

# **Returns to Early Years of Formal Education: How the Date of Birth Affects Later Educational Outcomes in New Zealand**

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## **Abstract**

In New Zealand, primary school attendance typically starts as soon as a child reaches the age of five (although formal education is not mandatory until the age of six) and the child then proceeds to the next grade in February the following year. In this system, the length of time spent in early formal education therefore varies across students depending purely on the date of birth and this may have consequences for the students' future educational achievement. In most other developed countries, all children turning a specific age in a certain academic year begin school on the same date and receive the same 'amount' of primary education in total. The New Zealand system thus presents a unique opportunity to study the impact of the length of time spent in early formal education on later achievement.

Using a detailed individual-level dataset for years 2005-2010 provided by the New Zealand Ministry of Education, this paper investigates the effects of the date of birth of New Zealand students on later educational outcomes. In particular, we estimate the impacts of the expected length of time spent in years zero and one of primary school on secondary school National Certificate of Educational Achievement (NCEA) and University Entrance (UE) results.

Controlling for socio-demographic factors, we find that the number of months spent in years zero and one does affect the probability of a New Zealand student achieving NCEA level 3 and of meeting the requirements of entrance to a New Zealand university. While the estimated effects are small, differences between extreme cases are non-negligible. In particular, students born in June are up to 4.6% more likely to meet UE than students born in May, *ceteris paribus*.