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The effect of age at school entry on college admission and earnings: a regression-discontinuity approach

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Abstract

This paper provides evidence of the effect of age at school entry on college admission and earnings. It does so by exploiting a number of features in the application process to one of the major flagship universities in Brazil. By comparing applicants with different ages at school entry depending on whether they were born on December 31 or on January 1, our estimates show that applicants who delayed first-grade enrollment present higher aptitude test scores and probability of admission. Our results further suggest that advantaged applicants also earn more early in their careers.

JEL Classification: I21, J24

Keywords: School starting age, School achievement, College admission, Aptitude test score

1 Introduction

The perception that maturity plays an important role in school learning has encouraged parents and teachers to delay children's first-grade enrollment. As a consequence, there has been a significant increase in the age at school entry in countries such as the USA (Deming and Dynarski 2008). In fact, there is strong evidence that older pupils tend to outperform their younger classmates in early grades (Bedard and Dhuey 2006; Puhani and Weber 2007; McEwan and Shapiro 2008; Justin 2009). However, there is also evidence that this difference declines over time and disappears in the long run, having no positive effect on adult outcomes (Elder and Lubotsky 2009; Mühlenweg and Puhani 2010). Some studies even find that entering school later reduces educational attainment, by increasing high school dropout rates, and decreases lifetime earnings, by reducing experience in the labor market (Angrist and Krueger 1991; 1992; Dobkin and Ferreira 2010; Black et al. 2011).[1] Nonetheless, the positive effects in early grades may be persistent in a system where students are tracked early into different schools or classes (Allen and Barnsley, 1993; Fredriksson and Öckert 2014).

Given the weak and still disputable evidence of its long-term effects, our study presents and discusses the consequences of a delayed school entry on the admission of college applicants and on their subsequent earnings. We exploit the admission process to one of the major flagship universities in Brazil, which selects candidates strictly based on an entrance exam. In addition to its high quality and reputation, *Universidade Federal de*