## To Not Move Forward is to Fall Behind: Evidence of policy failure in India

The Right of Children to Free and Compulsory Education (RTE) Act of 2009 was a landmark legislation that underscored India's commitment to provide quality elementary education to all children aged 6-14 years. Its importance stems from the recognition of education as a fundamental right and the accompanying state obligation to ensure its provision to all children. The act required public schools to provide free and compulsory admission, attendance and completion of elementary education for all children aged 6-14 years. Private schools were required to reserve 25% seats for underprivileged children of poorer socioeconomic backgrounds.

The impact of RTE was immediately visible through the increase in primary enrollment in the country in the first years post its implementation (Shah and Steinberg, 2019). However, the mere existence of education reforms does not guarantee their effective implementation or intended outcomes (McLaughlin, 1987). In this paper, I study a natural experiment in education policy implementation: the non-implementation of the India's RTE act in the state of Jammu and Kashmir (J&K)<sup>1</sup>. While the rest of India enacted the RTE act by 2012, J&K's special constitutional status resulted in its non-implementation and created an ideal setting to estimate a causal effect of non-implementation of an education reform.

Estimating the causal effects of non-implementation of education reforms presents considerable challenges, due to the fact that regions that do not implement the reform exhibit significant differences when compared to regions that implement the reform. I address this issue by using a quasi-experimental synthetic control (SC) approach developed by Abadie and Gardeazabal (2003) and extended in Abadie, Diamond and Hainmueller (2010), where I swap the traditional SC framework to study the absence of policy rather than its implementation. I construct a counterfactual J&K using weighted combinations of states that implemented the RTE, carefully selecting donor states based on pre-treatment characteristics. Using administrative data spanning 2001-2018, I find that non-implementation of RTE resulted in approximately 300,000 fewer children (16.8% below potential) enrolling in elementary schools annually in J&K. The magnitude of such educational deprivation, which affects thousands of young lives annually, threatened to create an irreversible human capital deficit in the region with long-term implications for economic and social progress. While these findings emerge from J&K's unique circumstances, they serve as a reminder of what other Indian states averted through RTE implementation, effectively quantifying the human cost of policy failure and missed opportunities for development. This study thus serves as both a cautionary tale and a powerful validation of education policy's fundamental role in human capital preservation.

In addition, I demonstrate differential impacts of non-implementation of RTE across primary and upper primary levels of schooling and find that the negative effects are more pronounced at the upper primary level. I establish the economic significance through Mincer wage equations (Mincer, 1974) showing substantial lifetime earnings losses. I find that children in J&K who complete

<sup>&</sup>lt;sup>1</sup>In 2019, J&K was brought directly under the Government of India and was designated as a Union Territory (UT), thus repealing its special status.

elementary education earn 46% more than children who do not. I validate my results through placebo tests across donor states and time (using a fake treatment year), "leave-one-out" tests, and using a demeaned outcome variable (Ferman and Pinto, 2021; Abadie et al., 2010; Abadie, Diamond and Hainmueller, 2015) to ensure results are not driven by any single comparison state. All tests point to the robustness of the estimated effect.

Beyond the immediate impact of non-implementation of RTE on enrollment, I discuss mechanisms through which the effect on enrollment is further amplified. The non-implementation of RTE affects enrollment through its effects on education quality, infrastructure development, teacher training, availability of adequate learning materials, creating greater barriers for students to access quality education (Glewwe and Muralidharan, 2016; Singh, 2020). Contextual factors, such as challenging terrain that limits physical access, international border security issues, conflicts, terrorism, demographic dispersion, limited administrative capacity, and regional disparities in educational opportunities, local to J&K, further amplify the effects on enrollment.

## References

- Abadie, A., Diamond, A. and Hainmueller, J. (2010), 'Synthetic Control Methods for Comparative Case Studies: Estimating the Effect of California's Tobacco Control Program', *Journal of the American Statistical Association* **105**(490), 493–505.
- Abadie, A., Diamond, A. and Hainmueller, J. (2015), 'Comparative Politics and the Synthetic Control Method: Comparative Politics and Synthetic Control Method', *American Journal of Political Science* **59**(2), 495–510.
- Abadie, A. and Gardeazabal, J. (2003), 'The Economic Costs of Conflict: A Case Study of the Basque Country', *American Economic Review* **93**(1), 113–132.
- Ferman, B. and Pinto, C. (2021), 'Synthetic Controls with Imperfect Pre-Treatment Fit'. arXiv:1911.08521 [econ].
- Glewwe, P. and Muralidharan, K. (2016), Improving education outcomes in developing countries: Evidence, knowledge gaps, and policy implications, *in* 'Handbook of the Economics of Education', Vol. 5, Elsevier, pp. 653–743.
- McLaughlin, M. W. (1987), 'Learning from experience: Lessons from policy implementation', *Educational evaluation and policy analysis* **9**(2), 171–178.
- Mincer, J. A. (1974), The human capital earnings function, *in* 'Schooling, experience, and earnings', NBER, pp. 83–96.
- Shah, M. and Steinberg, B. (2019), 'The Right to Education Act: Trends in Enrollment, Test Scores, and School Quality', *AEA Papers and Proceedings* **109**, 232–238.
- Singh, A. (2020), 'Learning more with every year: School year productivity and international learning divergence', *Journal of the European Economic Association* **18**(4), 1770–1813.