Class Composition and Student Achievement in Portugal

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In this paper we estimate class composition effects impacting on achievement levels of Portuguese students. Endogeneity between student achievement and student non-random sorting across schools and classes may prevent the correct identification of class composition effects. Using student level cross sectional data of 6th and 9th graders (2011/12 academic year) provided by *MISI* dataset we contrast a relatively recent estimation procedure in the literature – involving a proper instrument (IV) coupled with School Fixed Effects (SFE) – with usual OLS as means to properly identify the composition effects free of endogeneity bias. Several dimensions of class composition were identified as consistently impacting national exam scores on Portuguese and Mathematics. Namely, the proportion, in a given class, of pupils: 1) under the relevant grade reference age; 2) of low income households (negative impact) and 3) with home access to internet (positive impact), to mention a few. Many of the effects are statistically significantly asymmetric (e.g. an increasing proportion of students aged at or below the relevant grade reference age in a class seems to affect positively this type of classmate while hurting those aged above it). Non-linear effects are also analysed. In turn, class size yields no significant effect on achievement, while class gender composition uniquely affects boys' achievement in Portuguese. Given that in the past recent years Portugal has been put under tight public budgetary management it is even more important to identify class compositional effects. Their identification, which this paper contributes to, can provide policy orientations capable of delivering positive increments to student achievement while, at the same time, be budget neutral. Taking the results obtained it seems that optimally allocating students across classes seems more attractive than to increase teacher spending to cut class size.

Keywords: class composition; student achievement; IV; School FE.