, the small market share of unregistered madrasahs in both the primary and secondary sector contrasts with the popular perception of significant share of madrasa graduates in the labour force including securing employment in important public institutions. For instance, Ciovacco and Wazed (2008) state that as part of a deliberate plan by “Islamists” to increase their representation in the armed forces in Bangladesh, madrasas are specifically preparing their pupils for the military entrance examination. The authors conjecture that by 2006, Quomi madrasahs supplied nearly 35 per cent of Army recruits. We find that the incidence of Quomi madrasah is not large in rural Bangladesh even when assessed in terms of primary enrolment share.

A number of points are noteworthy from Table 1. First, census data based estimates of market share of madrasahs are consistent with household survey based estimates - household records generate similar figures although on few instances the numbers are slightly larger. Second, the share is much higher in secondary education. Third, the figures compare favourably to estimates available from other sources. For instance, according to large scale nation-wide household survey of CAMPE (2005), madrasahs account for 16% of total enrolment in the primary sector whilst our estimates range between 13.8 and 15.7%. Unfortunately, apart from CAMPE, there is no other source of comparable data on madrasah enrolment. The numbers from HIES 2005 survey are not comparable for data on school type is only available for children who report themselves as literate. Given that madrasah children reportedly have lower literacy compared to school students, HIES data is likely to under-report incidence of madrasah education in the country.

4.3. Variation in madrasah enrolment over time

Since none of the national household survey datasets repeatedly collected enrolment data by school type, it is not known how madrasah enrolment has changed over time vis-à-vis school enrolment. To fill this void, we exploit data from QSSMEB household census and examine trends in madrasah enrolment by looking across school participation of individuals belonging to different age cohorts. Fig. 1 uses data on individuals in order to compare the stock of individuals belonging to different age cohort who reported to have ever attended a madrasah.

Excluding the youngest cohort (born between 2002 and 1996), the age-enrolment profile is downward sloping. People born on or before 1947 were more likely to have religious education than those born between 1949 and 1953. The age-enrolment profile is slightly U-shaped in case of secondary enrolment. For post 1947 cohorts, enrolment share declined until 1958–1962, afterwards seeing an increase. These trends are suggestive of considerable growth in religious school enrolment in rural areas.13

More interesting patterns are obtained when madrasah enrolment is disaggregated by institution type and gender. In

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13 Published government data also confirms the enrolment growth. Between 1998 and 2014, total student enrolment in registered secondary (i.e. Dakhil) madrasahs grew by 45%, increasing from 87591 in 1998 to 60120 by 2014 (BANBEIS, 2014).
both primary and secondary education, the growth is largely driven by state-recognized madrasahs. But this is more pronounced in case of secondary enrolment. In secondary education, share of unrecognized madrasahs remained flat for all cohorts but those born after 1993 (i.e. aged between 6 and 15 years). When looking at gender specific plots, unrecognized madrasahs never accounted for more than 2% of total enrolment for any cohort of female born before 1998. This confirms the widely held view that these madrasahs have historically catered to male education only. For male enrolment, the share is relatively higher compared to females. More importantly, when compared across various age-cohorts, it is higher for the youngest 3 cohorts across all (i.e. primary and secondary) levels.

A popularly held belief is that enrolment in unrecognized madrasahs is an all-male phenomenon. Even then the share of this madrasah never accounted for more than 2% of total secondary enrolment for any male cohorts born before 1998. Only for individuals aged between 6 and 15 years does the enrolment share substantially exceed 2%. In case of recognized madrasahs, there is a clear jump in female enrolment (at secondary level) for the age cohort 21–25 years old and to a lesser extent 26–30 years. A t-test of differences of mean enrolment rates between age 21–25 and 26–30 years old (as well as 26–30 vs. 31–35 years) confirms that the jump is statistically significant at 10% level. This is unsurprising because this cohort entered into secondary education following the introduction of Female Secondary School Assistance Programme. In case of primary education, however, female enrolment does not change much across age-cohorts barring children aged 6–10 and 11–15 years old.

4.4. Variation in madrasah enrolment across districts

Bangladesh is divided administratively into six divisions—Dhaka, Chittagong, Sylhet, Barisal, Rajshahi and Khulna. Our sample households are drawn from a total of 12 districts where four come from Rajshahi and Barisal divisions, widely known as economically stagnant regions of Bangladesh. In general, Dhaka and Chittagong divisions have experienced significant economic growth and large scale decline in poverty over the past two decades. Therefore, looking at madrasah enrolment across districts provides a way to assess the relationship between religious school enrolment and regional poverty. The geographical dispersion of madrasah enrolment partly depends on our definition of madrasah incidence. When defined in terms of combined market share of madrasah enrolment it varies from 8% to 37%. The Northern district of Kurigram, well-known for poverty and economic hardship has lowest market share of madrasahs. On the other hand, market share is above 15% in Eastern districts of Chittagong, Comilla, Chandpur, Sylhet and Moulavibazar\textsuperscript{14}. When assessed in terms of types of madrasahs, the above regional pattern becomes more evident. Contrary to popular beliefs, share of unrecognized madrasahs is higher in Eastern districts. For instance, over 90% of the total madrasah enrolment in Sylhet, the least poor district in the country, comprises of unrecognized madrasahs (Fig. 2).

Although Quomi enrolment is somewhat higher in well-off districts, combined madrasah enrolment is evenly spread among all sample districts. The high market share of unrecognized madrasahs in non-poor districts may be owing to social norms that espouse religion based education. In addition, these districts benefited from inflow of foreign remittance which in turn may have aided demand for religious schooling\textsuperscript{15}. In general, Eastern districts have lower incidence of poverty and many (particularly Chittagong and Sylhet) have benefited from inflow of foreign remittances. These are potential issues for further research and deserve closer scrutiny.

4.5. Variation in madrasah enrolment across households

This section looks at the variation in madrasah enrolment at the level of the household. The QSSMEB survey was designed to aid in-depth analysis of the choice of madrasahs among households as a schooling choice. As pointed out earlier, the QSSMEB study collected madrasah enrolment data through household survey as well as complete population census in the study villages so that it is possible to carry out a detailed analysis of schooling choice data at the household level. The household survey gathered data on

\textsuperscript{14} These numbers are high even when compared to madrasah enrolment figures among Pakistani districts that border Afghanistan (see Andrabi et al., 2006).

\textsuperscript{15} For a similar argument, see Rao (2011).

Fig. 1. Age-cohort wise distribution of madrasah enrolment share by gender and level of education. Note: (1) Figures are based on individuals who have ever attended a non-madrasah school or a madrasah. (2) Data is from QSSMEB household census.
a variety of issues relating to children’s schooling, cognitive development and religious education and activities alongside information on socio-economic conditions of the households. In Section 5, we systematically address madrasah school choice. In this section, we present simple tabulations and associations to provide a basic understanding of madrasah enrolment in rural Bangladesh.

Parents of households with at least one madrasah attending child was directly asked to identify the reasons for sending their children to madrasahs. We begin by looking at their responses as it helps to set the context of our discussion of enrolment variation across households. Fig. 3 tabulates the data for the full sample. The most commonly cited reason is religious preference of the household (45.79%), followed by perceived high quality of madrasah education (22.18%), concerns for after-life (8.22%) and distance to school (6.88%). In the absence of similar data on reasons for choosing school instead madrasah, however, it is difficult to assess whether households choosing madrasahs are structurally different when compared to households that select schools for children’s education. To investigate this issue further, we follow Andrabi et al. and directly look at the distribution of madrasah enrolment at the household level. If household-specific factors are important in madrasah choice, we will find that a significant proportion of households send all of their children to madrasahs.

First, for households that have a 6–18 years old child enrolled in a madrasah, we examine what type of schools other children in the household attend. Focusing on households that have at least two enrolled children, we classify them as (a) “all madrasah,” if all the children attend a madrasah; (b) “madrasah/government,” if at least one child goes to madrasah and one to government school; (c) “madrasah/non-govt.,” if one attends madrasah and the other attends non-govt. school; and (d) “madrasah/govt./non-govt.,” if the households had three or more enrolled children using all three options simultaneously. Similarly, we repeated this exercise in households with at least one child going to non-religious school.

The results are summarized in Fig. 4. Among households with at least one child enrolled in a government school (i.e. “govt. school households”), almost 71% of households choosing schools for at least one of their children select gov’t or non-govt. schools for all of their school-age children, while 20 percent of households sending a child to a madrasah (call them “madrasah households”) send all of their children to madrasahs. In other words, among households with at least one child enrolled in a madrasah, only 20 percent can be classified as “all madrasah” households. The majority (i.e. 80%) of “madrasah households” use both madrasahs and non-religious (government or non-government) schools where 17 percent use all three –madrasahs, government and non-government schools simultaneously. In other words, the majority of “madrasah households” use both madrasahs and non/govt. schools while the pattern is the opposite in case of “school (govt. as well as non-govt.) households”. Therefore, if the choice of a madrasah or a non-religious school provides information about the ideology of the household, the data suggest that the choice of a non-religious school is more ideologically driven than the choice of a madrasah.

The last graph (households generally) shows how prevalent every type of household is. “All madrasah” households altogether account for 7 percent of all households. In 20% households, some children are sent to madrasah whilst others to schools i.e. both are used simultaneously. The majority (i.e. 63 percent) of households generally speaking use schools only (either government or non-government or both).

The fact that most variation in madrasah enrolment is within rather than between households does not necessarily rule out the role of household-specific factors in predicting madrasah enrolment of children. In Fig. 4 (bottom right plot) for instance, 7 percent of all households have all children enrolled in madrasahs (2% in case of Quomi madrasahs). In case of Pakistan, only 0.6 percent of all households reported to have all children enrolled in madrasahs (Andrabi et al., 2006). Whilst this finding apparently lends support to the hypothesis that the choice of a madrasah in Bangladesh provides some information about the ideology of the household (e.g. religious convictions including concern for after-life consumption), it could still be driven by supply-side factors (such as access to madrasahs).

There are also other factors that operate at the household level which includes poverty, general preference for human capital (as proxied by parental education) and location of the household (in terms of distance to schools and madrasahs). Summary statistics are presented in Appendix Table A for selected variables. To better understand their role, Fig. 5 provides the market shares (FOE or “fraction of enrolment”) of various types of education providers by quintile of per capita expenditure (with the first quintile, “Q1,” representing the poorest 20 percent of the population, and the top quintile, “Q5,” the richest 20 percent) and parental education level16. Madrasahs (particularly the unrecognized type) charge lower fees and hence may attract children from poorer households (World Bank, 2010; Asadullah et al., 2015). Households unable to afford admission fees, textbooks, transport and private tuition required to attend government recognized schools and/or madrasahs may often find that their only option is a Quomi madrasah.

16 For each household, we first compute the total food and non-food expenditure. Then we work out per capita monthly household expenditure and apply adult equivalence correction to account for scale economies arising due to differences in household demographic structure.
If household poverty is a valid explanation for madrasah enrolment, we would expect a negative correlation between enrolment and expenditure holding parental education constant. The first graph plots data on enrolment share of recognized madrasahs. A similar proportion of children belonging to uneducated parents or parents with primary education across all expenditure categories attend madrasah. However, in case of children with highly educated parents (secondary school completed or above), enrolment in recognized madrasah is positively correlated with expenditure. In case of unrecognized madrasahs, enrolment share is high for children of uneducated (or primary school educated) parents, across all expenditure categories (see top right plot). For children of secondary school educated parents, none is enrolled when children also belong to the top expenditure quintile. In case of school enrolment, participation rate is similar for children belonging to different parental education and household expenditure categories (see bottom left plot). In general, however, enrolment follows a positive relationship with household expenditure and parental education (see bottom right plot).

A similar comparison done by Andrabi et al. shows an association between lower-income households and madrasah enrolment and households with less educated heads and madrasah enrolment, but the magnitude of these associations is rather small. In case of Pakistan, “madrasah households” are only slightly poorer (0.5 percent more likely to earn less than Rs 7500 per month). However, madrasah households were found to differ significantly in one aspect—their proximity to a private school. Among households with a child in a madrasah, 49 percent lived in neighbourhood with a private school. On the other hand, concentration of the non-madrasah households in such neighbourhood was much higher (72 percent). In order to explore this issue for Bangladesh, Fig. 6 plots data on enrolment by expenditure quintiles and school availability.

The first graph plots data on enrolment in general. Given the presence of any school (irrespective of type) within one mile of the household, enrolment increases with household expenditure. The second graph (top right) plots data on enrolment share of recognized madrasah. Here, madrasah enrolment positively (negatively) responds to distance to madrasahs (schools) across all expenditure quintiles. In case of unrecognized madrasahs, irrespective of distance to school or madrasah, there is a negative correlation between enrolment and household expenditure (see bottom left plot). However, in presence of only non-religious schools, richer households exit out of the unrecognized madrasah system. Lastly, data on enrolment conditioned on non-religious school attendance is reported in bottom right plot. Among households that have access to a school within 1 mile, school enrolment is high across all expenditure quintiles. The opposite is true in case of availability of a madrasah.

The above patterns are consistent with differences in cost of education across school types. Estimates of household spending on sample children are reported in Appendix Table B. Transport cost associated with school attendance is significant in case of government secondary schools as they are few in numbers. In general, household spending rises as we move from primary to secondary education. In the latter, spending also varies significantly across provider types: spending on students enrolled in non-government schools average Tk3434.09 whilst this is 25% lower in case of madrasahs (recognized or unrecognized). For alternative estimates of private spending in Bangladesh by school types and levels of education, see Al-Samarrai (2007). For recognized primary and secondary madrasahs, estimates of private spending reported are Tk1532 and Tk4736 respectively. Estimates for primary and secondary government schools are Tk1034 and Tk12,689 respectively. These figures are higher as they also include private tuition expenses.

4.6. Variation in madrasah enrolment across community characteristics

Differences in madrasah enrolment could be driven by differences across villages rather than households, i.e., in some villages all of the children go to madrasahs, while in others none of the children attend. Since madrasahs rely on religious charity and
local support, it is reasonable to expect that they would thrive in specific socio-economic environments. A similar claim is made by Ali (2009) in his comprehensive analysis of madrasah enrolment in Pakistan17. Community profile can matter for a number of other reasons. Any community-level factor that increases remoteness of the village are likely to contribute to madrasah enrolment through a price effect–improved road conditions will reduce transport costs thereby making it cheaper to go to school. Similarly, supply-side variables such as the availability of formal schools and the level of development in the village can negatively influence madrasah enrolment. Lastly, madrasah enrolment could be driven by the general influence of religion in the community. Villages with more mosques, for instance, may boost demand for religious education. However, this effect should prevail as long as the opportunity costs of religion based activities do not change. In villages with better market access and communications with urban centres, influence of religion should be weak. If so, factors such as electricity availability, road conditions, distance to urban centres and average level of human capital amongst the villagers should all reduce demand for religious education. On the other hand, local labour

17 Ali uses village-level variation and presents correlations between village electricity and water supply in one tehsil in Punjab to make inferences about prevalence of madrasas and linkages with police reports of violent activity.

Fig. 5. Enrolment share of school and madrasah by parental education and expenditure.

Fig. 6. Enrolment share of school and madrasah by availability of school types and household expenditure.
market unemployment rate should increase unrecognized madrasah enrolment as it lowers the opportunity cost of such education. Fig. 7 reports the village-level (aggregate) enrolment data by the presence of following facilities in the village: electricity connection, police station, gas connection, satellite dish connection, NGO-run educational programme, a sufi shrine, more than 2 mosques, and close to an urban area. Religious orientation (whether there is a sufi shrine; whether more than 2 mosques in the village) of the village is positively correlated with madrasah enrolment. On the other hand, there appears to be a negative correlation between village development and madrasah enrolment. For instance, more children enrol in school (compared to madrasahs) in villages close to an urban area, with NGO activity, police station, gas supply and satellite dish. It should be noted that

Fig. 7. Enrolment in school and madrasah by selected village characteristics. Note: (a) * indicates statistical significance based on a pr-test of difference of proportions at 10 percent level. (b) The figure in parenthesis indicates the % of villages having the stated facility.
the magnitude of these correlations is small and they are statistically significant in only 2 out of 6 cases. Besides, a village may benefit from multiple facilities. We address this issue in the next section.

5. Determinants of madrasah enrolment: Results from multivariate regression analysis

In this section, we present econometric evidence on the correlates of madrasah attendance thereby revisiting the findings based on Figs. 5–7 in a multivariate regression framework. The probability of ever enrolment in madrasahs for children is analyzed in Table 2 where we regress the binary dependent variable (1 if the child is/was in madrasah; 0 otherwise) controlling for socio-economic background of the student, parental educational profile and household economic status (proxied by household expenditure quintile dummies and electricity connection) and so on. Variable selection is guided by our choice of data sets. Since Table 2 reports estimates based on data from two surveys, the QSSMEB and the HIES, we specify the regression model using socio-economic variables that are common between the data sets.

For QSSMEB sample, five empirical models are estimated in total. Models 1 and 2 control for division and district fixed effects, respectively. However both control for community characteristics using an aggregate index. Models 3 and 4 replace the index with binary indicators of 6 community characteristics. Model 5 on the other hand controls for village fixed effects. For HIES data, two regression models are estimated where models 1 and 2 include division and district fixed effects respectively. The advantage of the latter dataset is that it is nationally representative (i.e. covers 64 districts of Bangladesh). In contrast, the QSSMEB data comes from 12 districts and hence not nationally representative. HIES sample also includes both rural and urban households so that it is possible to investigate the rural-urban divide (if any) in madrasah choice. A number of findings follow from Table 2. First, among individual specific characteristics, madrasah enrolment is positively associated with child age. This is consistent with administrative data confirming that madrasah share in enrolment goes up
from primary to secondary level. However the coefficient on gender dummy is close to zero and marginally significant (at 10% level). Again this is consistent with earlier studies confirming that an equal number of boys and girls attend registered madrasahs in Bangladesh. In other words, rural madrasahs attract both boys and girls. Second, madrasah enrolment amongst children belonging to very poor households is very high—the coefficient on bottom expenditure quintile is positive and significant throughout all specifications. Similarly the coefficient on the dummy indicating household access to electricity is negative and significant once again confirming the madrasah-poverty connection. Third, supply-side factors also matter. Madrasah enrolment is positively (negatively) and significantly correlated with number of madrasahs (schools) in the locality. This confirms the importance of relative availability of schools in rural Bangladesh as a key determinant of Islamic school choice.

Fourth, aggregate (village level) factors also influence school choice in our data. This is tested in three ways. First, we experiment with an aggregate measure of economic development of the village\textsuperscript{16}. The second approach uses a number of individual indicators corresponding to socio-economic characteristics of the village (columns 3 and 4). Third, we estimate village fixed-effects model so that all community variables drop out. But this allows us to formally examine the extent to which household income effect estimated in models 1–4 is proxying for unmeasured village-level factors.

We find that the coefficient on the village index is negative as expected but insignificant in all specifications (columns 1 and 2). In columns 3 and 4, we look at the influence of constituent individual village attributes. Consistent with Section 4.5, presence of NGO activity in the village is significantly correlated with a lower level of madrasa enrolment. Satellite dish connection is also significantly associated with low madrasa connection. For the remaining indicators (except gas availability), the coefficients are also negatively signed although insignificant. Therefore the findings suggest that some village factors are important. This is also confirmed by QSSMEB based model 5 which reports a large jump in the overall predictive power of the regression model (i.e. value of pseudo $R$-square being doubled) when village dummies (fixed effects) are included. In this model, the coefficient on household expenditure variable also experiences a small decline in size suggesting that part of the negative income effect on madrasa demand reflects the fact that poor households tend to live in economically less-developed communities.

Lastly there is remarkable similarity between findings based on QSSMEB and HIES data. For rural sample, both find significantly higher enrolment in madrasa amongst children belonging to the poorest 20 percent households. Madrasa enrolment is also positively and significantly correlated with the aggregate supply of madrasahs in the locality. At the same time, HIES data formally allows a test of the significance of madrasa attendance in rural areas. The coefficient on rural dummy is positive and statistically significant confirming that madrasa attendance is primarily a rural phenomenon. Beyond these findings, the coefficient on village index is also negatively signed though not statistically significant\textsuperscript{17}.

Our findings on the availability of schools/madrasahs, household expenditure, household access to electricity are also consistent with household-level analysis of correlates of madrasah attendance presented in Asadullah et al. (2015) which presents estimates based on OLS and fractional logic regression models and includes controls for village characteristics. However, variables relating to average characteristics of the child (e.g. proportion of children being female and average age of the child) are not significant in Asadullah et al. because these enter the regression model at the household level. Another important difference relates to parental religiosity which is found to be significant in Asadullah et al. (2015), consistent with the theoretical model presented. However, this factor is left out of Table 2 as we restricted analysis to variables information on which is available in both QSSMEB and HIES datasets.

6. Conclusion

Bangladesh today has the largest Islamic education system in South Asia. Yet it remains the least researched sub-sector of the country. Our discussion has highlighted a number of institutional factors that have been critical to the steady growth of the madrasa education sector over time. Particularly notable are subsidies available to madrasahs that chose to accept state-mandated curriculum and/or admitted female students. At the same time, the authoritarian political regimes seek legitimacy by showing their loyalty to Islam and try to fend off the small but vocal, and sometimes militant, Islamic groups who can cause trouble. However it is hard to separate the role of financial incentives, history and politics as they interacted with each other to determine expansion of Islamic education system in the country. It is in this context that we have examined the incidence and choice of madrasah education in rural Bangladesh by carefully isolating different types of madrasahs.

Unrecognized madrasahs do have a large presence in rural areas—together with recognized madrasahs, they respectively account for 12% and 49% of the total primary and secondary educational institutions in our study area. However contrary to common wisdom, the market share of unrecognized madrasahs, measured in terms of the number of students enrolled as a proportion of total enrolled children, is found to be small. This is consistent with findings for Pakistan where less than 1 per cent of all students were found to be attending madrasahs. However recognized madrasahs do have a much larger share in overall student enrolment, particularly in secondary education.

Cohort-wise analysis reveals that the enrolment share of unrecognized madrasah never accounted for more than 2% of total secondary enrolment for any male cohorts born before 1998. In case of recognized madrasahs, there is a clear jump in female enrolment (at secondary level) for the age cohort 21–25 years old suggesting that the influence of Female Secondary School Assistance Programme. Overall enrolment share is higher among recent age-cohorts for both recognized and unrecognized madrasahs. District-wise analysis of enrolment data indicates a higher market share of unrecognized madrasahs in less poor Eastern districts (such as Sylhet and Chittagong).

Having documented the incidence of unrecognized madrasahs as less extensive than is usually thought, we analyzed the factors that shaped parental decisions to send children to Islamic schools. Our descriptive evidence highlights significant differences in the set of choices available to parents in different socio-economic positions even though parents single out religious factors as the key reason for madrasah enrolment. Regression analysis on the determinants of madrasah enrolment shows that both boys as well as girls are equally likely to be sent to Islamic schools. At the same time, household attributes such as income and electricity connection

\textsuperscript{16} In case of HIES, this is proxied by sub-district mean. In case of QSSMEB data, the index is constructed over six characteristics (i.e. availability of electricity, gas, police station, satellite connection, any NGO run education program and village being semi-urban) village and hence ranges between 0 and 6. We also experimented with an alternative version of the latter following the principal component approach. However, our result did not change.

\textsuperscript{17} In case of HIES data, the village index doesn’t include presence of NGO activities availability and availability of electricity. We did not have access to these variables from HIES dataset which is available separately from an accompanying community survey. Instead, we used average household expenditure in the sub-district as a proxy for village development.
matter in predicting who will send their child to a madrasah. On the supply-side, availability of schools and community-specific factors such as NGOs activity and availability of satellite dish connection in the village significantly reduce enrolment in madrasahs. This once again highlights the fact that demand for madrasa is greater among poor households and those living in under-provided areas. In other words, given an affordable choice, many rural families would send their children to the mainstream school, particularly at the secondary level.

Nonetheless, the correlations described in the paper should be revisited using new data in order to better explain the determinants of madrasa enrolment. Our survey did not ask parents about motivations for sending one household child to a madrasah and not the others. As a matter of fact, none of the available Bangladeshi surveys (e.g. those conducted by CAMPE) separately ask households for reasons to choose schools and madrasahs and/or a combination of the two. Alongside conventional household factors, the importance of unobserved preferences should be investigated as parents may sort less able children within the households into madrasahs based on such characteristics. Other motivators for madrasa enrolment includes marriage market considerations. Equally, correlates of unregistered madrasah attendance should be investigated separately. Potential supply-side factors include smaller student-teacher ratio (or less crowded classrooms) in madrasahs compared to schools. Although madrasahs operating outside the state-sector draw a small proportion of school going children, they may involve important trade-offs in terms of school quality, civic norms and socioeconomic values. Unrecognized madrasah attendance may not prepare children for general employment and there can be significant opportunity costs involved. At the same time, there may be important non-market returns to such education. Future research using data from Muslim communities should look into these possibilities.

Lastly, the institutional context in Bangladesh is comparable to that of Indonesia and Egypt where a large state supported parallel Islamic education system has developed historically. They also face the education policy dilemma of how to deal with the products of the state-supported religious education system who are arguably not well-prepared for economic and citizen role in a progressive, democratic and modernizing society and who are vulnerable to the enticements of religion-based political extremism. The political culture in these countries also appears to limit public discussions on the paradoxes of a faith-based education. Therefore, it is hoped that the patterns documented in this paper along with comparable published evidence on Pakistan will help inform the current global debate on Islamic schools in South Asia and other regions.

Appendix A

Table 1

<table>
<thead>
<tr>
<th>Table A</th>
<th>Summary statistics (selected variables; QSSMEX 2008 sample).</th>
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<tbody>
<tr>
<td></td>
<td>Mean</td>
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<tr>
<td>Child enrolled in madrasah</td>
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<tr>
<td>- Child currently enrolled in</td>
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<td>any school/madrasah</td>
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<tr>
<td>Household head’s spousal schooling in years</td>
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Table A (Continued)

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<th>Mean</th>
<th>Std. Dev.</th>
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<td>- less than primary</td>
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<tr>
<td>- primary completed</td>
<td>0.19</td>
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<tr>
<td>- secondary and/or above</td>
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<td>Household expenditure: bottom quintile</td>
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<tr>
<td>Household expenditure: second quintile</td>
<td>0.22</td>
</tr>
<tr>
<td>Household expenditure: median</td>
<td>0.18</td>
</tr>
<tr>
<td>Household expenditure: fourth quintile</td>
<td>0.12</td>
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<tr>
<td>Household expenditure: top quintile</td>
<td>0.09</td>
</tr>
<tr>
<td>Total # of secondary schools in the union</td>
<td>4.44</td>
</tr>
<tr>
<td>Total # of secondary madrasahs in the union</td>
<td>2.67</td>
</tr>
<tr>
<td>- Household within 1 mile distance of the nearest school</td>
<td>0.62</td>
</tr>
<tr>
<td>- Household within 1 mile distance of the nearest madrasah</td>
<td>0.50</td>
</tr>
<tr>
<td>Village has a police station</td>
<td>0.04</td>
</tr>
<tr>
<td>Village has gas connection</td>
<td>0.02</td>
</tr>
<tr>
<td>Village has electricity</td>
<td>0.89</td>
</tr>
<tr>
<td>Village has satellite dish connection</td>
<td>0.25</td>
</tr>
<tr>
<td>Village is peri-urban</td>
<td>0.10</td>
</tr>
<tr>
<td>Village has NGO activity</td>
<td>0.48</td>
</tr>
<tr>
<td>Village development index</td>
<td>2.23</td>
</tr>
</tbody>
</table>

Appendix B

Table B

<table>
<thead>
<tr>
<th>Table B</th>
<th>Annual household educational expenditure per student by school type, QSSMEX estimates.</th>
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<tbody>
<tr>
<td>Fees</td>
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<td>Primary schools/madrasahs</td>
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<td>Madrasah (any)</td>
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<tr>
<td>- Madrasah (recognized)</td>
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<td>Secondary schools/madrasahs</td>
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<tr>
<td>School (non-govt)</td>
<td>908.06</td>
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<td>School (non-formal/NGO)</td>
<td>1051.23</td>
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</table>

Note: (a) All figures are for the year 2007 and in taka. (b) Estimates don’t account for direct spending on supplementary private tutoring.

References


Bangladesh Development Series Paper No. 27.