ELECTRONIC APPENDICES

Appendix A. Institutional Background of RTE in India

The right to free and compulsory basic education has been a subject of heated debates since the beginning of independent India in 1947. These debates hinged on the premise that right to education was implicit in the right to life and personal liberty guaranteed by Article 21 – which was observed by the Supreme Court of India.[1] Further, it was also advocated by the Acharya Ramamurti Committee Report in 1990 to achieve universalization of elementary education (class 1 to class 8) as stated in the *Directive Principle of State Policy.*[2] While the momentum for right to education as a fundamental right was gaining in political and judicial spaces in India, GoI through District Primary Education Project (DPEP) and Sarva Shiksha Abhiyan (SSA) was investing in physical infrastructure, training of human resources (including teachers and government officials), and trying to diffuse operational guidelines to achieve universalization of elementary education. In particular, SSA was introduced in 2004 by GoI to achieve universalization of elementary education by 2010. The central government provided additional funding to invest in demand and supply-side interventions to achieve this target (Kingdon, 2007). But the goal was elusive as right to education without its fundamental right status was still an endeavor of the state subject to its resource constraints.

Finally, in 2002, the 86th amendment to the constitution introduced Article 21 (a) which stated that "*the State shall provide free and compulsory education to all children of the age of six to fourteen years in such manner as the State may, by law, determine.*"[3] Formally, thereafter, the RTE Act gained approval from the Union Cabinet in 2008, and then passed through the Lower and Upper House of the Indian parliament in July and August 2009. India thus joined more than 100 countries including United Kingdom, Japan, Germany, Belgium, Norway and others where the right to education is a fundamental and justifiable right of every citizen in the country from April 1st, 2010.[4] Consequently, the state governments enforced the RTE Act by passing it in their own state legislatures. It should be noted that not all states passed the Act in their legislatures at the same time (see Appendix Table 1 for details of

[1] The two cases were Mohini Jain v. Union of India (1992) 3 SCC 666 and J P Unnikrishnan v. State of Andhra Pradesh, 1993 SCC (1) 645. In the case of J P Unnikrishnan v. State of Andhra Pradesh, 1993, the Supreme Court stated that: "The citizens of this country have a fundamental right to education. The said right flows from Article 21. This right is, however, not an absolute right. Its content and parameters have to be determined in the light of Articles 45 and 41. In other words, every child/citizen of this country has a right to free education until he completes the age of fourteen years. Thereafter his right to education is subject to the limits of economic capacity and development of the State."

[2] http://righttoeducation.in/how-was-original-article-45-constitution-arrived [Accessed as on March 14th 2019]

[3] https://www.india.gov.in/my-government/constitution-india/amendments/constitution-india-eighty-sixth-amendment-act-2002 - [Accessed as on March 14th 2019].

[4] We consider August 2009 once the RTE Act went through the Indian parliament as our effective cut-off date of national enforcement because all states knew from there on that sooner or later they have to comply to the provisions of the act.

time period of enforcement in each state). To elaborate, seven states/UTs - namely Andhra Pradesh, Bihar, Chandigarh, Dadra & Nagar Haveli, Daman & Diu, Uttar Pradesh, and Uttarakhand - were first to pass the RTE Act in their state legislatures. But even these states took about nearly eight months to pass the Act in their own legislatures. About 20 other states passed the RTE Act in their legislatures nearly after one year and more - where four states passed it only in 2012 which is nearly two years after its enactment in the Indian Parliament. We exploit this feature of staggered enforcement by region and time to build causal strength in our analysis as we describe below.

Jha, Ghatak, Mahendiran, and Bakshi (2013) categorized the main components of the RTE into *child entitlements* and *institutional arrangements*. In the former, RTE ensured that every child between 6 to 14 years has a right to admission in every neighborhood school. It defined neighborhood schools as 1 kilometer (km) from the habitation of a child at the primary level (grade 1 to 5) and 3 km from the habitation of a child at the upper primary level (grade 6 to 8). Although RTE provides the right to admission in neighborhood schools, it does not mandate that a child must access only these neighborhood schools to pursue elementary education. In essence, every child has a right to access these neighborhood schools but is free to access any schools of his/her preference. Further, the Act stated that private unaided schools[5] in the neighborhood has to allocate 25 percent of its seats at the entry level (class 1) for economically weaker sections and disadvantaged groups. The state was mandated to compensate for the costs incurred by the private schools. It included free midday meal, textbooks, uniforms, and notebooks as a right of every child pursuing elementary education. In addition, it made *no detention policy* and *comprehensive continuous evaluation* mandatory and guaranteed an environment free from discrimination, harassment, trauma or anxiety.

In terms of institutional arrangements, RTE mandated that all schools offering primary and upper primary education must have a good and inclusive infrastructure in terms of weather- proof building, boys and girl's toilet, drinking water, ramps for special children, library and so on. It also specified quality indicators such as teacher-pupil ratio being 1:30 for primary[6] and 1:35 for upper primary section. The qualification of teachers, their working hours and duties were specified very clearly in the

[5]Private unaided schools are those which are managed by private management and does not take any assistance from the state or central government in any form.
[6]The teacher-pupil ratio was 1:30 for all schools offering primary sections with students less than or equal to 200. It must not exceed 1:40 for all schools offering primary sections with students more than 200. In terms of schools offering upper primary sections, there must be a teacher for every subject where the teacher-pupil ratio must not exceed 1:35 for schools catering to 100 students or less. For schools more than 100 students, there must be a head teacher and additional part-time instructors for work education, art, and health.

Act to ensure that children accessing these neighborhood schools are provided with a quality education.

All schools were to comply with the norms specified by RTE ACT, otherwise they faced the possibility of being de-recognized by the government. To ensure this, the Act has mandated constitution of School Management Committee and State Advisory Council, in addition empowering existing local authorities, to monitor the compliance of norms specified and take actions in the event of violations. Overall, the RTE Act ensured that there was also a complementary quality monitoring role played by the social planner.

Although nationally enforced from August 2009, as we have discussed above, Taneja et al. (2011) find regional heterogeneity in implementation and report that there were only ten states which had come up with its State RTE rules by 2011. It wasn't until 2013 that all states and union territories had drafted its RTE rules. In a report assessing the RTE implementation in 2015, prior work shows that there exists very poor compliance with the RTE Act, 2009, across all the states. In general, the RTE Act has been implemented as *"yet another scheme"* (Sachdeva et al, 2015).

One of the reasons for non-uniform implementation of the Act is because of the different economic and development stages of states in India. Jha, Ghatak, Mahendiran, and Bakshi (2013) found that there were severe financial and governance challenges in Odisha, an economically poor state, whereas governance challenges plagued the implementation of RTE in Karnataka, an economically better-performing state, in India. Further, there exists district level variation in implementation of RTE Act especially in terms of providing free textbooks, maintaining the teacher-pupil ratio, availability of trained teachers, formation of School Management Committees (SMCs) and the 25 percent reservation of seats. Choudhary (2018) carried out the study in six major tribal districts in Jharkhand[7] and find considerable variations in the earlier-mentioned indicators of RTE Act both within and between the six districts. In Odisha, there was only 3 percent of schools which are fully compliant with the ten basic indicators of RTE Act; and it was below 1 percent of schools in districts such as Balangir, Nuapada, Rayagada, Nabarangpur, and Malkangiri by 2013.[8] An examination of the compliance of RTE Act in Karnataka, a better-performing state, indicate that only 17 percent of 60,002 primary schools adhere to the ten basic indicators of RTE Act in 2019.[9] Moreover, there was significant district wise variation in

[7]The six districts include Ranchi, Dumka, Gumla, Lohardaga, Pakur, and Pashchimi Singhbhum.
[8]http://odishachannel.com/index.php/4292/implementation-of-rte-act-in-odisha-abysmally-poor/ - [Accessed as on March 14th, 2019].
[9]https://timesofindia.indiatimes.com/city/bengaluru/only-17-primary-institutions-in-karnataka-adhere-to-rte-parameters/articleshow/67520125.cms - [Accessed as on March 14th 2019].

compliance of RTE norm in Karnataka. To illustrate, there were only 9.9 percent of schools in urban Bangalore complying to the RTE norms whereas about 34.3 percent of schools met the RTE norms in Gadag. The percentage of schools complying with RTE norms across the districts ranged between 6.8 percent in Vijayapura to 36 percent in Dakshina Kannada in 2019. Thus, it can be surmised that the implementation and compliance to RTE Act varied at the regional level, a feature we exploit in our identification strategy that we describe in section 4.

It is important to also highlight here the regulation of private schools under RTE Act. The compulsory compliance to norms for recognition and 25 percent reservation of seats attracted criticisms and exasperation from the private school management and the parents belonging to better income households. Popularly captured in a Bollywood movie *Hindi Medium*[10], the compulsory compliance requirement has brought about a concern related to incentivizing corrupt practices, often drawing parallels to the days of license raj in India (Aghion, Burgess, Redding, and Zilibotti (2008)), as the powers to make decisions are vested with the education department (Jha, Ghatak, Mahendiran, and Bakshi (2013)). Adding to these concerns, the state governments in India (except Karnataka, Rajasthan, Andhra Pradesh and Tamil Nadu), did not undertake any inclusive and participatory consultative process involving members from civil society, parent- teacher association, and other local community members in drafting its RTE rules (Taneja et al. (2011)).

Despite these issues, the state governments have enforced and regulated the private unaided schools more strictly under RTE Act. During 2015-2018, the National Independent Schools Alliance (NISA) reports that there were 2,469 private schools closed, 13,546 private schools served closure notice and 4,482 private schools are on closure threat owing to non- compliance of RTE norms across fourteen states in India.[11] While this shows that the government have enforced compliance as mandated by RTE Act, it has raised debate over the financial viability of low-cost private schools to run its operations. A recent study points out that the closing of these schools owing to one or other technicality of RTE Act would result in 60 percent of children being forced out of the school education system in

[10]See details on this movie based on parental travails in Delhi for a family trying to give their daughter elite education while coping with RTE Act here: https://www.imdb.com/title/tt5764096/ [Accessed as on April 21, 2019].
[11]http://nisaindia.org/data-on-school-closures - Accessed as on [March 14th 2019]. The fourteen states include Andhra Pradesh, Assam, Bihar, Chhattisgarh, Haryana, Himachal Pradesh, Jharkhand, Karnataka, Kerala, Madhya Pradesh, Maharashtra, Punjab, Tamil Nadu and Uttar Pradesh. Note that, one would ideally like to examine survival of schools, varying by leader and laggard districts, pre and post RTE. But as we mention below, our data only allows us to credibly and comprehensibly observe registration and entry but is noisy and problematic to measure exit, we hence leave it for future research to extend in follow-on analysis.

Patna city (Rangaraju, Tooley, and Dixon (2012).

In sum, the RTE Act enacted in August 2009 held promises of ensuring greater access to good quality primary and upper primary education to all children up to the age of fourteen years. However, we find that there exists significant district-level heterogeneity in complying with RTE norms irrespective of economic status of the district and state. Second, we observe that there is weak adherence to ensuring infrastructural and quality indicators such as teacher-pupil ratio, availability of trained teachers and so on. But the states have taken stringent actions against private schools which do not comply with the prescribed norms of RTE Act.

Appendix Table 1: Details of state-wise enactment of RTE rules

Serial No	State	Act coming to force [from MHRD]
1	Andaman & Nicobar Islands	01-04-2010
2	Andhra Pradesh	01-04-2010
3	Arunachal Pradesh	03-06-2010
4	Assam	03-11-2011
5	Bihar	01-04-2010
6	Chandigarh	01-04-2010
7	Chhattisgarh	15-11-2010
8	Dadra & Nagar Haveli	01-04-2010
9	Daman & Diu	01-04-2010
10	Delhi	23-11-2011
11	Goa	02-08-2012
12	Gujarat	18-02-2012
13	Haryana	03-06-2011
14	Himachal Pradesh	05-03-2011
15	Jammu and Kashmir	Not Enacted Yet
16	Jharkhand	14-05-2011
17	Karnataka	28-04-2012
18	Kerala	06-05-2011
19	Lakshadweep	01-04-2010
20	Madhya Pradesh	26-03-2011
21	Maharashtra	11-10-2011
22	Manipur	21-10-2010
23	Meghalaya	01-08-2011
24	Mizoram	28-03-2011
25	Nagaland	21-03-2011
26	Odisha	18-10-2010
27	Puducherry	27-10-2011
28	Punjab	12-10-2011
29	Rajasthan	30-03-2011
30	Sikkim	11-08-2010
31	Tamil Nadu	12-11-2011
32	Tripura	11-07-2011
33	Uttar Pradesh	01-04-2010
34	Uttarakhand	01-04-2010
35	West Bengal	16-03-2012

Note: Individual state RTE rules were downloaded from https://mhrd.gov.in/rte_state_rules [Accessed as on June 5th 2019]

Appendix Table 2: All Registrations by Principal Business Activity in India 1900 - 2015

Type of principal business activity	Year of Registration				
	1900-1950	1951-1990	1991-2000	2001-2009	2010-2015
Agriculture	3.21	2.44	3.70	2.33	2.77
Business	5.99	12.29	16.60	22.02	31.06
Community/Social Enterprises	4.26	3.09	4.10	6.18	7.50
Construction	1.33	3.91	4.76	13.58	10.71
Electricity	0.55	0.23	0.50	1.33	1.80
Finance	5.91	12.10	14.63	2.97	2.41
Insurance	0.48	0.03	0.03	0.14	0.07
Manufacturing	21.91	37.53	26.08	21.14	15.29
Mining	1.86	1.16	1.08	1.25	1.12
Real Estate	1.57	2.81	3.56	5.84	9.69
Trading	11.10	9.75	13.80	17.78	14.51
Transport	2.04	2.47	3.13	3.90	3.07
Others	39.79	12.19	8.03	1.56	0.00
Total	17,468	2,13,321	3,51,970	4,05,557	4,68,965

Note: 1. The above table presents the column percentage of firms by principal business activity (PBA) for five time periods: (i) 1900-1950, (ii) 1951-1990, (iii) 1991-2000, (iv) 2001-2009 and (v) 2010-2015. 2. The data is available for each month in any particular year. The table provides a consolidated number of firms in each time period for the sake of brevity. Source: Authors calculation using the Registrar of Companies database from Ministry of Corporate Affairs, Government of India.

Appendix Table 3: List of industry codes under education in NIC 2004

Serial Number	Industry Code	Description
1	**8010**	**Primary education**
1a	80101	Primary education, including pre-primary and upper-primary education.
1b	80102	Literacy programmes for children who have no opportunity to attend schools.
1c	80103	Adult education primary level including upper-primary.
2	**8021**	**Secondary/Senior Secondary education [including special school-type education for handicapped students]**
2a	80211	Gender Secondary/Senior Secondary education, generally designed to qualify students either for vocational and technical education or for university entrance without any special subject pre-requisite.
2b	80212	General Secondary/Senior Secondary school-type education for handicapped students.
2c	80213	Adult education, Secondary/Senior Secondary level.
3	**8022**	**Technical and vocational Secondary/Senior Secondary education [includes all type of technical and vocational education. The programmes emphasis a subject matter specialization and instruction of both theoretical background and practical skills].**
3a	80221	Technical and vocational Secondary/Senior Secondary education below the level of university
3b	80222	Technical and vocational school type education for handicapped students
3c	80223	Adult education, Secondary/Senior Secondary level, technical and vocational
4	**8030**	**Higher education [includes post-secondary/senior secondary sub-degree level education that leads to university degree or equivalent]**
4a	80301	General higher education in science, commerce and humanity
4b	80302	Higher education in engineering/other technical courses
4c	80303	Higher education in medical/bio-technology and related courses

4d	80304	Higher education in professional/vocational courses like hotel management, fashion design, secretarial procedures, teacher's training, law etc.
4e	80305	Higher education in management courses.
4f	80306	Higher education in information technology courses.
4g	80309	Higher education n.e.c viz. oriental studies etc.
5	**8090**	**Other education**
5a	80901	Education by correspondence, through radio and television broadcasting and other distance learning media.
5b	80902	Coaching centers
5c	80903	Activities of the individuals providing tuition
5e	80904	Activities relating to training/education/conduct of specialised course in computer knowledge.

Source: NIC code – 2004, Ministry of Statistics and Programme Implementation, Government of India.

Appendix Table 4: Average flow of new school and HEIs registrations per million persons - IITs established before RTE

Year	New school registrations per million persons				New HEIs registrations per million persons			
	Less-competitive districts		Competitive districts		Less-competitive districts		Competitive districts	
	Mean	SE	Mean	SE	Mean	SE	Mean	SE
1991-2000 (average)	0.000	[0.000]	0.002	[0.001]	0.003	[0.000]	0.014	[0.002]
2001	0.000	[0.000]	0.002	[0.002]	0.001	[0.002]	0.020	[0.007]
2002	0.001	[0.000]	0.006	[0.004]	0.011	[0.002]	0.021	[0.006]
2003	0.001	[0.000]	0.006	[0.003]	0.011	[0.002]	0.029	[0.008]
2004	0.001	[0.001]	0.000	[0.000]	0.008	[0.001]	0.039	[0.011]
2005	0.000	[0.000]	0.003	[0.002]	0.016	[0.002]	0.028	[0.009]
2006	0.002	[0.001]	0.009	[0.004]	0.013	[0.002]	0.025	[0.007]
2007	0.002	[0.001]	0.011	[0.004]	0.011	[0.001]	0.071	[0.017]
2008	0.002	[0.001]	0.016	[0.007]	0.016	[0.002]	0.133	[0.026]
2009	0.001	[0.001]	0.017	[0.007]	0.022	[0.002]	0.100	[0.019]
2010	0.003	[0.001]	0.15	[0.006]	0.027	[0.003]	0.151	[0.027]
2011	0.002	[0.000]	0.021	[0.006]	0.032	[0.003]	0.143	[0.024]
2012	0.003	[0.001]	0.012	[0.005]	0.031	[0.003]	0.093	[0.015]
2013	0.002	[0.000]	0.025	[0.009]	0.025	[0.002]	0.123	[0.019]
2014	0.001	[0.000]	0.020	[0.008]	0.011	[0.001]	0.048	[0.012]
2015	0.003	[0.001]	0.010	[0.007]	0.008	[0.002]	0.024	[0.012]
Number of districts	361	-	13	-	361	-	13	-
Average pre-RTE	**0.001**	**[0.000]**	**0.007**	**[0.001]**	**0.013**	**[0.001]**	**0.050**	**[0.050]**
Average post-RTE	**0.002**	**[0.000]**	**0.018**	**[0.003]**	**0.024**	**[0.001]**	**0.106**	**[0.008]**
Differences between post-RTE and pre-RTE	**0.001****	**[0.000]**	**0.011*****	**[0.003]**	**0.011*****	**[0.001]**	**0.056*****	**[0.009]**

Note: Competitive districts have an IIT located in them before the enactment of RTE in August 2009 by Government of India. Standard errors are reported in parentheses. We undertook t-test to arrive at the differences of average registrations of tuition centers between pre and post RTE. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$.

Appendix Table 5: Testing the parallel trends for new tuition center registrations per billion persons – competitive districts defined as IIT before 2001

Independent Variables	[1]	[2]	[3]
Educationally Competitive District Indicator (C_d)	-21.042	-19.636	-20.416
	[31.803]	[31.886]	[31.825]
Time Trend (t)	0.010	0.010	0.008
	[0.011]	[0.011]	[0.011]
Differential trend **(** $t \times C_d$ **)**	0.103	0.103	0.103
	[0.114]	[0.114]	[0.114]
Population			0.000**
			[0.000]
Share of Manufacturing [%]			-0.039**
			[0.017]
Constant	-1.516	-2.978	-2.097
	[3.086]	[3.233]	[3.212]
Observations	26,928	26,928	26,928
R-square	0.001	0.021	0.022
State fixed effects	No	Yes	Yes

Note: Sample is January 2001 to December 2006. Standard errors clustered at the district level. * p < 0.10, ** p < 0.05, *** p < 0.01.

Appendix Table 6: Testing the parallel trends for new school registrations per billion persons – competitive districts defined as IIT before 2001

Independent Variables	*[1]*	*[2]*	*[3]*
Educationally Competitive District Indicator (C_d)	-8.349	-7.552	-7.838
	[13.341]	[13.395]	[13.305]
Time Trend (t)	0.009	0.009	0.009
	[0.007]	[0.007]	[0.007]
Differential trend **(** $t \times C_d$ **)**	0.044	0.044	0.044
	[0.051]	[0.051]	[0.051]
Population			0.000
			[0.000]
Share of Manufacturing [%]			-0.012
			[0.011]
Constant	-1.944	-2.736	-2.449
	[2.023]	[2.117]	[2.108]
Observations	26,928	26,928	26,928
R-square	0.001	0.017	0.017
State fixed effects	No	Yes	Yes

Note: Sample is January 2001 to December 2006. Standard errors clustered at the district level. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$.

Appendix Table 7: Testing the parallel trends for new HEIs registrations per billion persons – competitive districts defined as IIT before 2001

Independent Variables	*[1]*	*[2]*	*[3]*
Educationally Competitive District Indicator (C_d)	-70.619	-62.501	-65.995
	[61.432]	[61.093]	[61.518]
Time Trend (t)	0.058	0.058	0.052
	[0.072]	[0.072]	[0.072]
Differential trend **(**$t \times C_d$**)**	0.338	0.338	0.336
	[0.262]	[0.262]	[0.263]
Population			0.000*
			[0.000]
Share of Manufacturing [%]			-0.008
			[0.097]
Constant	-5.293	-16.861	-15.456
	[20.457]	[20.696]	[20.524]
Observations	26,928	26,928	26,928
R-square	0.001	0.120	0.120
State fixed effects	No	Yes	Yes

Note: Sample is January 2001 to December 2006. Standard errors clustered at the district level. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$.

Appendix Table 8: Testing the parallel trends for new tuition center registrations per billion persons – competitive districts defined as IIT and premier institutions before 2001

Independent Variables	*[1]*	*[2]*	*[3]*
Educationally Competitive District Indicator (C_d)	-4.881	-3.652	-4.259
	[26.217]	[26.226]	[26.240]
Time Trend (t)	0.011	0.011	0.009
	[0.011]	[0.011]	[0.011]
Differential trend **(** $t \times C_d$ **)**	0.041	0.041	0.040
	[0.094]	[0.094]	[0.094]
Population			0.000**
			[0.000]
Share of Manufacturing [%]			-0.039**
			[0.017]
Constant	-1.736	-3.171	-2.310
	[3.091]	[3.241]	[3.222]
Observations	26,928	26,928	26,928
R-square	0.001	0.021	0.022
State fixed effects	No	Yes	Yes

Note: Sample is January 2001 to December 2006. Standard errors clustered at the district level. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$.

Appendix Table 9: Testing the parallel trends for new school registrations per billion persons – competitive districts defined as IIT and premier institutions before 2001

Independent Variables	*[1]*	*[2]*	*[3]*
Educationally Competitive District Indicator (C_d)	-7.581	-6.912	-7.041
	[17.555]	[17.701]	[17.657]
Time Trend (t)	0.009	0.009	0.009
	[0.007]	[0.007]	[0.007]
Differential trend **($t \times C_d$)**	0.045	0.045	0.045
	[0.066]	[0.066]	[0.066]
Population			0.000
			[0.000]
Share of Manufacturing [%]			-0.012
			[0.010]
Constant	-1.896	-2.629	-2.389
	[2.005]	[2.096]	[2.079]
Observations	26,928	26,928	26,928
R-square	0.001	0.018	0.018
State fixed effects	No	Yes	Yes

Note: Sample is January 2001 to December 2006. Standard errors clustered at the district level. * p < 0.10, ** p < 0.05, *** p < 0.01.

Appendix Table 10: Testing the parallel trends for new HEIs registrations per billion persons – competitive districts defined as IIT and premier institutions before 2001

Independent Variables	*[1]*	*[2]*	*[3]*
Educationally Competitive District Indicator (C_d)	-2.858	5.302	2.916
	[69.686]	[69.488]	[69.783]
Time Trend (t)	0.061	0.061	0.056
	[0.072]	[0.072]	[0.072]
Differential trend **(** $t \times C_d$ **)**	0.102	0.102	0.099
	[0.256]	[0.256]	[0.256]
Population			0.000
			[0.000]
Share of Manufacturing [%]			-0.008
			[0.096]
Constant	-6.357	-17.722	-16.509
	[20.587]	[20.836]	[20.673]
Observations	26,928	26,928	26,928
R-square	0.001	0.120	0.120
State fixed effects	No	Yes	Yes

Note: Sample is January 2001 to December 2006. Standard errors clustered at the district level. * p < 0.10, ** p < 0.05, *** p < 0.01.

Appendix Table 11: Testing the parallel trends for new tuition center registrations per billion persons – competitive districts defined as premier institutions before 2001

Independent Variables	*[1]*	*[2]*	*[3]*
Educationally Competitive District Indicator (C_d)	21.093	21.988	21.770
	[15.387]	[15.267]	[15.273]
Time Trend (t)	0.018*	0.018*	0.017
	[0.011]	[0.011]	[0.011]
Differential trend **(** $t \times C_d$ **)**	-0.059	-0.059	-0.060
	[0.053]	[0.053]	[0.053]
Population			0.000*
			[0.000]
Share of Manufacturing [%]			-0.034**
			[0.017]
Constant	-4.053	-5.235*	-4.567
	[2.933]	[3.144]	[3.120]
Observations	26,928	26,928	26,928
R-square	0.002	0.022	0.022
State fixed effects	No	Yes	Yes

Note: Sample is January 2001 to December 2006. Standard errors clustered at the district level. * p < 0.10, ** p < 0.05, *** p < 0.01.

Appendix Table 12: Testing the parallel trends for new school registrations per billion persons – competitive districts defined as premier institutions before 2001

Independent Variables	*[1]*	*[2]*	*[3]*
Educationally Competitive District Indicator (C_d)	-6.533	-7.123	-7.190
	[7.648]	[8.374]	[8.371]
Time Trend (t)	0.007	0.007	0.006
	[0.007]	[0.007]	[0.007]
Differential trend **(** $t \times C_d$ **)**	0.033	0.033	0.032
	[0.030]	[0.030]	[0.030]
Population			0.000
			[0.000]
Share of Manufacturing [%]			-0.010
			[0.010]
Constant	-1.397	-1.962	-1.770
	[2.061]	[2.126]	[2.123]
Observations	26,928	26,928	26,928
R-square	0.001	0.017	0.017
State fixed effects	No	Yes	Yes

Note: Sample is January 2001 to December 2006. Standard errors clustered at the district level. * p < 0.10, ** p < 0.05, *** p < 0.01.

Appendix Table 13: Testing the parallel trends for new HEIs registrations per billion persons – competitive districts defined as premier institutions before 2001

Independent Variables	*[1]*	*[2]*	*[3]*
Educationally Competitive District Indicator (C_d)	161.263	156.691	156.062
	[150.487]	[139.805]	[139.774]
Time Trend (t)	0.112**	0.112**	0.110**
	[0.055]	[0.055]	[0.055]
Differential trend **(** $t \times C_d$ **)**	-0.466	-0.466	-0.468
	[0.486]	[0.486]	[0.486]
Population			0.000
			[0.000]
Share of Manufacturing [%]			0.011
			[0.094]
Constant	-23.242*	-32.442**	-32.143**
	[13.925]	[15.823]	[15.809]
Observations	26,928	26,928	26,928
R-square	0.006	0.122	0.122
State fixed effects	No	Yes	Yes

Note: Sample is January 2001 to December 2006. Standard errors clustered at the district level. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$.

Appendix Table 14: Testing the parallel trends for new tuition center registrations per billion persons – competitive districts defined as any prior registrations

Independent Variables	*[1]*	*[2]*	*[3]*
Educationally Competitive District Indicator (C_d)	1.171	-0.655	-0.873
	[12.384]	[12.887]	[12.869]
Time Trend (t)	0.008*	0.008*	0.007
	[0.005]	[0.005]	[0.005]
Differential trend **(** $t \times C_d$ **)**	0.015	0.015	0.015
	[0.045]	[0.045]	[0.045]
Population			0.000**
			[0.000]
Share of Manufacturing [%]			-0.042**
			[0.018]
Constant	-2.132*	-2.419*	-1.580
	[1.244]	[1.300]	[1.297]
Observations	26,928	26,928	26,928
R-square	0.005	0.022	0.022
State fixed effects	No	Yes	Yes

Note: Sample is January 2001 to December 2006. Standard errors clustered at the district level. * p < 0.10, ** p < 0.05, *** p < 0.01.

Appendix Table 15: Testing the parallel trends for new school registrations per billion persons – competitive districts defined as any prior registrations

Independent Variables	*[1]*	*[2]*	*[3]*
Educationally Competitive District Indicator (C_d)	-12.089	-13.387*	-13.494*
	[7.343]	[7.722]	[7.726]
Time Trend (t)	-0.002	-0.002	-0.003
	[0.004]	[0.004]	[0.004]
Differential trend **(** $t \times C_d$ **)**	0.050*	0.050*	0.050*
	[0.027]	[0.027]	[0.027]
Population			0.000*
			[0.000]
Share of Manufacturing [%]			-0.013
			[0.011]
Constant	0.799	0.518	0.817
	[1.298]	[1.278]	[1.294]
Observations	26,928	26,928	26,928
R-square	0.002	0.017	0.017
State fixed effects	No	Yes	Yes

Note: Sample is January 2001 to December 2006. Standard errors clustered at the district level. * p < 0.10, ** p < 0.05, *** p < 0.01.

Appendix Table 16: Testing the parallel trends for new HEIs registrations per billion persons – competitive districts defined as any prior registrations

Independent Variables	*[1]*	*[2]*	*[3]*
Educationally Competitive District Indicator (C_d)	-28.639	-48.176	-48.862
	[81.493]	[81.998]	[81.974]
Time Trend (t)	0.011	0.011	0.007
	[0.026]	[0.026]	[0.027]
Differential trend **(** $t \times C_d$ **)**	0.224	0.224	0.223
	[0.285]	[0.286]	[0.286]
Population			0.000
			[0.000]
Share of Manufacturing [%]			-0.024
			[0.099]
Constant	0.389	-3.054	-1.986
	[7.535]	[7.586]	[7.627]
Observations	26,928	26,928	26,928
R-square	0.018	0.121	0.122
State fixed effects	No	Yes	Yes

Note: Sample is January 2001 to December 2006. Standard errors clustered at the district level. * p < 0.10, ** p < 0.05, *** p < 0.01.

Appendix Table 17: Testing the parallel trends for new tuition center registrations per billion persons – competitive districts defined as any prior investments

Independent Variables	*[1]*	*[2]*	*[3]*
Educationally Competitive District Indicator (C_d)	1.038	-0.941	-1.141
	[13.428]	[13.971]	[13.950]
Time Trend (t)	0.008*	0.008*	0.007
	[0.004]	[0.004]	[0.004]
Differential trend **(** $t \times C_d$ **)**	0.017	0.017	0.017
	[0.049]	[0.049]	[0.049]
Population			0.000*
			[0.000]
Share of Manufacturing [%]			-0.037**
			[0.018]
Constant	-2.081*	-2.361*	-1.630
	[1.214]	[1.269]	[1.267]
Observations	26,928	26,928	26,928
R-square	0.006	0.022	0.022
State fixed effects	No	Yes	Yes

Note: Sample is January 2001 to December 2006. Standard errors clustered at the district level. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$.

Appendix Table 18: Testing the parallel trends for new school registrations per billion persons – competitive districts defined as any prior investments

Independent Variables	*[1]*	*[2]*	*[3]*
Educationally Competitive District Indicator (C_d)	-13.034	-14.439*	-14.543*
	[7.937]	[8.342]	[8.346]
Time Trend (t)	-0.002	-0.002	-0.002
	[0.004]	[0.004]	[0.004]
Differential trend **(** $t \times C_d$ **)**	0.054*	0.054*	0.054*
	[0.029]	[0.029]	[0.029]
Population			0.000
			[0.000]
Share of Manufacturing [%]			-0.011
			[0.011]
Constant	0.780	0.506	0.769
	[1.267]	[1.248]	[1.264]
Observations	26,928	26,928	26,928
R-square	0.003	0.017	0.017
State fixed effects	No	Yes	Yes

Note: Sample is January 2001 to December 2006. Standard errors clustered at the district level. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$.

Appendix Table 19: Testing the parallel trends for new HEIs registrations per billion persons – competitive districts defined as any prior investments

Independent Variables	*[1]*	*[2]*	*[3]*
Educationally Competitive District Indicator (C_d)	-31.911	-53.233	-53.812
	[88.367]	[88.893]	[88.856]
Time Trend (t)	0.010	0.010	0.007
	[0.026]	[0.026]	[0.026]
Differential trend **(** $t \times C_d$ **)**	0.246	0.246	0.245
	[0.309]	[0.310]	[0.310]
Population			0.000
			[0.000]
Share of Manufacturing [%]			-0.004
			[0.094]
Constant	0.570	-2.848	-2.246
	[7.357]	[7.406]	[7.453]
Observations	26,928	26,928	26,928
R-square	0.020	0.122	0.122
State fixed effects	No	Yes	Yes

Note: Sample is January 2001 to December 2006. Standard errors clustered at the district level. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$.

Appendix Table 20: Effect of RTE on new tuition centers registrations per billion persons – competitive districts defined as IIT before 2001

Independent Variables	RTE = 1 after August 2009				RTE = 1 after state enactment	
	[1]	*[2]*	*[3]*	*[4]*	*[5]*	*[6]*
Educationally Competitive District Indicator (C_d)	22.504*	15.146***	13.928**	16.962**	24.394*	24.207*
	[12.142]	[4.949]	[5.569]	[7.939]	[13.308]	[13.220]
Post RTE Indicator (RTE_t)	1.309	1.808	1.174	1.222	-2.964*	-2.967*
	[2.739]	[2.739]	[2.760]	[2.750]	[1.612]	[1.618]
Differential Impact **(** $RTE_t \times C_d$ **)**	33.262	42.085	41.842	38.807	31.476	31.663
	[26.049]	[33.577]	[33.642]	[30.452]	[24.395]	[24.443]
Population	0.000		0.000	0.000	0.000	0.000
	[0.000]		[0.000]	[0.000]	[0.000]	[0.000]
Share of Manufacturing	-0.129**		-0.129**	-0.129**	-0.132**	-0.132**
	[0.056]		[0.056]	[0.056]	[0.058]	[0.058]
Anticipatory 24-month Trend				1.904		1.619
				[1.535]		[1.704]
Constant	-0.934	-2.150	-0.801	-0.849	-0.732	-0.729
	[1.723]	[1.720]	[1.739]	[1.731]	[1.722]	[1.722]
Observations	63,954	63,954	63,954	63,954	63,954	63,954
R-square	0.053	0.054	0.055	0.053	0.054	0.052
Monthly anticipatory indicators in competitive districts (24 month)	No	Yes	Yes	No	Yes	No

Note: Sample is January 2001 to March 2015. All regressions include state and month fixed effects. Standard errors clustered at the district level. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$. 2. The joint test of dummies for 24-month anticipatory effects in Column 3 and 5 is statistically significant at 5 percent respectively.

Appendix Table 21: Effect of RTE on new school registrations per billion persons – competitive districts defined as IIT before 2001

Independent Variables	RTE = 1 after August 2009				RTE = 1 after state enactment	
	[1]	*[2]*	*[3]*	*[4]*	*[5]*	*[6]*
Educationally Competitive District Indicator (C_d)	10.415	6.602*	5.928	6.777	11.044	10.603
	[6.883]	[3.917]	[4.283]	[4.744]	[6.970]	[6.519]
Post RTE Indicator (RTE_t)	0.545	0.740	0.474	0.488	-0.796	-0.787
	[0.999]	[0.999]	[1.004]	[1.002]	[0.638]	[0.639]
Differential Impact **(** $RTE_t \times C_d$ **)**	10.603*	15.177*	15.093*	14.244*	6.618	7.059
	[5.757]	[8.231]	[8.260]	[7.598]	[4.462]	[4.820]
Population	0.000		0.000	0.000	0.000*	0.000*
	[0.000]		[0.000]	[0.000]	[0.000]	[0.000]
Share of Manufacturing	-0.037		-0.036	-0.036	-0.037	-0.037
	[0.023]		[0.023]	[0.023]	[0.024]	[0.024]
Anticipatory 24-month Trend				1.250		1.192
				[0.783]		[0.796]
Constant	-1.313***	-1.628***	-1.245***	-1.258***	-1.262***	-1.256***
	[0.340]	[0.302]	[0.345]	[0.344]	[0.336]	[0.337]
Observations	63,954	63,954	63,954	63,954	63,954	63,954
R-square	0.020	0.023	0.023	0.021	0.022	0.021
Monthly anticipatory indicators in competitive districts (24 month)	No	Yes	Yes	No	Yes	No

Note: Sample is January 2001 to March 2015. All regressions include state and month fixed effects. Standard errors clustered at the district level. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$. 2. The joint test of dummies for 24-month anticipatory effects in Column 3 and 5 is statistically significant at 5 percent respectively.

Appendix Table 22: Effect of RTE on new HEIs registrations per billion persons – competitive districts defined as IIT before 2001

Independent Variables	RTE = 1 after August 2009				RTE = 1 after state enactment	
	[1]	*[2]*	*[3]*	*[4]*	*[5]*	*[6]*
Educationally Competitive District Indicator (C_d)	67.844*	53.002**	44.391*	48.677*	71.472*	77.694*
	[39.558]	[21.765]	[23.503]	[25.625]	[42.156]	[46.337]
Post RTE Indicator (RTE_t)	-10.898	-8.155	-11.268	-11.200	-14.163*	-14.050*
	[9.561]	[9.597]	[9.579]	[9.571]	[7.436]	[7.435]
Differential Impact **(** $RTE_t \times C_d$ **)**	39.191	63.560	62.656	58.367	-19.637	-25.887
	[35.558]	[54.093]	[54.594]	[50.661]	[13.495]	[16.586]
Population	0.000*		0.000*	0.000*	0.000*	0.000*
	[0.000]		[0.000]	[0.000]	[0.000]	[0.000]
Share of Manufacturing	-0.353**		-0.351**	-0.351**	-0.353**	-0.353**
	[0.151]		[0.150]	[0.150]	[0.151]	[0.151]
Anticipatory 24-month Trend				6.583		7.302
				[5.503]		[5.538]
Constant	23.424***	20.063**	23.784***	23.718***	24.339***	24.234***
	[8.326]	[8.411]	[8.339]	[8.332]	[8.176]	[8.174]
Observations	63,954	63,954	63,954	63,954	63,954	63,954
R-square	0.106	0.106	0.108	0.107	0.109	0.107
Monthly anticipatory indicators in competitive districts (24 month)	No	Yes	Yes	No	Yes	No

Note: Sample is January 2001 to March 2015. All regressions include state and month fixed effects. Standard errors clustered at the district level. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$. 2. The joint test of dummies for 24-month anticipatory effects in Column 3 and 5 is statistically significant at 5 percent respectively.

Appendix Table 23: Effect of RTE on new tuition centers registrations per billion persons – competitive districts defined as IIT and premier institutions before 2001

Independent Variables	RTE = 1 after August 2009				RTE = 1 after state enactment	
	[1]	*[2]*	*[3]*	*[4]*	*[5]*	*[6]*
Educationally Competitive District Indicator (C_d)	19.190**	12.633***	12.014***	14.188**	20.372**	20.084**
	[8.438]	[3.521]	[4.082]	[5.692]	[9.571]	[9.511]
Post RTE Indicator (RTE_t)	1.032	1.341	0.862	0.914	-3.366**	-3.373**
	[2.755]	[2.759]	[2.777]	[2.767]	[1.566]	[1.572]
Differential Impact **(** $RTE_t \times C_d$ **)**	40.025**	47.454**	47.210**	45.034**	39.869**	40.157**
	[18.316]	[22.938]	[22.982]	[21.022]	[16.790]	[16.880]
Population	0.000		0.000	0.000	0.000	0.000
	[0.000]		[0.000]	[0.000]	[0.000]	[0.000]
Share of Manufacturing	-0.128**		-0.127**	-0.127**	-0.131**	-0.131**
	[0.054]		[0.054]	[0.054]	[0.055]	[0.055]
Anticipatory 24-month Trend				1.719*		1.851
				[1.033]		[1.142]
Constant	-0.783	-1.943	-0.617	-0.668	-0.547	-0.540
	[1.710]	[1.715]	[1.726]	[1.717]	[1.705]	[1.705]
Observations	63,954	63,954	63,954	63,954	63,954	63,954
R-square	0.056	0.058	0.058	0.057	0.058	0.056
Monthly anticipatory indicators in competitive districts (24 month)	No	Yes	Yes	No	Yes	No

Note: Sample is January 2001 to March 2015. All regressions include state and month fixed effects. Standard errors clustered at the district level. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$. 2. The joint test of dummies for 24-month anticipatory effects in Column 3 and 5 is statistically significant at 5 percent respectively.

Appendix Table 24: Effect of RTE on new school registrations per billion persons – competitive districts defined as IIT and premier institutions before 2001

Independent Variables	RTE = 1 after August 2009				RTE = 1 after state enactment	
	[1]	*[2]*	*[3]*	*[4]*	*[5]*	*[6]*
Educationally Competitive District Indicator (C_d)	9.442*	7.408**	6.996**	7.428**	10.064**	9.761**
	[4.891]	[3.074]	[3.366]	[3.594]	[5.075]	[4.784]
Post RTE Indicator (RTE_t)	0.471	0.615	0.413	0.423	-1.060	-1.056
	[1.003]	[1.006]	[1.007]	[1.006]	[0.693]	[0.692]
Differential Impact **(** $RTE_t \times C_d$ **)**	12.775**	15.315**	15.225**	14.792**	10.963*	11.265*
	[5.521]	[6.571]	[6.594]	[6.265]	[6.292]	[6.307]
Population	0.000		0.000	0.000	0.000	0.000
	[0.000]		[0.000]	[0.000]	[0.000]	[0.000]
Share of Manufacturing	-0.036		-0.036	-0.036	-0.037	-0.037*
	[0.022]		[0.022]	[0.022]	[0.023]	[0.023]
Anticipatory 24-month Trend				0.692		0.831
				[0.588]		[0.557]
Constant	-1.265***	-1.586***	-1.209***	-1.219***	-1.197***	-1.190***
	[0.304]	[0.292]	[0.313]	[0.311]	[0.294]	[0.294]
Observations	63,954	63,954	63,954	63,954	63,954	63,954
R-square	0.022	0.023	0.024	0.022	0.023	0.022
Monthly anticipatory indicators in competitive districts (24 month)	No	Yes	Yes	No	Yes	No

Note: Sample is January 2001 to March 2015. All regressions include state and month fixed effects. Standard errors clustered at the district level. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$. 2. The joint test of dummies for 24-month anticipatory effects in Column 3 and 5 is statistically significant at 5 percent respectively.

Appendix Table 25: Effect of RTE on new HEIs registrations per billion persons – competitive districts defined as IIT and premier institutions before 2001

Independent Variables	RTE = 1 after August 2009				RTE = 1 after state enactment	
	[1]	*[2]*	*[3]*	*[4]*	*[5]*	*[6]*
Educationally Competitive District Indicator (C_d)	62.642**	47.543***	40.844**	44.736**	62.630**	68.269**
	[27.453]	[15.232]	[16.779]	[18.354]	[30.093]	[32.973]
Post RTE Indicator (RTE_t)	-11.235	-9.039	-11.748	-11.656	-15.103**	-14.976**
	[9.567]	[9.612]	[9.590]	[9.580]	[7.437]	[7.431]
Differential Impact **(** $RTE_t \times C_d$ **)**	56.182**	79.117**	78.009**	74.112**	25.588	19.924
	[25.360]	[37.263]	[37.574]	[34.956]	[23.895]	[25.055]
Population	0.000		0.000	0.000	0.000*	0.000*
	[0.000]		[0.000]	[0.000]	[0.000]	[0.000]
Share of Manufacturing	-0.351**		-0.349**	-0.349**	-0.354**	-0.354**
	[0.147]		[0.146]	[0.146]	[0.148]	[0.148]
Anticipatory 24-month Trend				6.155*		6.179*
				[3.691]		[3.656]
Constant	23.683***	20.505**	24.184***	24.093***	24.753***	24.614***
	[8.333]	[8.417]	[8.347]	[8.338]	[8.188]	[8.184]
Observations	63,954	63,954	63,954	63,954	63,954	63,954
R-square	0.109	0.110	0.112	0.110	0.112	0.110
Monthly anticipatory indicators in competitive districts (24 month)	No	Yes	Yes	No	Yes	No

Note: Sample is January 2001 to March 2015. All regressions include state and month fixed effects. Standard errors clustered at the district level. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$. 2. The joint test of dummies for 24-month anticipatory effects in Column 3 and 5 is statistically significant at 5 percent respectively.

Appendix Table 26: Effect of RTE on new tuition centers registrations per billion persons – competitive districts defined as premier institutions before 2001

Independent Variables	RTE = 1 after August 2009				RTE = 1 after state enactment	
	[1]	*[2]*	*[3]*	*[4]*	*[5]*	*[6]*
Educationally Competitive District Indicator (C_d)	8.156**	6.732***	6.382***	6.951**	8.741**	8.744**
	[3.421]	[1.825]	[2.414]	[2.774]	[3.623]	[3.607]
Post RTE Indicator (RTE_t)	0.820	0.943	0.639	0.698	-3.274**	-3.265**
	[2.763]	[2.784]	[2.792]	[2.778]	[1.452]	[1.451]
Differential Impact **(** $RTE_t \times C_d$ **)**	12.696**	14.767**	14.483**	13.911**	13.281**	13.278**
	[5.491]	[6.611]	[6.636]	[6.176]	[5.802]	[5.846]
Population	0.000		0.000	0.000	0.000	0.000
	[0.000]		[0.000]	[0.000]	[0.000]	[0.000]
Share of Manufacturing	-0.099*		-0.098*	-0.098*	-0.100*	-0.100*
	[0.052]		[0.051]	[0.051]	[0.052]	[0.052]
Anticipatory 24-month Trend				0.416		0.466
				[0.283]		[0.326]
Constant	-0.937	-1.775	-0.761	-0.819	-0.768	-0.769
	[1.729]	[1.712]	[1.745]	[1.735]	[1.721]	[1.721]
Observations	63,954	63,954	63,954	63,954	63,954	63,954
R-square	0.051	0.051	0.052	0.051	0.051	0.051
Monthly anticipatory indicators in competitive districts (24 month)	No	Yes	Yes	No	Yes	No

Note: Sample is January 2001 to March 2015. All regressions include state and month fixed effects. Standard errors clustered at the district level. * p < 0.10, ** p < 0.05, *** p < 0.01. 2. The joint test of dummies for 24-month anticipatory effects in Column 3 and 5 is statistically significant at 5 percent respectively.

Appendix Table 27: Effect of RTE on new school registrations per billion persons – competitive districts defined as premier institutions before 2001

Independent Variables	RTE = 1 after August 2009				RTE = 1 after state enactment	
	[1]	*[2]*	*[3]*	*[4]*	*[5]*	*[6]*
Educationally Competitive District Indicator (C_d)	3.437**	3.385***	3.206**	3.236**	3.903**	4.149**
	[1.683]	[1.083]	[1.309]	[1.357]	[1.705]	[1.650]
Post RTE Indicator (RTE_t)	0.189	0.268	0.166	0.169	-1.014	-0.911
	[1.009]	[1.017]	[1.014]	[1.011]	[0.821]	[0.848]
Differential Impact **(** $RTE_t \times C_d$ **)**	6.544***	6.857***	6.778***	6.747***	5.227**	4.979**
	[1.851]	[2.051]	[2.069]	[2.001]	[2.027]	[2.083]
Population	0.000		0.000	0.000	0.000	0.000
	[0.000]		[0.000]	[0.000]	[0.000]	[0.000]
Share of Manufacturing	-0.022		-0.022	-0.022	-0.024	-0.024
	[0.021]		[0.021]	[0.021]	[0.022]	[0.022]
Anticipatory 24-month Trend				0.069		0.294
				[0.173]		[0.200]
Constant	-1.262***	-1.469***	-1.239***	-1.242***	-1.230***	-1.261***
	[0.304]	[0.294]	[0.325]	[0.319]	[0.293]	[0.293]
Observations	63,954	63,954	63,954	63,954	63,954	63,954
R-square	0.021	0.021	0.021	0.021	0.022	0.020
Monthly anticipatory indicators in competitive districts (24 month)	No	Yes	Yes	No	Yes	No

Note: Sample is January 2001 to March 2015. All regressions include state and month fixed effects. Standard errors clustered at the district level. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$. 2. The joint test of dummies for 24-month anticipatory effects in Column 3 and 5 is statistically significant at 5 percent respectively.

Appendix Table 28: Effect of RTE on new HEIs registrations per billion persons – competitive districts defined as premier institutions before 2001

Independent Variables	RTE = 1 after August 2009				RTE = 1 after state enactment	
	[1]	*[2]*	*[3]*	*[4]*	*[5]*	*[6]*
Educationally Competitive District Indicator (C_d)	35.101***	29.689***	26.338***	27.074***	34.060***	35.843***
	[9.925]	[6.148]	[7.054]	[7.599]	[10.318]	[10.994]
Post RTE Indicator (RTE_t)	-11.661	-10.942	-12.552	-12.477	-13.761*	-13.591*
	[9.643]	[9.594]	[9.643]	[9.669]	[7.836]	[7.837]
Differential Impact **(** $RTE_t \times C_d$ **)**	26.563**	36.512***	35.398***	34.658***	22.199**	20.401*
	[11.235]	[13.889]	[13.663]	[13.053]	[11.168]	[11.287]
Population	0.000		0.000	0.000	0.000	0.000
	[0.000]		[0.000]	[0.000]	[0.000]	[0.000]
Share of Manufacturing	-0.264*		-0.258*	-0.258*	-0.265*	-0.266*
	[0.135]		[0.134]	[0.134]	[0.137]	[0.137]
Anticipatory 24-month Trend				2.773**		2.399**
				[1.095]		[1.137]
Constant	23.314***	21.505**	24.176***	24.101***	24.376***	24.193***
	[8.333]	[8.397]	[8.311]	[8.341]	[8.180]	[8.210]
Observations	63,954	63,954	63,954	63,954	63,954	63,954
R-square	0.109	0.110	0.111	0.110	0.111	0.109
Monthly anticipatory indicators in competitive districts (24 month)	No	Yes	Yes	No	Yes	No

Note: Sample is January 2001 to March 2015. All regressions include state and month fixed effects. Standard errors clustered at the district level. * p < 0.10, ** p < 0.05, *** p < 0.01. 2. The joint test of dummies for 24-month anticipatory effects in Column 3 and 5 is statistically significant at 5 percent respectively.

Appendix Table 29: Effect of RTE on new tuition centers registrations per billion persons – competitive districts defined as any prior registrations

Independent Variables	RTE = 1 after August 2009				RTE = 1 after state enactment	
	[1]	*[2]*	*[3]*	*[4]*	*[5]*	*[6]*
Educationally Competitive District Indicator (C_d)	3.239	1.654	1.328	1.520	3.950*	3.982*
	[2.202]	[1.989]	[2.049]	[2.153]	[2.278]	[2.261]
Post RTE Indicator (RTE_t)	-2.092	-2.056	-2.544	-2.499	-3.180***	-3.235***
	[2.589]	[2.584]	[2.586]	[2.594]	[1.225]	[1.223]
Differential Impact **(** $RTE_t \times C_d$ **)**	17.045***	19.072***	18.962***	18.770***	16.871***	16.837***
	[4.446]	[4.842]	[4.863]	[4.774]	[4.614]	[4.660]
Population	0.000		0.000	0.000	0.000	0.000
	[0.000]		[0.000]	[0.000]	[0.000]	[0.000]
Share of Manufacturing	-0.130**		-0.130**	-0.130**	-0.134**	-0.134**
	[0.061]		[0.060]	[0.060]	[0.061]	[0.061]
Anticipatory 24-month Trend				0.592***		0.767***
				[0.207]		[0.254]
Constant	0.475	-0.420	0.924	0.879	0.562	0.559
	[1.623]	[1.552]	[1.630]	[1.615]	[1.631]	[1.639]
Observations	63,954	63,954	63,954	63,954	63,954	63,954
R-square	0.054	0.054	0.055	0.054	0.055	0.053
Monthly anticipatory indicators in competitive districts (24 month)	No	Yes	Yes	No	Yes	No

Note: Sample is January 2001 to March 2015. All regressions include state and month fixed effects. Standard errors clustered at the district level. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$. 2. The joint test of dummies for 24-month anticipatory effects in Column 3 and 5 is statistically significant at 5 percent respectively.

Appendix Table 30: Effect of RTE on new school registrations per billion persons – competitive districts defined as any prior registrations

Independent Variables	RTE = 1 after August 2009				RTE = 1 after state enactment	
	[1]	*[2]*	*[3]*	*[4]*	*[5]*	*[6]*
Educationally Competitive District Indicator (C_d)	1.833*	1.130	0.872	0.887	2.121**	2.310**
	[0.953]	[0.687]	[0.764]	[0.803]	[0.981]	[0.939]
Post RTE Indicator (RTE_t)	-0.300	-0.296	-0.527	-0.524	-1.061	-0.959
	[1.066]	[1.038]	[1.044]	[1.052]	[0.703]	[0.719]
Differential Impact **(** $RTE_t \times C_d$ **)**	4.362***	5.375***	5.326***	5.311***	3.511**	3.324**
	[1.492]	[1.389]	[1.390]	[1.388]	[1.569]	[1.515]
Population	0.000*		0.000*	0.000*	0.000*	0.000*
	[0.000]		[0.000]	[0.000]	[0.000]	[0.000]
Share of Manufacturing	-0.037		-0.037	-0.037	-0.038	-0.038
	[0.024]		[0.024]	[0.024]	[0.024]	[0.024]
Anticipatory 24-month Trend				0.326*		0.188*
				[0.175]		[0.112]
Constant	-0.964***	-1.121***	-0.738**	-0.741**	-0.949***	-1.001***
	[0.343]	[0.242]	[0.319]	[0.321]	[0.345]	[0.338]
Observations	63,954	63,954	63,954	63,954	63,954	63,954
R-square	0.020	0.022	0.022	0.020	0.021	0.019
Monthly anticipatory indicators in competitive districts (24 month)	No	Yes	Yes	No	Yes	No

Note: Sample is January 2001 to March 2015. All regressions include state and month fixed effects. Standard errors clustered at the district level. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$. 2. The joint test of dummies for 24-month anticipatory effects in Column 3 and 5 is statistically significant at 5 percent respectively.

Appendix Table 31: Effect of RTE on new HEIs registrations per billion persons – competitive districts defined as any prior registrations

Independent Variables	RTE = 1 after August 2009				RTE = 1 after state enactment	
	[1]	*[2]*	*[3]*	*[4]*	*[5]*	*[6]*
Educationally Competitive District Indicator (C_d)	19.682***	19.078***	16.196***	15.405***	20.024***	21.986***
	[6.120]	[5.290]	[5.216]	[5.372]	[6.453]	[6.692]
Post RTE Indicator (RTE_t)	-15.717	-14.073	-16.539*	-16.727*	-8.098**	-7.779**
	[9.718]	[9.720]	[9.737]	[9.759]	[3.772]	[3.797]
Differential Impact **(** $RTE_t \times C_d$ **)**	25.133***	29.155***	28.630***	29.424***	13.549**	11.596*
	[8.006]	[9.072]	[9.031]	[8.820]	[6.373]	[6.422]
Population	0.000*		0.000*	0.000*	0.000*	0.000*
	[0.000]		[0.000]	[0.000]	[0.000]	[0.000]
Share of Manufacturing	-0.363**		-0.362**	-0.362**	-0.370**	-0.370**
	[0.156]		[0.155]	[0.155]	[0.157]	[0.157]
Anticipatory 24-month Trend				1.472***		2.531**
				[0.557]		[1.107]
Constant	25.643***	22.698***	26.460***	26.649***	26.183***	25.693***
	[8.256]	[8.291]	[8.263]	[8.274]	[8.155]	[8.211]
Observations	63,954	63,954	63,954	63,954	63,954	63,954
R-square	0.108	0.108	0.109	0.109	0.110	0.109
Monthly anticipatory indicators in competitive districts (24 month)	No	Yes	Yes	No	Yes	No

Note: Sample is January 2001 to March 2015. All regressions include state and month fixed effects. Standard errors clustered at the district level. * p < 0.10, ** p < 0.05, *** p < 0.01. 2. The joint test of dummies for 24-month anticipatory effects in Column 3 and 5 is statistically significant at 5 percent respectively.

Appendix Table 32: Effect of RTE on new tuition centers registrations per billion persons – competitive districts defined as any prior investments

Independent Variables	RTE = 1 after August 2009				RTE = 1 after state enactment	
	[1]	*[2]*	*[3]*	*[4]*	*[5]*	*[6]*
Educationally Competitive District Indicator (C_d)	3.687	1.909	1.612	1.819	4.434*	4.551*
	[2.311]	[2.092]	[2.157]	[2.265]	[2.392]	[2.364]
Post RTE Indicator (RTE_t)	-1.895	-1.978	-2.346	-2.301	-3.754***	-3.799***
	[2.580]	[2.582]	[2.576]	[2.585]	[1.377]	[1.376]
Differential Impact **(** $RTE_t \times C_d$ **)**	18.143***	20.347***	20.226***	20.019***	18.291***	18.172***
	[4.793]	[5.215]	[5.243]	[5.146]	[4.966]	[5.018]
Population	0.000		0.000	0.000	0.000	0.000
	[0.000]		[0.000]	[0.000]	[0.000]	[0.000]
Share of Manufacturing	-0.111**		-0.110*	-0.110*	-0.116**	-0.116**
	[0.056]		[0.056]	[0.056]	[0.057]	[0.057]
Anticipatory 24-month Trend				0.644***		0.717***
				[0.224]		[0.256]
Constant	0.244	-0.451	0.691	0.646	0.382	0.360
	[1.619]	[1.553]	[1.622]	[1.608]	[1.626]	[1.633]
Observations	63,954	63,954	63,954	63,954	63,954	63,954
R-square	0.054	0.055	0.056	0.055	0.055	0.054
Monthly anticipatory indicators in competitive districts (24 month)	No	Yes	Yes	No	Yes	No

Note: Sample is January 2001 to March 2015. All regressions include state and month fixed effects. Standard errors clustered at the district level. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$. 2. The joint test of dummies for 24-month anticipatory effects in Column 3 and 5 is statistically significant at 5 percent respectively.

Appendix Table 33: Effect of RTE on new school registrations per billion persons – competitive districts defined as any prior investments

Independent Variables	RTE = 1 after August 2009				RTE = 1 after state enactment	
	[1]	*[2]*	*[3]*	*[4]*	*[5]*	*[6]*
Educationally Competitive District Indicator (C_d)	2.110**	1.307*	1.059	1.080	2.408**	2.617***
	[1.013]	[0.728]	[0.818]	[0.858]	[1.042]	[0.998]
Post RTE Indicator (RTE_t)	-0.257	-0.301	-0.485	-0.481	-1.059	-0.959
	[1.063]	[1.038]	[1.040]	[1.048]	[0.694]	[0.712]
Differential Impact **(** $RTE_t \times C_d$ **)**	4.751***	5.859***	5.806***	5.785***	3.817**	3.610**
	[1.612]	[1.494]	[1.496]	[1.495]	[1.699]	[1.642]
Population	0.000		0.000	0.000	0.000	0.000
	[0.000]		[0.000]	[0.000]	[0.000]	[0.000]
Share of Manufacturing	-0.031		-0.030	-0.030	-0.032	-0.032
	[0.023]		[0.023]	[0.023]	[0.023]	[0.023]
Anticipatory 24-month Trend				0.355*		0.209*
				[0.189]		[0.121]
Constant	-1.032***	-1.118***	-0.805***	-0.810**	-1.011***	-1.064***
	[0.338]	[0.241]	[0.311]	[0.314]	[0.340]	[0.333]
Observations	63,954	63,954	63,954	63,954	63,954	63,954
R-square	0.020	0.023	0.023	0.020	0.021	0.020
Monthly anticipatory indicators in competitive districts (24 month)	No	Yes	Yes	No	Yes	No

Note: Sample is January 2001 to March 2015. All regressions include state and month fixed effects. Standard errors clustered at the district level. * p < 0.10, ** p < 0.05, *** p < 0.01. 2. The joint test of dummies for 24-month anticipatory effects in Column 3 and 5 is statistically significant at 5 percent respectively.

Appendix Table 34: Effect of RTE on new HEIs registrations per billion persons – competitive districts defined as any prior investments

Independent Variables	RTE = 1 after August 2009				RTE = 1 after state enactment	
	[1]	*[2]*	*[3]*	*[4]*	*[5]*	*[6]*
Educationally Competitive District Indicator (C_d)	21.532***	20.617***	17.597***	16.797***	21.822***	23.919***
	[6.413]	[5.486]	[5.456]	[5.617]	[6.758]	[7.016]
Post RTE Indicator (RTE_t)	-15.311	-14.042	-16.165*	-16.340*	-8.365**	-7.994**
	[9.709]	[9.720]	[9.725]	[9.748]	[3.788]	[3.818]
Differential Impact **(** $RTE_t \times C_d$ **)**	26.953***	31.503***	30.906***	31.709***	14.559**	12.466*
	[8.636]	[9.780]	[9.740]	[9.507]	[6.848]	[6.906]
Population	0.000		0.000	0.000	0.000	0.000
	[0.000]		[0.000]	[0.000]	[0.000]	[0.000]
Share of Manufacturing	-0.311**		-0.309**	-0.309**	-0.320**	-0.320**
	[0.146]		[0.145]	[0.145]	[0.148]	[0.148]
Anticipatory 24-month Trend				1.632***		2.740**
				[0.599]		[1.206]
Constant	25.068***	22.707***	25.913***	26.088***	25.663***	25.180***
	[8.253]	[8.290]	[8.254]	[8.266]	[8.152]	[8.208]
Observations	63,954	63,954	63,954	63,954	63,954	63,954
R-square	0.109	0.109	0.110	0.109	0.111	0.109
Monthly anticipatory indicators in competitive districts (24 month)	No	Yes	Yes	No	Yes	No

Note: Sample is January 2001 to March 2015. All regressions include state and month fixed effects. Standard errors clustered at the district level. * p < 0.10, ** p < 0.05, *** p < 0.01. 2. The joint test of dummies for 24-month anticipatory effects in Column 3 and 5 is statistically significant at 5 percent respectively.

Appendix Table 35: Summary of differential trend ($t \times C_d$) to test the parallel test assumption under alternative definitions of competitive districts

Differential trend ($t \times C_d$) by definitions of competitive districts	N. of competitive districts	*DV: New Tuition registrations*	*DV: New School registrations*	*DV: New HEIs registrations*
		[1]	*[2]*	*[3]*
IIT established before RTE	13	0.000	0.000	0.001
		[0.000]	[0.000]	[0.001]
IIT established before 2001	6	0.001	0.000	0.001
		[0.000]	[0.000]	[0.001]
IIT and premier institutions established before 2001	9	0.000	0.000	0.000
		[0.000]	[0.000]	[0.001]
Premier institutions established before 2001	39	-0.000	0.000	-0.000
		[0.000]	[0.000]	[0.001]
Any prior registrations (1991-2000)	89	0.000	0.000**	0.001*
		[0.000]	[0.000]	[0.000]
Any prior investments (1991-2000)	82	0.000	0.000**	0.001*
		[0.000]	[0.000]	[0.000]

Note: Sample is January 2001 to December 2006. All regressions include population, share of manufacturing and software firm registrations, and state fixed effects. Standard errors clustered at the district level. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$.

Appendix Table 36: Summary of differential impact ($RTE_t \times C_d$) under alternative definitions of competitive districts

Differential Impact ($RTE_t \times C_d$) by definitions of competitive districts	N. of competitive districts	RTE = 1 after August 2009			RTE = 1 after state enactment		
		DV: New Tuition registrations	*DV: New School registrations*	*DV: New HEIs registrations*	*DV: New Tuition registrations*	*DV: New School registrations*	*DV: New HEIs registrations*
		[1]	*[2]*	*[3]*	*[4]*	*[5]*	*[6]*
IIT established before RTE	13	0.137**	0.043**	0.228**	0.135***	0.032*	0.122*
		[0.055]	[0.019]	[0.094]	[0.047]	[0.019]	[0.071]
IIT established before 2001	6	0.145	0.055*	0.223	0.115	0.022*	-0.049
		[0.102]	[0.031]	[0.179]	[0.074]	[0.013]	[0.056]
IIT and premier institutions established before 2001	9	0.186**	0.058**	0.306**	0.171**	0.043*	0.142
		[0.073]	[0.025]	[0.126]	[0.060]	[0.025]	[0.096]
Premier institutions established before 2001	38	0.067***	0.027***	0.196**	0.059***	0.020**	0.125*
		[0.024]	[0.008]	[0.078]	[0.021]	[0.008]	[0.066]
Any prior registrations (1991-2000)	89	0.056***	0.017***	0.120***	0.048***	0.012***	0.069**
		[0.013]	[0.004]	[0.036]	[0.011]	[0.004]	[0.030]
Any prior investments (1991-2000)	82	0.061***	0.019***	0.130***	0.051***	0.013***	0.074**
		[0.014]	[0.004]	[0.039]	[0.012]	[0.005]	[0.032]

Note: Sample is January 2001 to March 2015. All regressions include population, share of manufacturing and software firm registrations, 24-month anticipatory effects, state and month fixed effects. Standard errors clustered at the district level. * p < 0.10, ** p < 0.05, *** p < 0.01. The joint test of dummies for 24-month anticipatory effects is statistically significant at 5 percent.

Appendix Table 37: Summary of differential impact ($RTE_t \times E_d$) on registrations per billion persons under the definition of early vs late adoption of RTE by states

Differential Impact ($RTE_t \times E_d$)	N. of early-adopting-districts	RTE = 1 after August 2009			RTE = 1 after state enactment		
		New Tuition registrations per billion persons	*New School registrations per billion persons*	*New HEIs registrations per billion persons*	*New Tuition registrations per billion persons*	*New School registrations per billion persons*	*New HEIs registrations per billion persons*
		[1]	*[2]*	*[3]*	*[4]*	*[5]*	*[6]*
Early vs Late adoption	123	-3.735*	-0.569	-16.406***	-3.201	-0.404	-14.533***
		[2.088]	[0.715]	[3.679]	[2.219]	[0.803]	[3.427]

Note: 1. Each cell provides estimates from a separate regression of the outcome identified in the column heading for the early-and-late adopters (E_d) interacted with post-RTE (RTE_t). 2. Sample is January 2001 to March 2015. 3. All regressions include population, share of manufacturing and software firm registrations, 24-month anticipatory effects, state and month fixed effects. 4. Standard errors clustered at the district level. * p < 0.10, ** p < 0.05, *** p < 0.01. 5. The joint test of dummies for 24-month anticipatory effects is not statistically significant at 5 percent. 6. Finally, the parallel trend test estimated with the sample between 2001-2006 is not statistically significant for tuition centers and schools registered. The parallel trend test is rejected for the HEIs registered; therefore, caution is warranted in interpreting the results from Col (3) and Col (6).

Appendix Table 38: Distribution of population in the age-group 6-13 years old by alternative definition of competitive districts - [IHDS]

Definition of competitive districts	Type of District	N. of Districts	% Growth per year	
			6 - 10 years old	11 - 13 years old
IITs established before RTE	Less Competitive	351	-1.74	4.83
	Competitive	12	-1.94	2.94
IITs established before 2001	Less Competitive	358	-1.70	4.87
	Competitive	5	-3.14	0.87
IITs and premier institutions established before 2001	Less Competitive	355	-1.70	4.89
	Competitive	8	-2.93	1.15
Premier institutions established before 2001	Less Competitive	327	-1.85	4.97
	Competitive	36	-0.87	3.11
Any prior registrations (1991-2000)	Less Competitive	291	-1.59	4.84
	Competitive	72	-2.41	4.32
Any prior investments (1991-2000)	Less Competitive	295	-1.64	4.81
	Competitive	68	-2.24	4.42

Note: For this calculation, we consider only the household and individuals which were surveyed in both time periods – 2004-05 and 2011-12. We make use of appropriate sample weights to arrive at the absolute number of populations in the age group 6-13 years old. The population numbers are used to derive the growth rate per year (in percentages) which is reported in the above table.
Source: Calculated by the authors on the basis of data made available from the India Human Development Survey [IHDS] 2004-05 and 2011-12

Appendix Table 39: Demand for education in a household – IITs established before RTE - [IHDS]

Completed Education Status	Any Male Adult				Any Female Adult			
	Pre RTE [2004-05]		Post RTE [2011-12]		Pre RTE [2004-05]		Post RTE [2011-12]	
	Less-competitive	Competitive	Less-competitive	Competitive	Less-competitive	Competitive	Less-competitive	Competitive
No education	25.23	14.25	20.92	10.43	51.32	34.01	41.66	24.43
Primary	17.90	12.18	15.81	8.58	14.82	14.33	15.30	10.57
Upper Primary	15.13	15.59	15.45	12.96	12.59	16.43	13.65	14.31
Secondary	20.50	26.50	20.63	24.45	11.45	17.21	13.57	22.00
Senior Secondary	9.65	14.46	11.09	15.01	4.59	7.56	6.61	12.56
UG & Above	11.58	17.03	16.10	28.57	5.23	10.46	9.22	16.12

Note: 1. The table reports the highest education level completed by any male and female adult in a household. 2. For this calculation, we consider only the household and individuals which were surveyed in both time periods – 2004-05 and 2011-12. We make use of appropriate sample weights to arrive at the percentages.

Source: Calculated by the authors on the basis of data made available from the India Human Development Survey [IHDS] 2004-05 and 2011-12

Appendix Table 40: Difference-in-difference of enrolment between competitive and less-competitive districts before and after RTE – alternative definitions of competitive districts – [IHDS]

Definition of competitive districts	N. of competitive districts	Primary		Upper Primary	
		Government School	Private School	Government School	Private School
IITs established before 2001	5	-13.19	16.93	-5.13	9.22
IITs and premier institutions established before 2001	8	-11.52	14.72	-5.67	9.28
Premier institutions established before 2001	36	-5.92	6.21	-9.18	8.33
Any prior registrations (1991-2000)	72	-3.55	4.18	-4.45	2.77
Any prior investments (1991-2000)	68S	-3.27	4.13	-4.57	3.13

Note: 1. The difference-in-difference (in percentage points) is derived by undertaking the following steps: (a) subtract the percentage of students currently enrolled in a particular type of school during pre-RTE period from the post-RTE period for competitive and less-competitive districts, and (b) take the derived value from (a) and subtract the percentage points for less-competitive district from competitive districts. 2. A positive value of the difference-in-difference means that students attending a particular education level in a particular school type has increased in competitive districts relative to less-competitive districts during the post-RTE period in comparison to pre-RTE period. 3. A negative value of the difference-in-difference means that students attending a particular education level in a particular school type has increased in less-competitive districts relative competitive districts during the post-RTE period in comparison to pre-RTE period. 4. The category of school type include (a) Government, (b) Private, (c) Government-Aided, and (d) Others [Madrasa and Open schools]. We present the enrolment percentage in government and private schools since it constitutes 98 percent of enrolment in India. 5. For this calculation, we consider only the household and individuals which were surveyed in both time periods – 2004-05 and 2011-12. We make use of appropriate sample weights to arrive at the percentages of enrolment.

Source: Calculated by the authors on the basis of data made available from the India Human Development Survey [IHDS] 2004-05 and 2011-12

Appendix Table 41: Difference-in-difference of private tuition take up by education level and school type – alternative definition of competitive districts - [IHDS]

Definition of competitive districts	N. of competitive districts	Primary		Upper Primary	
		Government School	Private School	Government School	Private School
IITs established before 2001	5	5.61	-4.49	8.16	19.56
IITs and premier institutions established before 2001	8	4.04	0.25	7.83	10.27
Premier institutions established before 2001	36	3.61	-1.17	3.02	1.09
Any prior registrations (1991-2000)	72	-3.71	-1.49	-8.20	2.38
Any prior investments (1991-2000)	68	-3.88	-1.63	-8.09	2.73

Note: 1. The difference-in-difference (in percentage points) is derived by undertaking the following steps: (a) subtract the percentage of students accessing private tuition who are currently attending primary/upper-primary in a particular type of school during pre-RTE period from the post-RTE period for competitive and less-competitive districts, and (b) take the derived value from (a) and subtract the percentage points for less-competitive district from competitive districts. 2. A positive value of the difference-in-difference means that the students accessing private tuition has increased in competitive districts relative to less-competitive districts during the post-RTE period in comparison to pre-RTE period. 3. A negative value of the difference-in-difference means that the students accessing private tuition has increased in less-competitive districts relative competitive districts during the post-RTE period in comparison to pre-RTE period. 4. The category of school type include (a) Government, (b) Private, (c) Government-Aided, and (d) Others [Madrasa and Open schools]. 3. For this calculation, we consider only the household and individuals which were surveyed in both time periods – 2004-05 and 2011-12. We make use of appropriate sample weights to arrive at the percentage of student accessing private tuition.

Source: Calculated by the authors on the basis of data made available from the India Human Development Survey [IHDS] 2004-05 and 2011-12

Appendix Table 42: Average tuition fee paid by students currently attending elementary level – alternative definition of competitive districts - [IHDS]

Definition of competitive districts	N. of competitive districts	Total (in real value and US $)				Difference-in-Difference
		Pre RTE [2004-05]		Post RTE [2011-12]		
		Less-Competitive	Competitive	Less-Competitive	Competitive	
IIT established before RTE	12	34.81	58.89	20.84	29.80	-15.13*
		[1.04]	[8.07]	[0.55]	[2.51]	[7.89]
IIT established before 2001	5	34.94	72.01	20.91	33.32	-24.67**
		[1.04]	[9.75]	[0.54]	[3.31]	[10.69]
IIT & premier institutions established before 2001	8	34.74	70.51	20.92	30.80	-25.91***
		[1.04]	[8.65]	[0.54]	[2.69]	[9.38]
Premier institutions before 2001	36	32.07	55.16	19.37	31.06	-11.40***
		[1.05]	[3.35]	[0.50]	[1.98]	[3.55]
Any prior registrations (1991-2000)	72	33.06	49.34	19.67	30.75	-5.21
		[1.07]	[3.00]	[0.51]	[1.87]	[3.54]
Any prior investments (1991-2000)	68	33.02	49.75	19.66	31.02	-5.38
		[1.07]	[3.05]	[0.51]	[1.90]	[3.59]

Note: 1. The difference-in-difference is derived by undertaking the following steps: (a) subtract the amount spent by students enrolled in primary and upper-primary level and attending private tuition during pre-RTE period from the post-RTE period for competitive and less-competitive districts, and (b) take the derived value from (a) and subtract the value for less-competitive district from competitive districts. 2. A positive value of the difference-in-difference means that students belonging to competitive districts spend higher amount on tuition classes relative to less-competitive districts during the post-RTE period in comparison to pre-RTE period. 3. A negative value of the difference-in-difference means that students belonging to less-competitive districts spend higher amount on tuition classes relative competitive districts during the post-RTE period in comparison to pre-RTE period. 4. For this calculation, we consider only the household and individuals which were surveyed in both time periods – 2004-05 and 2011-12. We make use of appropriate sample weights to arrive at the percentages of enrolment. 5. We undertake the conversion from nominal to real values with base at 2011-2012, and transformed the local currency to US currency [1 US$ = 73.44 INR].

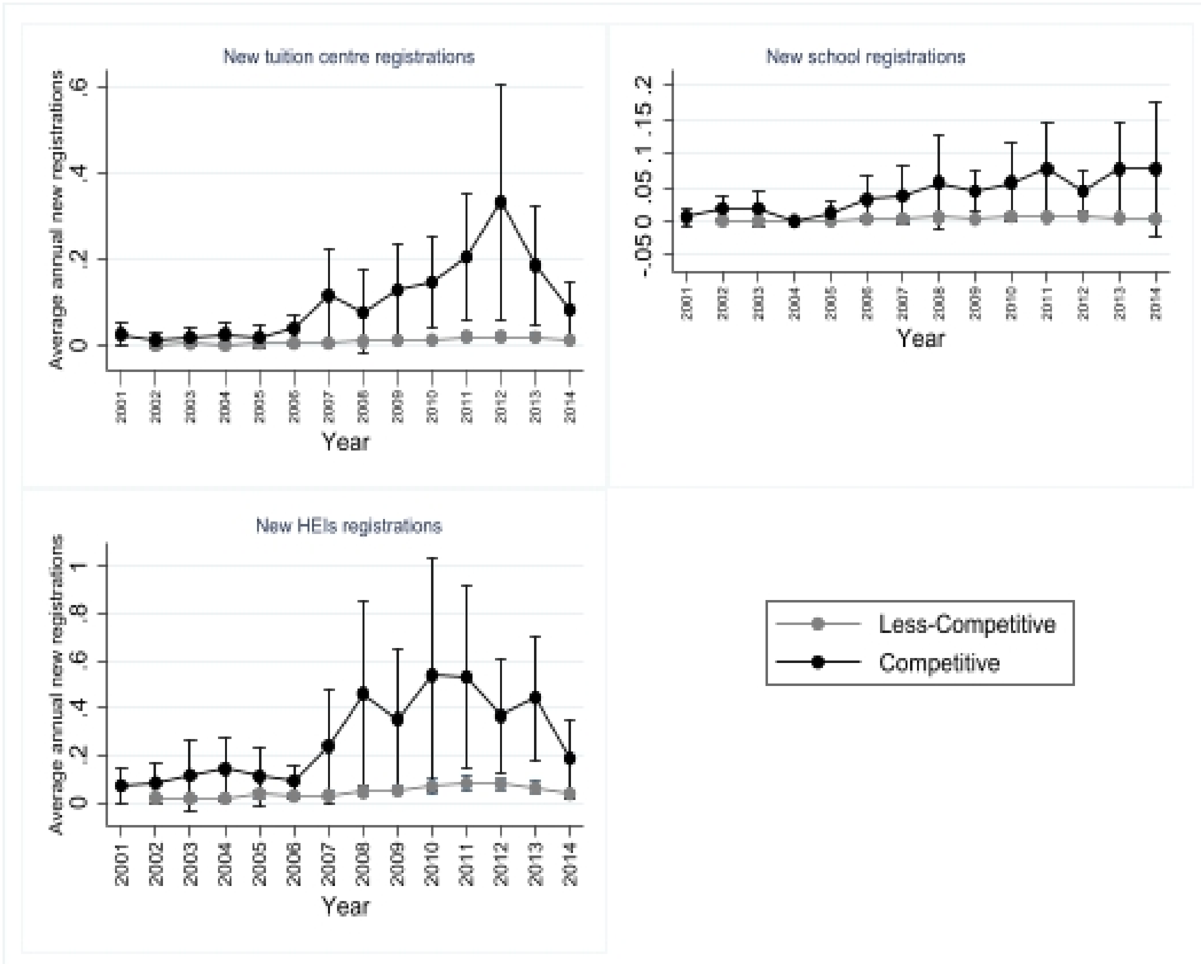
Source: Calculated by the authors on the basis of data made available from the India Human Development Survey [IHDS] 2004-05 and 2011-

Appendix Table 43: Difference-in-difference of learning outcome in reading, math, and writing ability – by alternative definitions of competitive districts – [IHDS]

Definition of competitive districts	N. of competitive districts	Reading Ability		Math Ability		Writing Ability	
		No tuition	Tuition	No tuition	Tuition	No tuition	Tuition
IIT established before 2001	5	-0.29	16.06***	9.16***	4.42	-2.94	8.94**
		[2.99]	[4.67]	[3.49]	[6.63]	[1.88]	[3.53]
IIT & premier institutions before 2001	8	0.13	14.97***	7.70**	3.31	-2.09	6.77**
		[2.68]	[4.02]	[3.35]	[5.59]	[1.77]	[2.94]
Premier institutions before 2001	36	1.01	6.59**	5.15**	0.27	0.48	3.36**
		[2.34]	[3.07]	[2.47]	[3.00]	[1.32]	[1.64]
Any prior registrations (1991-2000)	72	-2.17	2.95	0.86	-0.23	1.08	1.60
		[1.76]	[2.47]	[1.71]	[2.52]	[0.99]	[1.40]
Any prior investments (1991-2000)	68	-3.19*	3.20	0.10	0.21	0.32	1.50
		[1.75]	[2.49]	[1.77]	[2.53]	[1.01]	[1.40]

Note: 1. The above represents the mean and standard deviation [in parentheses] of difference-in-difference in reading, math, and writing ability of the first and second child in the age group 8-11 years old. We calculate the average scores by those who are taking tuition and not for each time period (pre/post RTE) and type of competitive district under the definition of IITs established before the enactment of RTE. This is then used to derive the difference-in-difference value reported here. 3. For this calculation, we consider only the household and individuals which were surveyed in both time periods – 2004-05 and 2011-12. We make use of appropriate sample weights to arrive at the average scores. 4. The signs ***, **, and * represent the statistical significance at 1 percent, 5 percent, and 10 percent respectively.

Source: Calculated by the authors on the basis of data made available from the India Human Development Survey [IHDS] 2004-05 and 2011-12



Appendix Figure 1: Graphical representation of parallel trends of new tuition centers, school and HEIs

Note: The estimates were derived from regressing the new tuition centers, school and HEIs registrations on dummy for competitive districts interacted with dummies for year. Standard errors clustered at the district level. Competitive districts have an IIT located in them before the enactment of RTE in August 2009 by Government of India. The bandwidths represent the 95 percent confidence interval.

Appendix References

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