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Madrasah for girls and private school for boys? The determinants of school type choice in rural and urban Indonesia☆

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ABSTRACT

Using a nationally representative data set on Indonesian households and villages, we study the determinants of enrolment in Islamic schools (i.e. madrasahs) and private schools vis-à-vis government schools. Multinomial logit estimates indicate that madrasahs systematically attract children from poorer households, rural locations and less educated parents while the opposite is true for private school enrolment. Moreover, girls are significantly more likely to be in madrasahs, irrespective of their locations, while boys enjoy a higher probability of enrolment in non-madrasah schools, particularly in urban areas. A significant effect of household income remains even after factoring out the influence of child characteristics, parental background, and village characteristics. Therefore policies that reduce household poverty are likely to reduce demand for Islamic schooling. However the presence of a "girl effect" in madrasah enrolment independent of household income and location factors is puzzling and underscores the need to better understand the socio-cultural determinants of school choice in Indonesia.

1. Introduction

Indonesia is home to the largest Islamic education system in the world where thousands of madrasahs exclusively cater to the educational needs of children from Muslim households. As a matter of fact, Indonesia belongs to a regional belt, stretching from North and West Africa to South and South-East Asia, including countries like Egypt, Nigeria, Pakistan, Afghanistan and Bangladesh, where the madrasah system of education is thriving (Anzar, 2003; Coulson, 2004; Hefner and Zaman, 2007; Atran et al., 2008; van Bruinessen, 2008; Izama, 2014; Asadullah and Chaudhury, 2016). However, madrasahs are often accused of promoting extreme political and religious views and gender norms (Anshor, 2006; Asadullah and Chaudhury, 2010).[1] The large presence of Islamic schools in Muslim countries, therefore, raises an important question: why do households choose to send their children to madrasahs? The common perception is that madrasah attendance is higher in rural locations and driven by household poverty and/or cost-related concerns (Parker and Raihani 2009). If true, madrasah choice has important policy implications given that Indonesia, Bangladesh and Pakistan host over half a billion people most of whom live in rural areas and on less than two dollars a day. Identifying the determinants of Islamic school attendance vis-a-vis non-madarash schools is crucial for understanding parental choice in poor Muslim communities throughout South-East Asia. Country-specific knowledge of the determinants can guide appropriate policy design to ensure that these countries capitalize on the opportunity to reap benefits from the demographic dividend by improving the quality of available human resources.

Indonesia's madrasah system is unique in the Muslim world for

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[1] While there is evidence that educational attainment in Indonesia reduces public support for suicide bombings that target civilians, particularly among those with higher education (Shafiq and Sinno, 2010), direct statistical evidence on the link between madrasah attendance and support for violence is limited. One survey conducted in 2003 revealed that most students at a particular brand of pesantrens "view America as an enemy, believe the Bali attack was organized by the U.S. to 'damage the image of Islam,' and say that they are eager to join a jihad" Murphy (2003). For a counter argument, however, see Pohl (2006).

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several reasons. First, the majority of the country's madrasahs are in the non-state sector, in most cases teaching Arabic religious texts alongside a non-religious curriculum.[2] Yet they belong to centralized bureaucracies, associated with Indonesia's two leading Muslim organizations, *Muhammadiyah* and *Nahdlatul Ulama* (NU) (Hasan, 2008; van Bruinessen, 2008). Second, Indonesian madrasahs have been open to girls for nearly a century. Both *Muhammadiyah* and NU maintain a nationwide network of madrasahs led by women who interpret sacred texts and exert powerful religious influence (van Doorn-Harder, 2006). This is in stark contrast with madrasahs in South Asia which were until recently all-male institutions. Third, a large number of fee-charging non-religious private schools operate throughout Indonesia alongside madrasahs. The large size and heterogeneous composition of the non-state education sector is despite a large-scale public school construction programme undertaken in the country in the past (Dufflo, 2001). Therefore, compared to most other Muslim countries in Asia, Indonesian households face a different mix of schools comprising of madrasahs, non-religious private and public schools. In other words, households can choose a private school/madrasah, one that operates independently, or send their children to a government-aided school or madrasah (Stern and Smith, 2016). Fourth, Indonesia's fragmented geography means that the availability of alternatives to madrasahs may vary across regions. Regional disparities remain in student access and educational quality in remote and poor areas (OECD/Asian Development Bank, 2015). More integrated, urbanized, and prosperous regions (compared to less developed and poorer provinces) may benefit from the presence of private schools widening the available range of school types. In other words, the mix of schools differs depending on the household's place of residence.

The above features of the country's education sector present a rich institutional context for studying madrasah enrolment decisions. Yet, research on madrasah choice in Indonesia is limited. Compared to government non-religious schools and madrasahs, these schools are underfunded and rely on teachers many of whom are uncertified and lack professional development. Private madrasahs also perform relatively poorly in public examinations. Yet demand for these educational institutions is high and they significantly cater to the educational needs of children from low-income families (Stern and Smith, 2016). While studies have examined the determinants of school enrolment decisions (e.g., Pradhan, 1998; Takahashi, 2011) or academic achievement (e.g., Newhouse and Beegle, 2003; Suryadarma et al., 2006) in Indonesia, none looks at the correlates of school type choice. Two exceptions are Chen (2010) and Permani (2011a).[3] Chen (2010) does not directly study school choice in Indonesia. However, his empirical analysis of the Asian financial crisis finds that madrasah attendance serves as a form of insurance in times of crisis. Economic distress stimulates Koran study and Islamic school attendance but does not stimulate non-religious school attendance. Permani (2011a) attributes the demand for madrasah education to household religiosity, among other factors. However, the study does not analyze madrasah enrolment decision vis-a-vis different types of schools.[4] As such, little is known about the factors that shape children's enrolment into religious and non-religious schools in Indonesia and how that varies by location.

Indonesia's madrasah sector is unique in the Muslim world for its historically pro female orientation (van Doorn-Harder, 2006). Quran literacy gained from madrasah education can be valuable traits for a woman as it enables mothers to socialise their children in rural communities (Rao and Hossain, 2011). At the same time, many madrasahs in Indonesia continue to be influenced by traditional patriarchal values, and male-dominated religious interpretations (Abdalla et al., 2006). Madrasah education can inculcate traditional values in girls by helping them become a "better wife" (Raynor, 2005, 2008). Madrasah attendance may transmit values such as obedience, selflessness, and submission (Lukens-Bull, 2000, 2001) which are demanded by prospective grooms in the marriage market (Winkelman, 2005).[5] However, research exploring the effect of gender on madrasah choice in Indonesia is lacking.

In this paper, we test some of the common explanations for madrasah attendance, including the role of gender, using data from a very large household socio-economic survey, SUSENAS, which contains information on children's enrolment status by school types. The survey covers all provinces of Indonesia and spans rural as well as urban areas. An important limitation of SUSENAS is the lack of supply-side information. We overcome this deficit by merging SUSENAS data with village census records (PODES) which contains information on school availability at the village level. The combined SUSENAS-PODES dataset for the year 2005, therefore, allows us to empirically investigate the determinants of madrasah and private non-religious school enrolment vis-à-vis public non-religious schools in Indonesia with a focus on household, child and community characteristics. In doing so, we also contribute to the developing country literature on the determinants of children's school participation and school type attended by gender (Binder, 1998; Glick and Sahn, 2000; Tuwor and Sossou, 2008; Takahashi, 2011; Ajayi and Buessing, 2015; Goensch, 2016) and gender difference in school choice in particular (e.g. Srivastava, 2006; Azam and Kingdon, 2013; Woodhead et al., 2013; Antoninis, 2014; Sahoo, 2017).

The rest of the paper is organized as follows. Section 2 presents background information on madrasahs and the mainstream education system in Indonesia. Section 3 discusses the methodology and the theoretical ideas underlying the empirical model of school choice. Section 4 discusses the data set while results are presented in Section 5. Section 6 concludes.

2. Study context

With over some 340,000 educational institutions, Indonesia has the fourth largest education system in the world, behind the China, India and the United States (OECD/Asian Development Bank, 2015). This is the outcome of sustained public investment in schooling infrastructure by past governments. The most notable is that construction of 60,000 primary schools in the 1970s (Dufflo, 2001). In 1984, the government also enacted a National Compulsory Education program requiring children to finish primary school. This program helped Indonesia achieve universal primary education by the late 1980s, involving different types of providers including Islamic schools.

The Islamic education in Indonesia comprises of two types of schools: General education and Islamic education. Both types of schools are divided according to the level of education. General education with Islamic characteristics consists of formal and non-formal schools. Regardless of their status, these schools use a modern system of education in which Islamic subjects are taught alongside general subjects as part of a national curriculum. The main aim of this type of school is to produce graduates like those from modern-style 'non-religious' schools

[2] One variant of madrasah in Indonesia is called the *pesantren*, a primarily rural-based Islamic educational institution which exclusively teaches Islamic subjects using classical Arabic books with the principal aim of producing religious authorities. However in recent decades, many *pesantrens* also offer non-religious subjects (Hasan, 2008). Therefore, throughout this paper, we use the terms madrasah and *pesentran* interchangeably.

[3] A recently completed comprehensive study on Indonesian junior secondary madrasahs is Ali et al. (2011). However the study only focuses on learning achievements.

[4] The author relies on cross-section analysis of junior madarasa enrolment based on 353 observations extracted from the Indonesia Family Life Survey (IFLS) 2007. So it is not possible to consider the full range of school types – madrasah, non-faith private and public schools – from which households and analyse how choice varies across various subgroups such as regions and gender.

[5] Existing international evidence indicates significant conservatism among madrasah students in general, and female madrasah graduates in particular, relation to gender roles and attitudes (e.g. see Asadullah and Chaudhury, 2010; Asadullah et al., 2018).