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*The Impact of Changes in
Kindergarten Entrance Age
Policies on Children's
Academic Achievement and the
Child Care Needs of Families*

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This document was submitted as a dissertation in September 2003 in partial fulfillment of the requirements of the doctoral degree in public policy analysis at the RAND Graduate School. The faculty committee that supervised and approved the dissertation consisted of James R. Hosek (Chair), Laura S. Hamilton, and M. Rebecca Kilburn.

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Published 2003 by RAND

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Abstract

The past two decades have seen a rising trend in the minimum entrance age for kindergarten in the U.S. This trend has been motivated by findings from cross-sectional studies that find that older entrants perform better than younger entrants on a wide range of outcomes in school. However, these studies fail to account for the selection bias in kindergarten entrance age resulting from parental choice, thereby leading to biased estimates of the entrance age effect. In addition, a little-noticed but potentially large consequence of raising the minimum entrance age is that it imposes an additional economic burden in the form of childcare and time costs on families whose children are forced to stay out of school for an additional year.

This dissertation provides new evidence on the causal effect of delaying kindergarten entrance on children's academic achievement in elementary school using exogenous variation in birth dates and kindergarten entrance age policies. Both initial level differences and subsequent growth in test scores are examined. I find that a one-year delay in kindergarten entrance has a positive and significant effect on children's test scores when they begin school, which persists at the end of two years in school. The effect sizes associated with these estimates are large (0.62-0.85 standard deviation units) compared to effect sizes of other educational interventions. I also examine whether the entrance age effect is different for at-risk children, such as poor, children with a disability, and boys. I find that among poor and disabled children, the initial entrance age effect is smaller compared to that for non-poor and non-disabled children. However, delaying entrance has a sizeable effect on the gains in test scores over time for poor and

disabled children but has a negligible effect on gain scores for non-poor and non-disabled children.

This dissertation also develops an economic model for parents' kindergarten entrance age decisions and examines the effect of socio-economic factors on these decisions using a nationally representative dataset on kindergartners in the U.S. The estimates from this model are used to simulate the impact of changes in kindergarten entrance age policies on (a) the number of children affected by the policy change, (b) the socio-demographic composition of the affected children, and (c) the estimated additional childcare cost burden from the policy change. The results indicate that higher childcare prices and maternal wages significantly lower the age at which parents desire to send their child to kindergarten. Girls, non-whites, children from less educated and poor families are more likely to be affected by changes in entrance age policies. The additional childcare cost burden from a movement of all December/January cutoff dates to September, which reflects the current policy trends, is estimated to be close to \$147 million per year for the families of close to 92,000 children who will be affected by this policy change.