Evaluate the effects of District Primary Education Program in India

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Abstract

The impact of India's District Primary Education Program (DPEP), which was implemented in the mid-1990s, is examined. We take advantage of the fact that the DPEP was designed for primary-aged children and was introduced in phases to different districts across India, with many districts never receiving the programme, to use a difference-in-difference strategy to determine the program's causal impact on the likelihood of enrolling in primary school, the likelihood of completing primary education, and the number of years spent in school. We discovered that the DPEP programme raised the likelihood of children attending primary school by 2.1 percentage points and increased the likelihood of children finishing primary school by roughly 1.8 percentage points. Similarly, the initiative raised the overall number of years spent in school by 0.16.

Keywords: District Primary Education Program, Difference-in-Difference

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1. Introduction

Through the District Primary Education Program, the Indian government deployed a substantial primary school education operation in 1994. (DPEP). Various districts with low educational outcomes have been chosen to receive financial assistance for school improvement, teacher preparation, and course book enhancement, among other things, under this programme. The government's desire to complete general rudimentary education prompted the

launch of this programme. Despite the fact that 95 percent of the population was approaching elementary school by the mid-1990s, 33 percent of long-term students were out of school in 1992, and 66 percent of those out of school were girls. There was also a great deal of variation in educational outcomes between Indian districts. For example, according to the Census of 1991, female proficiency rates ranged from 8% (Barmer district in Rajasthan province) to 94 percent (Kottayam district in the territory of Kerala). Similarly, dropout rates ranged from 0% (Kerala) to 60% (India) (Bihar).

India's DPEP scheme was similar to stock side agreements that were carried out in a number of countries. It was comprehensive in terms of mediation, ranging from the creation of new primary school structures to the distribution of free course books. Several well-known studies on the impact of school development programmes in various countries have revealed that they have a positive impact on enlistment. Between 1973 and 1978, Duflo used the distinction in-contrast approach to examine the cross-country primary school development in Indonesia. According to the findings, the initiative boosted prolonged schooling durations from 0.12 to 0.19 and pay from 1.5 to 2.7 percent. Burde and Linden evaluated the impact of town-based schools, which were designed to serve just the students living near the schools, in the Ghor region of northwestern Afghanistan in 2007 and 2008. The schools, which were situated in existing facilities, received instructional resources and teacher training from Catholic Relief Services. The initiative, which began in the summer of 2007, was arbitrarily allotted to thirteen communities out of a total of 31. The programme resulted in a 52 percent increase in female enlistment and a 35 percent increase in young male enlistment, according to the researchers. Kazianga et al. (2013) employ a relapse irregularity plan to investigate the effects of a 2005 Burkina Faso girl friendly school improvement initiative in provincial communities. The Ministry of Education previously assigned a score to 293 towns based on the number of children, particularly girls, who will be serviced in those towns. The campaign also encouraged children to attend school and urged the community to support children's education, particularly for girls. According to Kazianga et al. (2003), enlistment for all children increased 19 rate foci after 2.5 years of the programme, and females' enlistment was roughly 5% greater than young men's.

Despite the fact that the DPEP initiative was huge in scope, there has been little research on its impact. Pandey (2000) focused primarily on changes in educational outcomes that happened within DPEP districts. These investigations

have all declared the DPEP to be a success in terms of its stated goals based on this basis. Nonetheless, we would expect elementary school pointers to improve over time in any district selected under the DPEP, even if the district did not receive DPEP assistance. To assess the net influence of DPEP in stage 1 districts, Jalan and Glinskyaya (2003) using penchant score coordinating (PSM). They discovered that the DPEP had a small but considerable net influence on primary school participation rates, supply of completed primary school education, and progression into more major levels of education beyond primary school. They also discovered that DPEP had just a little net effect on the three outcome pointers for the scheduled station gathering in stage 1 districts, none or a minor net effect for the booked clans, and virtually no influence on female children. Stage 1 districts were only considered by Jalan and Glinskyaya (2003), not different stages. Furthermore, the PSM gauges are one-sided when viewed through the eyes of unobservables.

2. Literature Review

Thapa, Rukmini & Sarkar (2019) Auxiliary information on school investment and finishing feature, which allows students to leave school before completing eight years of education, continues to put the success of India's all-inclusive elementary education to the test. This article discusses the findings of a field research conducted in 2008–2009 of every a peripheral metropolitan community in West Bengal against the backdrop of high dropout rates at the primary and higher primary levels. In 2013, similar family units were re-evaluated after a five-year period. The goal was to put barriers to primary education in the context of defenceless children living in a socioeconomically depressed and low-paying settlement. It was revealed that, despite admission to government schools, the dropout rate increased with the age of the child due to employment pressure at home and the double burden of family errands and pay-producing labour. This, combined with poor school support, made it difficult for students to complete primary school.

Mobar Roy, Sonal (2019) Chhattisgarh is one of the developing Indian states that has yet to sample the fruits of development, such as various national circumstances. The state's Human Development Index is 0.430, which is the lowest of all the states, and its proficiency rate is 71.04 percent, which is lower than the national average of 74.04 percent. The Indian government proposes the Right to Education Act (RTE) as a piece of Universal Education Program under the flagship programme of Sarva Shiksha Abhiyan (SSA), which provides quality education to children (6-14 years) across sex, social, and territorial divides. The author of this study explores the use of SSA in the state of Chhattisgarh, with a special focus on two districts in the state, Raipur and Mahasamund. Interview timetables and surveys were used to collect information from teachers, students, staff members, guardians, and community members, as well as District officials, using both subjective and quantitative approaches. Inside and outside information was gathered through perception and Focused Group Discussions (FGDs). The author saw that, under the SSA plan, both Primary and Upper Primary schools are inside the children' compass. Teachers receive training in order to improve their skills. Despite this, challenges such as a lack of resources, a shortage of qualified teachers, a powerless foundation and offices, and a hostile school environment were seen. The author suggests that regular teacher training, adequate monetary allocation, regular monitoring of school activities, and community investment can help make schools a fundamental part of the general public.

Govinda, Rangachar & Mathew (2018) Several times in the last seventy years, defined targets and time frames have been set to achieve the goal of providing basic education to all. Elementary education was elevated from being important for the Directive Principles to the status of a Fundamental Right in the Indian Constitution, requiring the government to ensure that every child aged 6 to 14 receives an education. Is the Right, in any case, a reality on the ground? The

study tries to follow the story of delays and disruptions that have characterised India's efforts to universalize elementary education in a rational manner.

Kong, Siu-cheung & Chiu (2018) This study built on Seymour Paper's idea of captivating students by dominating programming by dividing programming strength into four categories: weightiness, sway, imaginative self-viability, and programming self-adequacy. A related study was completed by 287 primary school pupils in grades four through six. The recommended portions of the programming strengthening tool were approved by a corroborative factor analysis. According to an underlying condition model, students who place a higher value on programming perceive it as more significant, have more notable effect, have more notable inventive self-viability, and have more noteworthy programming self-adequacy. Similarly, pupils with more confident attitudes regarding coordinated effort exhibited higher levels of innovative self-adequacy. Young men expressed a greater interest in programming than young women. Students with higher assessment levels viewed programming as less significant and had lower self-adequacy in programming. These findings support further research into the effects of revenue-driven computational reasoning and programming instructional curricula that provide enough coordinated effort openings.

Kapur, Radhika (2018) Education makes a vital contribution to the compelling development and improvement of persons, and instructors have a critical role to play in providing education to children. The major focus of teacher education is on the provision of training to teachers, with the primary goal of achieving the best possible academic outcomes. Teachers have a critical role to play in ensuring students' effective development and advancement. As a result, it is critical for them to enhance their abilities and capacities in order to carry out their job responsibilities to the required standard. Teachers have a critical role to play in not only achieving the ideal educational foundations' goals and

objectives, but also in improving community government assistance. They are required to adapt to a variety of challenges while carrying out their job responsibilities. The scope of teacher education, changing settings of teacher education in the Indian situation, and problems of teacher education are the key zones that have been explored in this exploration article.

3. Empirical Methodology

3.1 Data

The Indian District Level Health Survey (DLHS-3) third wave was conducted in 2007-08. With a sample size of roughly 720,000 households across 601 districts in India, the DLHS-3 is one of the most comprehensive household surveys ever conducted in India. The information includes socioeconomic characteristics of the household, as well as a list of all household members, their educational attainment, and current schooling status. There are 43 phase 1 districts, 77 phase 2 districts, 36 phase 3 districts, 94 districts in other phases, and 315 non-DPEP districts in the DLHS sample of 601 districts.

The union territories and the smaller states in the northeast were excluded from our sample.

As a result, we have 19 major states in our sample. We recoded Chattisgarh, Jharkhand, and Uttarakhand to their parent state codes because they were only created in 2001. As a result, our sample contains 16 important states. We also eliminated the 94 districts that adopted the DPEP in previous rounds since identifying the beneficiary group in those districts appears to be impossible due to the adoption of SSA in 2001. A total of 423 districts from 16 major states were included in our final sample: In phase one, 43 districts implemented DPEP, 77 districts implemented DPEP in phase two, and 36 districts implemented DPEP in step three, while the remaining 267 districts never implemented DPEP.

3.2 Identification strategy

The DPEP Program was not assigned at random, but rather based on poor female literacy rates in 1991. According to the DPEP standards, successful implementation of the Total Literacy Campaign (TLC) in the districts, as well as low female literacy rates, were the two factors utilised to choose districts. TLC,

on the other hand, had been implemented in practically all Indian districts by 1994. (Jalan and Glinskyaya 2003). Because the DPEP was designed for primary schools, only those who were in primary school at the time the programme was launched were eligible to participate, and those who had already past their primary school age at the time the programme was implemented were not eligible. Another source of difference is the residence district. Only people who lived in the DPEP programme districts would have benefited. Those who lived in non-DPEP districts did not get any benefits during the program's years, regardless of their age. As a result, an individual's exposure to the programme is determined by his or her age (or date of birth) during the programme and the district in which he or she lives.

Individuals who were between 6 and 13 years of age in 1994 in phase 1 districts, 6 to 10 years of age in phase 2 districts, and 6 to 9 years of age in phase 3 districts are considered to be in the treatment group (DPEP programme only). We utilise those who were 14-18 years old in 1994 as a control group because they were never exposed to the DPEP programme in any of the DPEP districts (See Table 1 for details). The treatment group is referred to as the young group, and the control group is referred to as the old group, and the following equation was calculated.

$$Y_{idt} = \alpha + \beta_1 young_i + \beta_2 young_i \times DPEP_d + \beta_3 X_{idt} + \sum_{j=1}^{15} \theta_j state_j \times trend + \gamma_d + \gamma_c + \epsilon_{idt} \quad (1)$$

where Y_{idt} is the outcome of an individual iliving in district dborn in year t, $young_i$ is an indicator variable that takes a value of one if an individual belongs to the treatment group, and zero if an individual belongs to the control group, and DP is an indicator variable that takes a value of one if an individual belongs to the control group. EPdis also an indicator variable with a value of one if a district has benefited from the DPEP programme and zero if the district has never benefited from the programme. The impact of the DPEP programme is captured by the coefficient 2 of the interactionterm between young and DPEP. While the dis districtfixed effect removes unobserved time-invariant district specific effects, the ciscohort fixed effect does not. Xijt is a vector of extra controls, including indicators for females, cities, wealth index quintiles, scheduled caste, scheduled tribe, other backward castes, and Muslims.

The identifying assumption that there are comparable trends of outcomes in treatment and comparison groups in the absence of the programme underpins the causal inference of our difference-in-difference estimations. Although we cannot directly test this assumption because the same young cohort who were not exposed to the programme were not observed, we perform a falsification test by using a cohort aged 14 to 18 in DPEP districts in 1994 as a fake treatment group (old) and individuals aged 19 to 24 as a control group (very old). We calculated the following specifications:

$$Y_{idt} = \alpha + \beta_1\, old_i + \beta_2\, old_i \times DPEP_d + \beta_3 X_{idt} + \sum_{j=1}^{15} \theta_j\, state_j \times trend + \gamma_d + \gamma_c + \epsilon_{idt} \quad (2)$$

This specification is similar to equation (1), except that our estimation sample is now individuals who were 14-23 years old in 1994, and old$_i$ is an indicator variable that takes values of 1 if individuals were 14-18 years old in 1994 and 0 if they were 19-23 years old in 1994. If there were no pre-existing differential trends across the treatment and comparison groups, we anticipate 2 to be indistinguishable from zero.

Our identification technique can be generalised to an inter-action term analysis, according to Duflo (2001).

$$Y_{idt} = \alpha \sum_{j=6}^{22} \delta_j\, cohort_j \ast DPEP_j + \beta_3 X_{idt} + \sum_{j=1}^{15} \theta_j\, state_j \times trend + \gamma_d + \gamma_c + \epsilon_{idt} \quad (3)$$

Where cohort$_j$ is a variable that refers to people who were j years old in 1994. The control group is made up of people who were 23 years old in 1994, and this dummy is left out of the regression. Each coefficient in the above estimation methodology can be understood as the program's impact on that specific age cohort. Because the programme did not benefit those aged 14 to 23 in 1994, the coefficients j should be close to 0 for j > 13.

4. Conclusion

For decades, reducing illiteracy and boosting basic education access for children of all genders, religions, income levels, castes, and social statuses has been at the top of the Indian government's development priority list. One of the government's large-scale intervention programmes to meet the aforementioned

aims was the District Primary Education Program (DPEP). The initiative was launched in phases across India's many districts. Furthermore, the DPEP programme was never implemented in a substantial number of districts. We use the fact that the programme was designed for primary school-aged children and that a number of districts never received it to implement a difference-in-difference (DID) strategy to assess the program's impact on the probability of enrolling in primary school (access), primary school completion, and total years of education completed. We discovered that DPEP improved the likelihood of attending primary school by 2.1 percentage points, the likelihood of finishing primary school by 1.8 percentage points, and the number of years spent in school by 0.16 years. We also discover that girls have somewhat higher positive impacts than boys.

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