

Designing and Costing Early Childhood Education (ECE) Service Expansion for Maximum Impact

Investing in ECE is a crucial strategy for fostering child development that sets children on a path for a more equitable future. The formative years of early childhood are uniquely influential, with rapid brain growth shaping cognitive, physical, social, and emotional capacities crucial for lifelong success. Such investments in ECE yield significantly higher returns compared to compensatory measures in later stages of life, making ECE a strategic and economically sound investment.

Assessing the distributional impact and costs associated with different financing and institutional arrangement models can support policymakers in tailoring solutions to their specific contexts. This analysis enables governments to understand the financial implications of scaling up existing programs or launching new ones, while also facilitating comparisons of costs and benefits. Such evaluations are crucial for grasping the affordability and sustainability of expansion, identifying key cost components, and contrasting different scenarios regarding their impact on children and associated expenses.



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Early Childhood Education (ECE) services play a critical role in levelling the playground, and reducing inequality of opportunities, for children from poorer and disadvantaged backgrounds. Therefore, it is vital to assess the distributional impact of these expansions to ensure that these children are reached and provided with equal access to quality education. Crucially, this process should highlight disparities in access, particularly where disadvantaged children are excluded due to fees or additional service costs borne by households. Recognizing and addressing these inequalities is imperative for ensuring equitable access to ECE services.

Development Analytics has led various research projects related to early childhood education and care and education outcomes in the last decade. We conducted these studies for various organizations, including the World Bank, UNICEF, Agence Française de Développement (AfD), Foundation for the Support of Women's Work (KEDV), Mother Child Education Foundation (AÇEV), and the former Ministry of Development of Türkiye. A number of these projects focused on broadening ECE services, for which we developed simulation models to estimate the potential impact and costs of different ECE policies. The models are presented through interactive and flexible tools, allowing for adjustments to certain policy decisions.

How would this research study be useful?

- Estimating the budget required for different ECE expansion policies, comparing and contrasting between different service delivery model and funding mechanism scenarios and assisting in understanding the cost implications for the government, from set-up to ongoing operational costs.
- Providing a comprehensive assessment of how various funding options for ECE services impact children from households across different income brackets and allowing policymakers to gain insights into the potential equity implications of ECE expansion and financing strategies.
- Presentation of the results of the simulation models through interactive dashboards allowing policymakers to manipulate parameters and visualize results in real-time, empowering them to explore various scenarios and make informed decisions promptly.

What kind of datasets are needed to carry out such a study?

In order to carry out this type of a study, **survey data collected from different types of service providers** including information on their costs and their prices is necessary. In addition, a **household survey** dataset containing details on expenditure or income, alongside information on access to ECE services is indispensable. Lastly, **national statistics** reflecting existing levels of ECE access, numbers of teachers and classrooms will be necessary.

What are the previous project references of Development Analytics related to this topic?

Development Analytics has extensive experience in devising simulation models to assess the anticipated impact of social policies and programs on population and child outcomes, along with calculating the total costs associated with such policies. Regarding ECE policies, below are examples of projects undertaken by DA, utilizing simulations to estimate the impact of different ECE policies:

- **Early Childhood Education (ECE) Costing Analysis in Türkiye**

Over the past decade, Türkiye has experienced substantial growth in its ECE capacity, but gaps in enrolment rates still remain, and particularly for 3 and 4 year olds.

As part of our project for the Ministry of National Education of Türkiye and UNICEF Türkiye, we developed a simulation model to estimate the total costs associated with expanding ECE services across various scenarios and evaluate their distributional impact. This simulation model was integrated into an interactive and adaptable Excel-based tool, leveraging data on current ECE access, pricing from both public and private providers, and unit costs of setting up and operating ECE services. By empowering users to adjust policy parameters, the Excel model allows exploration of the effects of different scenarios on enrollments and total costs.

The findings and the interactive tool were presented to MoNE experts, and the tool has been passed along to MoNE for future use in supporting the formulation of capacity expansion policies for ECE services. Similar tools can be developed for other countries using their national statistics, household surveys, and pricing and costing data.

- **Ex-Ante Policy Evaluation of Supply and Demand Side Childcare Subsidies**

Public financing of privately provided child care can allow for access to these services in places where public provision and capacity are low. However, the mechanisms of subsidy delivery will affect who benefits, and the overall cost-effectiveness of such subsidies.

In this respect, we carried out this study for the World Bank, for estimating the benefit incidence of expanded capacity and enrollments resulting from different child care subsidy mechanisms in Türkiye. The study considers one-time investment grants and monthly operational grants to child care providers, combinations of investment and operational grants, and demand-side vouchers to households. We built a simulation model to estimate the impact of these different policy options by combining a supply-side provider level and a demand-side household model in one simulation. The model is applied to empirical data from child care centers and households in Türkiye. The results reveal that the choice of the subsidy delivery model has a strong bearing on the benefit incidence and cost-effectiveness of the subsidy.


If you're interested in reaching out to us to explore conducting a study in your country that estimates the enrolment and cost implications of different ECE expansion scenarios leveraging evidence-based approaches supporting the design of future policies, please register your interest through the link below and discuss the specifics with us. Following your registration, we'll reach out to coordinate a suitable date and time for a meeting to understand your research needs and the details of such a study.

[**Register your Interest**](#)


We look forward to being in touch !

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