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The education divide in Indonesia

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Summary in English

Improving access to and quality of education is necessary condition to prepare a skilled workforce to advance a country from one economic level to the next level. However, increasing access to and quality of education alone is not sufficient without equitable learning for all. Equal opportunity on education affects an individual's life because it has the potential to improve the ability to think critically, to solve problems and to make appropriate decisions. Indonesian government simultaneously improves access to and quality of education for all citizens. Although its efforts had noticeable impact, many of the targets to improve access to and quality of education nevertheless still have not been achieved and education inequality is still persistent.

This dissertation studies the complex and multifaceted phenomenon of inequality in access to and quality of education. It uses analyses drawn from a multilevel multi-resource framework involving various nation-wide surveys, administrative datasets and experts' interview data from three non-governmental organizations in Indonesia to comprehend some of the mechanisms behind the unequal access to and quality of education. It suggests that the impact of and interplays between human, social, economic, political and infrastructural capital at the individual, household, school, community and government level are important on inequality in access to and quality of education in Indonesia.

Some of the questions discussed in the four empirical chapter of the dissertation include: Which characteristics at the level of municipalities, households and children help to explain why children never attend or drop out from school in Indonesia? To what extent and under which conditions can variations in preschool participation be explained by differences in household-level and community-level resources, and what is the moderating role of social capital? To what extent did the decentralization of Indonesia's educational sector affect (variability in) educational attainment at the provincial and municipal levels? How can variations in the (gender and parental socio-economic status related gaps of) academic achievement of students attending private Islamic schools be explained by ideological and organizational differences of their schools?

Which characteristics at the level of municipalities, households and children help to explain why children never attend or drop out from school in Indonesia?

We examine the relationship between municipality and household characteristics and the likelihood of children out of schooling. Building on opportunity structure approach, we theorize that a set of municipality and household characteristics could either hinder or facilitate children to be out of school. Hypotheses are tested using data from 221,392 children, nested in 136,182 households in 497 municipalities. Multilevel multinomial

analyses show municipality education expenditure can help prevent dropout but it could not attract children to attend school to begin with. In contrast, the availability of schools decreases the likelihood that children never attend school but it does not reduce dropout. High municipality poverty rates increase the likelihood of children never attending school, but they also lead to lower dropout rates. Family factors, such as wealth, education investment and educational background also reduce the likelihood that children are out of school. Belonging to a female-headed household increases the likelihood that children never attend or drop out from school.

To what extent and under which conditions can variations in preschool participation be explained by differences in household-level and community-level resources, and what is the moderating role of social capital?

Drawing on social capital theory, we theorize that high levels of household and community social capital not only lead to higher preschool enrollment rates, but also temper the negative effects of low socio-economic status on preschool attendance. Hypotheses on socio-economic status and social capital effects and their interaction were tested with Indonesian survey data, collected in 2009, on 43,879 children nested in 42,855 households in 14,774 villages. Multilevel logistic regression analyses confirm the strong negative main effects of low socio-economic status. In addition, low levels of access to modern mass media significantly decrease preschool attendance. Social capital represented by household association and community reciprocity increase preschool participation. Social capital based on perceived reciprocity compensates low-income parents that empower them to send their children to preschool. Our findings revealed three interplay mechanisms: (1) reciprocity can compensate low-income families for sending their children to preschool as a *within-level cross-resource effect*; (2) living in a higher trust strengthen the effect of association on preschool participation as a *between-level single-resource effect*; (3) residing in urban area reinforces the effect of associations but it weaken the effect of reciprocity on preschool participation as a *between level cross resource effect* consists in urbanization.

To what extent did the decentralization of Indonesia's educational sector affect (variability in) educational attainment at the provincial and municipal levels?

We advance existing research by examining the influence of both municipal factors and other explanatory variables on educational attainment in Indonesia. In particular, we hypothesize that after decentralization, 1) educational attainment is higher compared to the pre-decentralization era, 2) regional variations in educational attainment will have increased, and 3) the fiscal capacity, degree of urbanization, and development will be higher; the higher the municipality's mean year of schooling. The latter is also expected for the newly created municipalities of the past years. Hypotheses are tested using panel data on 5,541,983 respondents aggregated to 3,880 observations in 491 districts/cities in 32 provinces for the pre and post-decentralization periods. Multilevel analyses reveal that

after decentralization, the length of schooling slightly increased but progress in the length of schooling slightly decreased. In addition, educational attainment variation between provinces slightly decreased but the variation among municipalities increased. Moreover, the degree of municipalities' development and urbanization have a significantly positive impact on improving educational attainment while the fiscal capacity and the status of being a new municipality do not have a significant effect on extending the length of schooling.

How can variations in the (gender and parental socio-economic status related gaps of) academic achievement of students attending private Islamic schools be explained by ideological and organizational differences of their schools?

We investigate the effects of different organizational governance (tracks) and ideological organization (streams) of private Islamic schools on student achievement and achievement gaps. Drawing on an education production function approach, we outline differences in investment and resource allocation decisions across these tracks and streams. Hypotheses are tested using Indonesian data collected in 2013 on 156,952 students in 3,150 schools in 366 municipalities. Evidence showed that student achievement and achievement gaps vary over private Islamic school tracks and streams. Even though student achievement and achievement gaps are strongly determined by student and family characteristics, the results show that differences between school tracks and streams also play an important role. Moreover, this study found two interplay mechanisms: (1) attending in Traditionalist and Modernist streams significantly decrease the achievement of female students as an example of *between-level and cross-resource effects*; (2) being located in a municipality with a high poverty rate decreases the positive effect of madrasah on student achievement as a *between-level single-resource effects*.

