

Returns of parental education on children's development by cultural inheritance and ethnic background

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Childhood is an important time for healthy development and for establishing the foundations for future well-being. Parents' education and the time they spend with their children are crucial for child development and human capital formation (Fiorini and Keane, 2014; Bono et al., 2016). We examine the effect of parents' highest level of qualification and parental involvement on children's academic performance and cognitive development during their early stage of childhood and primary years of schooling. We ask whether returns of parental education on children's development outcomes differ by cultural inheritance and ethnic background. Parents with higher education tend to spend more quality time with their children, and tend to have access to more resources, and this is subsequently reflected in better outcomes for their children's development. These benefits can differ by cultural inheritance and ethnic background,

- firstly, because parents from different ethnic and cultural backgrounds may put different emphasis on various activities (Nguyen et al., 2020);
- secondly, because of differential returns to time investment where a child from a bilingual background may require more parental time investment to perform at a certain academic level or to avoid delays in language development (Blom 2010), which is more likely to occur among recent immigrants; and
- thirdly, because of structural and societal barriers and resulting discrimination that may lead to diminished returns of parental education among immigrants or ethnic minorities (as identified by Assari et al. (2020) in the United States).

We employ panel regressions estimated via Ordinary Least Squares and Quantile Regressions, where our outcome variable covers the child's development such as academic achievements and cognitive development, and our main explanatory variable is the interaction between parental education and ethnicity (i.e., the differential effect of parental education by ethnic background). The Quantile Regressions allow us to examine whether the differential effects that we identify for the mean development scores also hold for other parts of the distribution of academic performance.

We use eight waves of the Longitudinal Study of Australian Children between 2004 and 2019. This covers two cohorts of children and provides rich information on children's academic achievement and cognitive development. We consider a broad range of outcomes for children's development, including NAPLAN scores (a standardised test score for academic achievement across numeracy, reading, writing and literacy domains), expressed as the change in test score between the current year and the test score from the previous test, and their learning development in the first year of full-time schooling. The advantage of using NAPLAN scores to measure academic performance is that these test scores are comparable across students and over time. We use multiple ways to define cultural inheritance and ethnic background, including the child's country of birth, the parents' country of birth, the language spoken at home and immigrant status (including year of arrival in Australia and type of migration visa). Parental education is measured as the highest qualification attained by each parent. We include relevant variables to test explanations for differential effects, including variables from the time use diaries (e.g., the time spent on educational activities), whether the child is bilingual and/or has recently immigrated to Australia, and characteristics of their school and neighbourhood that measure the degree of diversity and inclusiveness. We also control for other socio-demographic variables and school characteristics.

We contribute to the literature by testing whether the evidence that there are diminished returns to parental education by ethnic background in the United States also holds in Australia. Further, our longitudinal dataset with a rich set of variables of individual, parent and school characteristics allows us to test alternative explanations for these differential returns that have been proposed in the literature.

Reference List

Assari, S., G. Akhlaghipour, S. Boyce, M. Bazargan and C. H. Caldwell (2020), "Parental Human Capital and Adolescents' Executive Function: Immigrants' Diminished Returns", *Med Res Arch.* Oct;8(10), doi: 10.18103/mra.v8i10.2235.

Blom, E. (2010), "Effects of input on the early grammatical development of bilingual children", *International Journal of Bilingualism* 14(4): 422-446.

Bono, E. D., M. Francesconi, Y. Kelly and A. Sacker (2016), "Early maternal time investment and early child outcomes", *Economic Journal* 126(596): 96-135.

Fiorini, M. and M. P. Keane (2014), "How the allocation of children's time affects cognitive and noncognitive development", *Journal of Labor Economics* 32(4): 787-836.

Nguyen, H. T., L. B. Connelly, H. T. Le, F. Mitrou, C. L. Taylor and S. R. Zubrick (2020), "Ethnicity differentials in academic achievements: the role of time investments", *Journal of Population Economics* 33:1381-1418.

Key Words

Migration, ethnicity, returns to education, academic achievement, children, quintile regression,

JEL Classification

C21, I20, I26, J13, J15