PSET 5: Completed Replication

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Contents

Question 1

Table 1—Sample Descriptives and Balance on Observables

	Mean (treatment)	Mean (control)	Difference	Standard Error	Observations (treatment)	Observations (control)
Panel A. All students in the baseline sample						
Demographic characteristics						
Female	0.76	0.76	0.004	0.034	314	305
Age (years)	12.67	12.41	0.267	0.143	230	231
SES index	-0.03	0.04	-0.07	0.137	314	305
Grade in School						
Grade 4	0.01	0.01	-0.003	0.007	305	299
Grade 5	0.01	0.02	-0.007	0.01	305	299
Grade 6	0.27	0.3	-0.035	0.037	305	299
Grade 7	0.26	0.26	0.005	0.036	305	299
Grade 8	0.3	0.28	0.017	0.037	305	299
Grade 9	0.15	0.13	0.024	0.028	305	299
Baseline test scores						
Math	-0.01	0.01	-0.016	0.081	313	304
Hindi	0.05	-0.05	0.096	0.081	312	305
Present at endline	0.85	0.9	-0.048	0.027	314	305
Panel B. Only students present in endline						
Demographic characteristics						
Female	0.77	0.76	0.013	0.036	266	273
Age (years)	12.61	12.37	0.243	0.156	196	203
SES index	-0.17	0.03	-0.193	0.142	266	273
Grade in School						
Grade 4	0.01	0.01	-0.003	0.008	258	269
Grade 5	0.01	0.02	-0.011	0.011	258	269
Grade 6	0.28	0.3	-0.022	0.04	258	269
Grade 7	0.26	0.26	-0.001	0.038	258	269
Grade 8	0.3	0.28	0.02	0.04	258	269
Grade 9	0.14	0.12	0.017	0.029	258	269
Baseline test scores						
Math	-0.03	0	-0.031	0.086	265	272
Hindi	0.05	-0.07	0.124	0.084	266	273

Notes: Treatment and control groups refer to whether students were randomly assigned to Mindspark voucher. Variables used in this table are from the baseline data collection in September 2015. The data collection consisted of two parts: (i) a self-administered student survey, from which demographic characteristics are taken and (ii) assessment of skills in math and Hindi, administered using pen-and-paper tests. Tests were designed to cover wide ranges of achievement and to be linked across grades, as well as between baseline and endline assess- ments, using common items. Scores are scaled here using Item Response theory models and standardized to have a mean of zero and standard deviation of one in the baseline. SES index refers to a wealth index generated using the first component from a Principal Components Analysis consisting of indicators for ownership of various consumer durables and services in the household.

Question 2

Table 2—Intent-To-Treat (ITT) Effects in a Regression Framework

	Standardized IRT scores (endline)			
	Math	Hindi	Math	Hindi
	(1)	(2)	(3)	(4)
Treatment	0.369	0.227	0.374	0.238
	(0.064)	(0.062)	(0.064)	(0.071)
Baseline score	0.584	0.713	0.568	0.684
	(0.042)	(0.040)	(0.051)	(0.033)
Constant	0.326	0.175	0.324	0.169
	(0.044)	(0.044)	(0.031)	(0.035)
Strata Fixed Effects	Yes	Yes	No	No
Observations	535	537	535	537
R^2	0.403	0.493	0.397	0.473

Notes: Robust standard errors in parentheses. *Treatment* is a dummy variable indicating a randomly assigned offer of aMindspark voucher. Tests in both math and Hindi were designed to cover wide ranges of achievement and to be linked acrossgrades, as well as between baseline and endline assessments, using common items. Scores are scaled here using Item Responsetheory models and standardized to have a mean of zero and standard deviation of one in the baseline.

Question 3

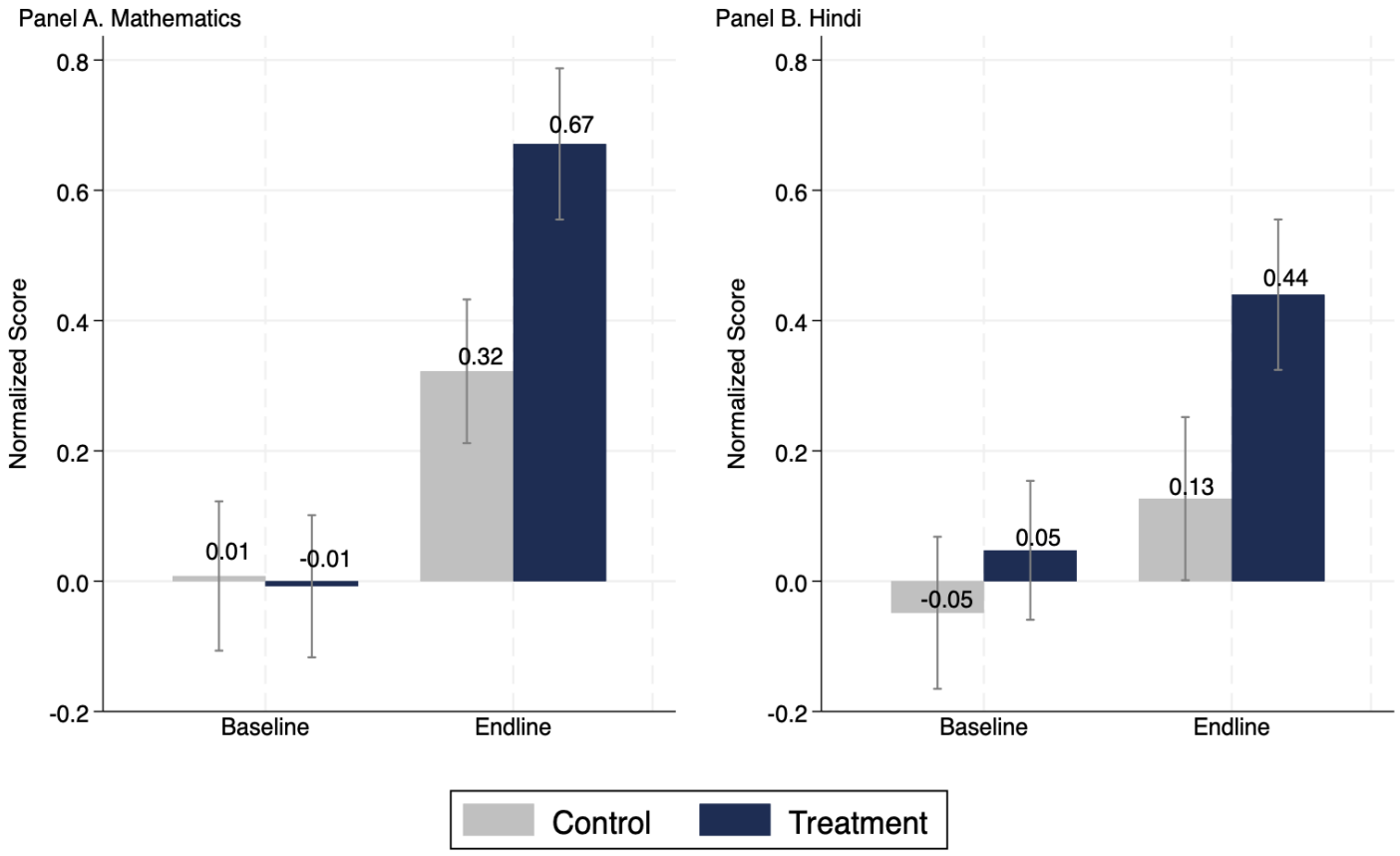

Figure 2. Mean Difference in Test Scores between Lottery Winners and Losers

Notes: This figure shows mean of test scores, normalized with reference to baseline, across treatment and control groups in the two rounds of testing with 95 percent confidence intervals. Test scores were linked within-subject through IRT models, pooling across grades and across baseline and endline, and are normalized to have a mean of 0 and a standard deviation of 1 in the baseline. Whereas baseline test scores were balanced between lottery winners and lottery losers, endline scores are significantly higher for the treatment group.