

Language Barrier to Human Capital Development

(Thesis abstract)

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Motivation of my thesis.

In cross-country growth regressions, educational achievement plays an important role in explaining development. On the other hand, other factors such as ethnolinguistic polarization, ethnolinguistic fractionalization and ethnolinguistic inequality have negative effects on development.¹ Nonetheless, there is little empirical evidence to support how these ethnolinguistic factors affect development through educational achievement. In my thesis, I provide this empirical evidence in the context of Guatemala which shows strong inequality, and both a polarized and fractionalized population.

The root of Guatemalan students' language barrier: households' preferences for school attributes or spatial segregation. (Job Market Paper)

A learning barrier to a country's predominant language may affect human capital development. In Guatemala, students' linguistic sorting across schools is hindering non-Spanish mother tongue (SMT) students to learn the predominant language of instruction at schools, Spanish. This leads non-SMT students to poorly perform at schools. Relevant for Guatemala due to its high non-SMT population, this research identifies how school attributes, children's non-Spanish language use, and spatial segregation influence parents' school choice, and hence shaping students' linguistic sorting across schools. I do this by estimating a model of demand for junior high schools in Guatemala. The model features that parents consider schools as differentiated products, but also that this school differentiation depends on characteristics of other parents who select the same school in equilibrium. From the estimation, three main findings emerge. First, non-SMT parents prioritize their child's Spanish learning process when selecting schools. Second, non-SMT parents prefer to sort into schools where other parents have a similar mother tongue. Third, this last preference dominates the first for non-SMT parents whose home is not close to the Guatemalan capital city (spatial segregation). This leads to linguistic segregation at schools.

Are non-Spanish mother tongue students facing a language barrier in the Guatemalan education system?

Non-Spanish mother tongue (non-SMT) students' achievement on the Guatemalan national tests is poor. On average, non-SMT students' reading and math test scores are 0.6 and 0.4 standard deviations lower, respectively, than SMT students' test scores. This research analyzes how students' linguistic sorting across schools affect non-SMT students' Spanish comprehension given their non-Spanish language use, and therefore their educational achievement. I do this by using both a longitudinal dataset that represents the grade six students' 2010 cohort, and different estimation approaches such as two stage least squares, first difference, and local instrumental variables to explain test score gaps between SMT and non-SMT students. Three main findings emerge. First, students' linguistic sorting across schools is a prominent factor for students' non-Spanish language use. Second, non-SMT students who frequently speak their mother tongue are not yet proficient in Spanish. Lastly, students' non-Spanish language use explains about 70 percent of test score gaps between SMT and non-SMT students.

¹Polarization measures people's beliefs toward other groups. Fractionalization measures how heterogeneous a group is.