



PDRI Policy Brief 1: Estimating the costs of COVID-19-related preprimary school closures

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Key takeaways:

- From March 2020 to February 2021, Early Childhood Care and Education (ECCE) closures amounted to an estimated 19 billion person-days of instruction lost globally, potentially resulting in an increase of 10 preschool million children falling “off-track” in their development and an expected reduction in learning by adolescence equivalent to 14 million grades.
- These impacts in turn imply a present discounted value of economic loss in terms of these children’s future earnings of around USD 300 billion, which is 50 billion more than the pre-pandemic global governmental expenditure per year on preprimary education.
- Although the closures are relatively more financially impactful to high-income countries that had elevated pre-pandemic ECCE participation and high returns to education, children from more disadvantaged contexts generally benefit more from ECCE services and their early development is more likely to have been derailed as a consequence of the restrictions.
- This large impact should be taken into consideration in the cost-benefit analysis of further shutdowns, and other developmentally appropriate remote-learning programs should be offered as a substitution when closures are necessary.

Background:

The study analyzes the impact of one of the several measures of infection containment that were taken during the COVID-19 pandemic: the shutdowns of ECCE (e.g., preprimary school) services. Since March 2020, more than 80 countries have decided to implement lockdowns with direct effects on around 1.4 billion children of various ages. In April 2020, there were already millions of children of preschool age across the globe who, along with their household members, were facing disruptions in their access to ECCE services due to such restrictions. When remote learning and online substitutes were offered, they were likely to be less effective for younger children relative to older students due to young children's greater need for direct supervision, close contact, substantial monitoring, and emotional care; moreover, the feasibility of such remote learning programs was more challenging in less advantaged contexts globally and within countries.

Research design:

This study offers a first estimate of the impact of ECCE closures both in the short term and long term through the application of simulation methods to pre-pandemic, observational data from 196 countries. The outcomes the authors investigate are preschool-age children's access to ECCE instruction, their expected early development, their expected adolescent learning, and finally their expected adult earnings globally. The study also explores heterogeneous implications of the shutdowns across countries belonging to different income categories. The authors exploit UNICEF and UNESCO data on school closures and ECCE participation, MICS data on early childhood development, PISA data for adolescent learning, and finally apply rates of returns to schooling from a prior review by [Fink et al. \(2016\)](#) to provide estimates of earnings losses. They use random-effects meta-analysis to map observational outcomes pre-COVID to the potential impacts due to ECCE services shutdowns.

Results:

The study focuses on shutdowns in the period from March 2020 to February 2021, thus offering an estimate of the effect pertaining to only 11 months of pandemic-related restrictions. Approximately 167 million children suffered disruptions in their access to ECCE services during this period, corresponding to around 19 billion instructional days lost, with the largest impact being faced by middle-income countries.

Prior to the pandemic, around 84 million young children globally were estimated to be "off track" in their early childhood development; that number was increased by almost 11 million because of ECCE closures, especially in low and lower-middle-income countries. Net learning losses amounted to 14.18 million grades according to the authors, who specify a loss per child and year ranging from around 0.09 grades in high income countries to 0.17 in lower middle-income ones. The corresponding impact in the long run can be multifaceted and broad.

In terms of losses in earnings corresponding to lower educational achievement, the study estimates a present discounted value of USD 308.02 billion – an economic loss exceeding by USD 50 billion the total annual governmental expenditures on preprimary education globally pre-COVID-19. There are likely to be other impacts of the ECCE closures not accounted for in this study, namely on the social-emotional skills of children, their and their parents' mental health, and others, implying further relevant economic outcomes. These first estimates represent an alarming result of high relevance for a large share of the global population.

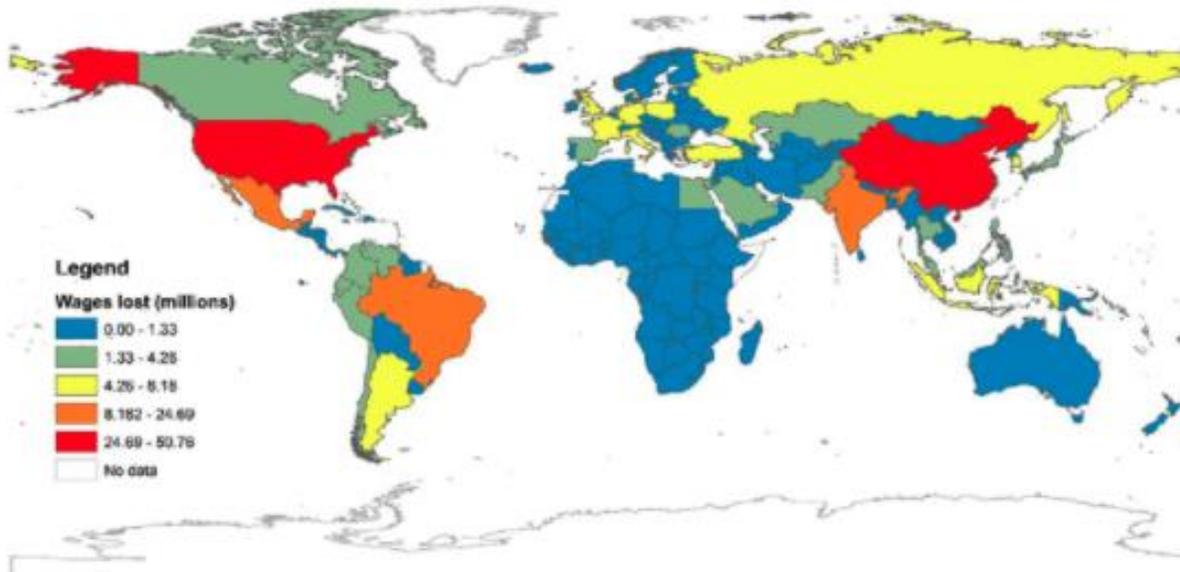


Figure 1: Predicted total wage losses attributable to COVID-19-related ECCE closures between March, 2020 and February, 2021, by country (in USD million, purchasing power parity).

Policy Implications:

The estimates provided by this paper show a worrisome effect of ECCE closures across the globe, with different impacts on countries according to levels of income. The potential persistence and magnitude of the consequences of these shutdowns for children and their future has high policy relevance.

When considering further ECCE closures, policymakers should include in their cost-benefit analysis the potential educational, developmental and economic consequences for preprimary-age children facing such disruptions. The considerations pertaining to public health, therefore, should be paired with the analysis of possible consequences of such policies on these other indicators of well-being.

The vast literature and consensus around the importance of early childhood care and education cannot be ignored when making decisions around schools and ECCE service shutdowns. In the circumstances in which these measures are necessary, governmental effort should be directed to provide suitable substitutes tailored to the particular

developmental needs of younger children, who require a stimulating environment and close care and supervision, calling for innovative and creative solutions. Finally, the outcomes of the study indicate the need to design policies attempting to make up at least partially for these relevant educational losses when restrictions and shutdowns are not necessary anymore.

[Read full study](#)

PDRI Researchers

Jere Behrman

Policy brief prepared by

Ornella Darova

Regions

All regions

Other researchers

Dana C. McCoy, Jorge Cuartas, Claudia Cappa, Jody Heymann, Florencia López Bóo, Chunling Lu, Abbie Raikes, Linda Richter, Alan Stein, Günther Fink

Themes

Health

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