

Estimating the Causal Effect of School Size on Educational Attainment

Oswald Koussihouédé

University Gaston Berger, Saint-Louis, Senegal annosw@yahoo.fr

The Education for All initiative led to an increase in schools enrollments in a large number of developing countries. Recent researches have pointed out that the increase in school enrollments has deteriorated the education feature because the initiative was not followed by effective actions to improve or at least maintain school quality. Yet, size of school, i.e. the number of students in that school, is seen as a factor of efficiency in the economies of scale. Large school size implies small operating cost per student while small school size is associated to increased unitary cost. Described this way, consolidation of school appears to be desirable and even preferable to keeping school small. However, available researches have provided contradictory evidences based only on correlations analysis. Those studies suffered of methodological issues because of the way they deal with the endogeneity of school size and ended up in having little or no influence on education policies. This dictates the need for contributing to the literature by bringing a different methodological strategy. We propose an approach that cares of the issues encountered by previous works in the area and our research questions the causal impact of school size on learning outcomes through two different quasi-randomizations mechanisms: a double robust method that uses propensity score in a weight scheme and an inverse variance nearest neighbor matching method. We utilize three rounds of nation-wide data collected between 2009 and 2011 by the World Bank in Senegal. The fact that the same students were followed-up overtime offers the possibility to look at the life-cycle of the causal impact of school size on educational attainment by computing the estimates for both the short term (12 months) and a longer term (18 months). Our findings could initiate the debate on this never causally questioned issue in Africa.

Key Words: Education quality, learning outcomes, quasi-randomization