



Control: 2144 2274 4418
 Treated: 10034 10242 20276
 12178 12516

Report - Covariates and coefficients:

Variable(s)	Coeff.	Std. Err.	t	P> t
gender	-0.668	0.336	-1.989	0.047
white	3.183	0.558	5.701	0.000
black	-0.821	0.789	-1.040	0.298
asian	6.144	0.895	6.864	0.000
hispanic	2.159	0.799	2.703	0.007
expect	0.279	0.032	8.734	0.000
learn	8.241	0.265	31.042	0.000
english	4.129	0.702	5.883	0.000
timewchild~n	-1.078	0.046	-23.609	0.000
ses	5.088	0.187	27.225	0.000

Outcome var.	reading	S. Err.	t	P> t
Before				
Control	30.107			
Treated	30.006			
Diff (T-C)	-0.100	0.332	-0.30	0.763
After				
Control	91.385			
Treated	93.609			
Diff (T-C)	2.224	0.779	2.85	0.004***
Diff-in-Diff	2.324	0.837	2.78	0.005***

R-square: 0.63

* Means and Standard Errors are estimated by linear regression

**Robust Std. Errors

Inference: * p<0.01; ** p<0.05; * p<0.1

```
1 .
2 . diff math, t(treated2) p(time) cov(gender white black asian hispanic expect learn ///
> english timewchildren ses) ps(psm) robust report
```

DIFFERENCE-IN-DIFFERENCES WITH COVARIATES**DIFFERENCE-IN-DIFFERENCES ESTIMATION RESULTS**

Number of observations in the DIFF-IN-DIFF: 24694

Before After
 Control: 2144 2274 4418
 Treated: 10034 10242 20276
 12178 12516

Report - Covariates and coefficients:

Variable(s)	Coeff.	Std. Err.	t	P> t
gender	4.643	0.264	17.590	0.000
white	4.100	0.447	9.168	0.000
black	-2.835	0.621	-4.568	0.000
asian	3.446	0.751	4.587	0.000
hispanic	1.869	0.628	2.977	0.003
expect	0.222	0.025	8.800	0.000
learn	8.076	0.210	38.498	0.000
english	3.039	0.564	5.384	0.000
timewchild~n	-0.947	0.036	-26.091	0.000
ses	3.883	0.146	26.550	0.000

Outcome var.	math	S. Err.	t	P> t
Before				

Control	16.978			
Treated	17.620			
Diff (T-C)	0.642	0.268	2.40	0.017**
After				
Control	64.913			
Treated	67.514			
Diff (T-C)	2.601	0.619	4.20	0.000***
Diff-in-Diff	1.959	0.667	2.94	0.003***

R-square: **0.63**

* Means and Standard Errors are estimated by linear regression

**Robust Std. Errors

Inference: * p<0.01; ** p<0.05; * p<0.1

```

3 .
4 . set more off

5 . drop psm psm_block

6 . qui pscore treated3 gender white black asian hispanic expect learn ///
> english timewchildren ses [pw=c245pw0], pscore(psm) logit blockid(psm_block) detail
The balancing property is not satisfied
Try a different specification of the propensity score

7 . //psgraph, treated(treated3) pscore(psm)
8 .
9 . qui psmatch2 treated3, outcome(reading) pscore(psm)

10 . qui psmatch2 treated3, outcome(math) pscore(psm)

11 .
12 . qui pstest gender white black asian hispanic expect learn ///
> english timewchildren ses, treated(treated3) both graph

13 .
14 . diff reading, t(treated3) p(time) cov(gender white black asian hispanic expect learn ///
> english timewchildren ses) ps(psm) robust report

```

DIFFERENCE-IN-DIFFERENCES WITH COVARIATES**DIFFERENCE-IN-DIFFERENCES ESTIMATION RESULTS**Number of observations in the DIFF-IN-DIFF: **24694**

	Before	After	
Control:	3572	3778	7350
Treated:	8606	8738	17344
	12178	12516	

Report - Covariates and coefficients:

Variable(s)	Coeff.	Std. Err.	t	P> t
gender	-0.676	0.336	-2.014	0.044
white	3.149	0.559	5.636	0.000
black	-0.834	0.789	-1.056	0.291
asian	6.185	0.895	6.913	0.000
hispanic	2.133	0.799	2.669	0.008
expect	0.277	0.032	8.674	0.000
learn	8.224	0.265	30.977	0.000
english	4.071	0.701	5.805	0.000
timewchild~n	-1.083	0.046	-23.665	0.000
ses	5.045	0.188	26.795	0.000

Outcome var.	reading	S. Err.	t	P> t
Before				
Control	30.429			
Treated	30.265			

Diff (T-C)	-0.164	0.285	-0.58	0.565
After				
Control	91.772			
Treated	94.224			
Diff (T-C)	2.452	0.655	3.74	0.000***
Diff-in-Diff	2.616	0.699	3.74	0.000***

R-square: 0.63

* Means and Standard Errors are estimated by linear regression

**Robust Std. Errors

Inference: * p<0.01; ** p<0.05; * p<0.1

15 .

```
16 . diff math, t(treated3) p(time) cov(gender white black asian hispanic expect learn ///
> english timewchildren ses) ps(psm) robust report
```

DIFFERENCE-IN-DIFFERENCES WITH COVARIATES**DIFFERENCE-IN-DIFFERENCES ESTIMATION RESULTS**

Number of observations in the DIFF-IN-DIFF: 24694

	Before	After	
Control:	3572	3778	7350
Treated:	8606	8738	17344
	12178	12516	

Report - Covariates and coefficients:

Variable(s)	Coeff.	Std. Err.	t	P> t
gender	4.630	0.264	17.545	0.000
white	4.059	0.448	9.069	0.000
black	-2.851	0.621	-4.594	0.000
asian	3.491	0.750	4.654	0.000
hispanic	1.834	0.628	2.919	0.004
expect	0.219	0.025	8.706	0.000
learn	8.061	0.210	38.428	0.000
english	2.995	0.564	5.309	0.000
timewchild~n	-0.953	0.036	-26.177	0.000
ses	3.836	0.147	26.072	0.000

Outcome var.	math	S. Err.	t	P> t
Before				
Control	17.398			
Treated	17.961			
Diff (T-C)	0.563	0.231	2.43	0.015**
After				
Control	65.599			
Treated	68.063			
Diff (T-C)	2.464	0.519	4.75	0.000***
Diff-in-Diff	1.901	0.557	3.41	0.001***

R-square: 0.63

* Means and Standard Errors are estimated by linear regression

**Robust Std. Errors

Inference: * p<0.01; ** p<0.05; * p<0.1

```

17 .
18 . //Museum//
19 . drop psm psm_block

20 . set more off

21 . qui pscore tmuseum gender white black asian hispanic expect learn ///
    > english timewchildren ses [pw=c245pw0], pscore(psm) blockid(psm_block) logit detail
The balancing property is not satisfied
Try a different specification of the propensity score

22 . //bysort childid (round): replace psm = psm[3]
23 . //psgraph, treated(tmuseum) pscore(psm)
24 . //graph export "C:\Users\soyou\Documents\GitHub\EduTravel\ps_score_museum.pdf", as(pdf) replace
25 .
26 . qui psmatch2 tmuseum, outcome(reading) pscore(psm)

27 . qui psmatch2 tmuseum, outcome(math) pscore(psm)

28 . qui pstest gender white black asian hispanic expect learn ///
    > english timewchildren ses, treated(tmuseum) both graph

29 . graph export "C:\Users\soyou\Documents\GitHub\EduTravel\matched_museum.pdf", as(pdf) replace
    (file C:\Users\soyou\Documents\GitHub\EduTravel\matched_museum.pdf written in PDF format)

30 .
31 . diff reading, t(tmuseum) p(time) cov(gender white black asian hispanic expect learn ///
    > english timewchildren ses) ps(psm) robust report

```

DIFFERENCE-IN-DIFFERENCES WITH COVARIATES

DIFFERENCE-IN-DIFFERENCES ESTIMATION RESULTS

Number of observations in the DIFF-IN-DIFF: **24694**

	Before	After	
Control:	8261	8529	16790
Treated:	3917	3987	7904
	12178	12516	

Report - Covariates and coefficients:

Variable(s)	Coeff.	Std. Err.	t	P> t
gender	-0.679	0.336	-2.023	0.043
white	3.258	0.559	5.828	0.000
black	-0.760	0.790	-0.963	0.336
asian	6.131	0.893	6.863	0.000
hispanic	2.186	0.799	2.736	0.006
expect	0.270	0.032	8.447	0.000
learn	8.276	0.265	31.223	0.000
english	4.206	0.700	6.006	0.000
timewchild~n	-1.098	0.046	-24.083	0.000
ses	4.972	0.188	26.510	0.000

Outcome var.	reading	S. Err.	t	P> t
Before				
Control	30.114			
Treated	30.931			
Diff (T-C)	0.816	0.292	2.79	0.005***
After				
Control	92.490			
Treated	95.759			
Diff (T-C)	3.268	0.652	5.01	0.000***
Diff-in-Diff	2.452	0.706	3.47	0.001***

R-square: **0.63**

* Means and Standard Errors are estimated by linear regression

**Robust Std. Errors
 Inference: * p<0.01; ** p<0.05; * p<0.1

```
32 . diff math, t(tmuseum) p(time) cov(gender white black asian hispanic expect learn ///
> english timewchildren ses) ps(psm) robust report
```

DIFFERENCE-IN-DIFFERENCES WITH COVARIATES

DIFFERENCE-IN-DIFFERENCES ESTIMATION RESULTS

Number of observations in the DIFF-IN-DIFF: **24694**

	Before	After	
Control:	8261	8529	16790
Treated:	3917	3987	7904
	12178	12516	

Report - Covariates and coefficients:

Variable(s)	Coeff.	Std. Err.	t	P> t
gender	4.623	0.264	17.518	0.000
white	4.165	0.448	9.297	0.000
black	-2.798	0.620	-4.510	0.000
asian	3.386	0.750	4.515	0.000
hispanic	1.893	0.628	3.012	0.003
expect	0.216	0.025	8.550	0.000
learn	8.128	0.209	38.805	0.000
english	3.150	0.564	5.586	0.000
timewchild~n	-0.952	0.036	-26.176	0.000
ses	3.839	0.147	26.084	0.000

Outcome var.	math	S. Err.	t	P> t
Before				
Control	17.162			
Treated	17.882			
Diff (T-C)	0.720	0.231	3.12	0.002***
After				
Control	66.226			
Treated	68.426			
Diff (T-C)	2.200	0.510	4.31	0.000***
Diff-in-Diff	1.480	0.552	2.68	0.007***

R-square: **0.63**

* Means and Standard Errors are estimated by linear regression

**Robust Std. Errors

Inference: * p<0.01; ** p<0.05; * p<0.1

```
33 . drop psm psm_block
```

```
34 .
```

```
35 . //Concert//
```

```
36 . qui pscore tconcrtr gender white black asian hispanic expect learn ///
> english timewchildren ses [pw=c245pw0], pscore(psm) blockid(psm_block)
```

The balancing property is not satisfied

Try a different specification of the propensity score

```

37 . //bysort childid (round): replace psm = psm[3]
38 . //psgraph, treated(tconcr) pscore(psm)
39 . //graph export "C:\Users\soyou\Documents\GitHub\EduTravel\ps_score_concert.pdf", as(pdf) replace
40 .
41 . psmatch2 tconcr, outcome(reading) pscore(psm)

```

Variable	Sample	Treated	Controls	Difference	S.E.	T-stat
reading	Unmatched	76.4629631	74.8789351	1.584028	.546712998	2.90
	ATT	76.4629631	70.9555784	5.50738471	.935989391	5.88

Note: S.E. does not take into account that the propensity score is estimated.

psmatch2: Treatment assignment	psmatch2: Common support On suppor	Total
Untreated	14,630	14,630
Treated	10,064	10,064
Total	24,694	24,694

```

42 . psmatch2 tconcr, outcome(math) pscore(psm)

```

Variable	Sample	Treated	Controls	Difference	S.E.	T-stat
math	Unmatched	60.3855067	58.865851	1.51965577	.433202913	3.51
	ATT	60.3855067	55.3977662	4.98774051	.740327607	6.74

Note: S.E. does not take into account that the propensity score is estimated.

psmatch2: Treatment assignment	psmatch2: Common support On suppor	Total
Untreated	14,630	14,630
Treated	10,064	10,064
Total	24,694	24,694

```

43 . qui pstest gender white black asian hispanic expect learn ///
    > english timewchildren ses, treated(tconcr) both graph
44 . graph export "C:\Users\soyou\Documents\GitHub\EduTravel\matched_concert.pdf", as(pdf) replace
    (file C:\Users\soyou\Documents\GitHub\EduTravel\matched_concert.pdf written in PDF format)
45 .
46 . diff reading, t(tconcr) p(time) cov(gender white black asian hispanic expect learn ///
    > english timewchildren ses) ps(psm) robust report

```

DIFFERENCE-IN-DIFFERENCES WITH COVARIATES

DIFFERENCE-IN-DIFFERENCES ESTIMATION RESULTS

Number of observations in the DIFF-IN-DIFF: **24694**

	Before	After	
Control:	7185	7445	14630
Treated:	4993	5071	10064
	12178	12516	

Report - Covariates and coefficients:

Variable(s)	Coeff.	Std. Err.	t	P> t
gender	-0.637	0.336	-1.893	0.058
white	3.160	0.559	5.657	0.000

black	-0.887	0.789	-1.124	0.261
asian	6.083	0.894	6.803	0.000
hispanic	2.150	0.799	2.692	0.007
expect	0.277	0.032	8.681	0.000
learn	8.262	0.265	31.153	0.000
english	4.216	0.701	6.013	0.000
timewchild~n	-1.078	0.046	-23.679	0.000
ses	5.099	0.187	27.338	0.000

Outcome var.	reading	S. Err.	t	P> t
Before				
Control	29.890			
Treated	29.963			
Diff (T-C)	0.073	0.264	0.28	0.782
After				
Control	92.444			
Treated	94.069			
Diff (T-C)	1.626	0.613	2.65	0.008***
Diff-in-Diff	1.553	0.662	2.35	0.019**

R-square: **0.63**

* Means and Standard Errors are estimated by linear regression

**Robust Std. Errors

Inference: * p<0.01; ** p<0.05; * p<0.1

47 .

48 . diff math, t(tconcr) p(time) cov(gender white black asian hispanic expect learn ///
> english timewchildren ses) ps(psm) robust report

DIFFERENCE-IN-DIFFERENCES WITH COVARIATES

DIFFERENCE-IN-DIFFERENCES ESTIMATION RESULTS

Number of observations in the DIFF-IN-DIFF: **24694**

	Before	After	
Control:	7185	7445	14630
Treated:	4993	5071	10064
	12178	12516	

Report - Covariates and coefficients:

Variable(s)	Coeff.	Std. Err.	t	P> t
gender	4.687	0.265	17.706	0.000
white	4.069	0.447	9.094	0.000
black	-2.930	0.621	-4.720	0.000
asian	3.358	0.750	4.479	0.000
hispanic	1.854	0.627	2.956	0.003
expect	0.220	0.025	8.713	0.000
learn	8.109	0.210	38.687	0.000
english	3.168	0.564	5.618	0.000
timewchild~n	-0.947	0.036	-26.111	0.000
ses	3.901	0.146	26.762	0.000

Outcome var.	math	S. Err.	t	P> t
Before				
Control	17.010			
Treated	17.771			
Diff (T-C)	0.762	0.213	3.57	0.000***
After				
Control	66.175			
Treated	67.867			
Diff (T-C)	1.692	0.481	3.52	0.000***
Diff-in-Diff	0.930	0.522	1.78	0.075*

R-square: **0.63**

* Means and Standard Errors are estimated by linear regression

**Robust Std. Errors

Inference: * p<0.01; ** p<0.05; * p<0.1

```

49 . drop psm psm_block

50 .
51 . //Zoo//
52 . qui pscore tzoo gender white black asian hispanic expect learn ///
    > english timewchildren ses [pw=c245pw0], pscore(psm) blockid(psm_block) detail
The balancing property is not satisfied
Try a different specification of the propensity score

53 . //psgraph, treated(tzoo) pscore(psm)
54 . //graph export "C:\Users\soyou\Documents\GitHub\EduTravel\ps_score_zoo.pdf", as(pdf) replace
55 .
56 . psmatch2 tzoo, outcome(reading) pscore(psm)

```

Variable	Sample	Treated	Controls	Difference	S.E.	T-stat
reading	Unmatched	76.2475203	75.0622982	1.18522207	.550828851	2.15
	ATT	76.2475203	69.4448661	6.80265421	.942624983	7.22

Note: S.E. does not take into account that the propensity score is estimated.

psmatch2: Treatment assignment	psmatch2: Common support On suppor	Total
Untreated	15,064	15,064
Treated	9,630	9,630
Total	24,694	24,694

```

57 . psmatch2 tzoo, outcome(math) pscore(psm)

```

Variable	Sample	Treated	Controls	Difference	S.E.	T-stat
math	Unmatched	59.5921381	59.4168116	.175326516	.43653827	0.40
	ATT	59.5921381	54.5887248	5.00341329	.750488929	6.67

Note: S.E. does not take into account that the propensity score is estimated.

psmatch2: Treatment assignment	psmatch2: Common support On suppor	Total
Untreated	15,064	15,064
Treated	9,630	9,630
Total	24,694	24,694


```

58 . qui pstest gender white black asian hispanic expect learn ///
> english timewchildren ses, treated(tzoo) both graph

59 . graph export "C:\Users\soyou\Documents\GitHub\EduTravel\matched_zoo.pdf", as(pdf) replace
(file C:\Users\soyou\Documents\GitHub\EduTravel\matched_zoo.pdf written in PDF format)

60 .
61 . diff reading, t(tzoo) p(time) cov(gender white black asian hispanic expect learn ///
> english timewchildren ses) ps(psm) robust report

```

DIFFERENCE-IN-DIFFERENCES WITH COVARIATES

DIFFERENCE-IN-DIFFERENCES ESTIMATION RESULTS

Number of observations in the DIFF-IN-DIFF: **24694**

	Before	After	
Control:	7431	7633	15064
Treated:	4747	4883	9630
	12178	12516	

Report - Covariates and coefficients:

Variable(s)	Coeff.	Std. Err.	t	P> t
gender	-0.664	0.336	-1.978	0.048
white	3.256	0.559	5.824	0.000
black	-0.817	0.789	-1.035	0.301
asian	6.057	0.895	6.770	0.000
hispanic	2.134	0.800	2.669	0.008
expect	0.275	0.032	8.614	0.000
learn	8.283	0.265	31.241	0.000
english	4.210	0.701	6.005	0.000
timewchild~n	-1.081	0.046	-23.756	0.000
ses	5.104	0.186	27.475	0.000

Outcome var.	reading	S. Err.	t	P> t
Before				
Control	29.690			
Treated	30.246			
Diff (T-C)	0.555	0.264	2.11	0.035**
After				
Control	92.474			
Treated	94.046			
Diff (T-C)	1.571	0.616	2.55	0.011**
Diff-in-Diff	1.016	0.667	1.52	0.128

R-square: **0.63**

* Means and Standard Errors are estimated by linear regression

**Robust Std. Errors

Inference: * p<0.01; ** p<0.05; * p<0.1

```

62 .
63 . diff math, t(tzoo) p(time) cov(gender white black asian hispanic expect learn ///
> english timewchildren ses) ps(psm) robust report

```

DIFFERENCE-IN-DIFFERENCES WITH COVARIATES

DIFFERENCE-IN-DIFFERENCES ESTIMATION RESULTSNumber of observations in the DIFF-IN-DIFF: **24694**

	Before	After	
Control:	7431	7633	15064
Treated:	4747	4883	9630
	12178	12516	

Report - Covariates and coefficients:

Variable(s)	Coeff.	Std. Err.	t	P> t
gender	4.625	0.264	17.512	0.000
white	4.141	0.448	9.245	0.000
black	-2.842	0.620	-4.581	0.000
asian	3.343	0.751	4.452	0.000
hispanic	1.869	0.628	2.973	0.003
expect	0.221	0.025	8.762	0.000
learn	8.130	0.210	38.783	0.000
english	3.156	0.564	5.592	0.000
timewchild~n	-0.933	0.036	-25.712	0.000
ses	3.948	0.146	27.135	0.000

Outcome var.	math	S. Err.	t	P> t
Before				
Control	16.834			
Treated	17.039			
Diff (T-C)	0.205	0.212	0.97	0.333
After				
Control	66.293			
Treated	66.757			
Diff (T-C)	0.464	0.483	0.96	0.337
Diff-in-Diff	0.259	0.524	0.49	0.621

R-square: **0.63**

* Means and Standard Errors are estimated by linear regression

**Robust Std. Errors

Inference: * p<0.01; ** p<0.05; * p<0.1

```

64 . drop psm psm_block

65 .
66 . //Sport//
67 . qui pscore tsport gender white black asian hispanic expect learn ///
    > english timewchildren ses [pw=c245pw0], pscore(psm) blockid(psm_block) detail
The balancing property is not satisfied
Try a different specification of the propensity score

68 . //psgraph, treated(tsport) pscore(psm)
69 . //graph export "C:\Users\soyou\Documents\GitHub\EduTravel\ps_score_sport.pdf", as(pdf) replace
70 .
71 . psmatch2 tsport, outcome(reading) pscore(psm)

```

Variable	Sample	Treated	Controls	Difference	S.E.	T-stat
reading	Unmatched	75.5134398	75.5352277	-.02178797	.537442172	-0.04
	ATT	75.5134398	71.811249	3.70219079	.92877412	3.99

Note: S.E. does not take into account that the propensity score is estimated.

psmatch2: Treatment assignment	psmatch2: Common support On suppor	Total
Untreated	12,539	12,539
Treated	12,155	12,155
Total	24,694	24,694

72 . psmatch2 tsport, outcome(math) pscore(psm)

Variable	Sample	Treated	Controls	Difference	S.E.	T-stat
math	Unmatched	60.321596	58.6743871	1.64720893	.425761623	3.87
	ATT	60.321596	55.7088646	4.6127314	.739157913	6.24

Note: S.E. does not take into account that the propensity score is estimated.

psmatch2: Treatment assignment	psmatch2: Common support On suppor	Total
Untreated	12,539	12,539
Treated	12,155	12,155
Total	24,694	24,694

73 . qui pstest gender white black asian hispanic expect learn ///
> english timewchildren ses, treated(tsport) both graph

74 . graph export "C:\Users\soyou\Documents\GitHub\EduTravel\matched_sport.pdf", as(pdf) replace
(file C:\Users\soyou\Documents\GitHub\EduTravel\matched_sport.pdf written in PDF format)

75 .

76 . diff reading, t(tsport) p(time) cov(gender white black asian hispanic expect learn ///
> english timewchildren ses) ps(psm) robust report

DIFFERENCE-IN-DIFFERENCES WITH COVARIATES

DIFFERENCE-IN-DIFFERENCES ESTIMATION RESULTS

Number of observations in the DIFF-IN-DIFF: 24694

	Before	After	
Control:	6152	6387	12539
Treated:	6026	6129	12155
	12178	12516	

Report - Covariates and coefficients:

Variable(s)	Coeff.	Std. Err.	t	P> t
gender	-0.653	0.336	-1.944	0.052
white	3.210	0.559	5.746	0.000
black	-0.821	0.789	-1.041	0.298
asian	5.982	0.897	6.666	0.000
hispanic	2.163	0.799	2.706	0.007
expect	0.279	0.032	8.742	0.000
learn	8.293	0.265	31.254	0.000
english	4.255	0.702	6.065	0.000
timewchild~n	-1.059	0.045	-23.302	0.000
ses	5.163	0.187	27.680	0.000

Outcome var.	reading	S. Err.	t	P> t
Before				

Control	29.778			
Treated	28.846			
Diff (T-C)	-0.932	0.257	-3.63	0.000***
After				
Control	92.636			
Treated	92.417			
Diff (T-C)	-0.220	0.601	0.37	0.715
Diff-in-Diff	0.712	0.648	1.10	0.272

R-square: **0.63**

* Means and Standard Errors are estimated by linear regression

**Robust Std. Errors

Inference: * p<0.01; ** p<0.05; * p<0.1

77 .

```
78 . diff math, t(tsport) p(time) cov(gender white black asian hispanic expect learn ///
> english timewchildren ses) ps(psm) robust report
```

DIFFERENCE-IN-DIFFERENCES WITH COVARIATES**DIFFERENCE-IN-DIFFERENCES ESTIMATION RESULTS**Number of observations in the DIFF-IN-DIFF: **24694**

	Before	After	
Control:	6152	6387	12539
Treated:	6026	6129	12155
	12178	12516	

Report - Covariates and coefficients:

Variable(s)	Coeff.	Std. Err.	t	P> t
gender	4.575	0.264	17.312	0.000
white	4.107	0.448	9.165	0.000
black	-2.851	0.621	-4.593	0.000
asian	3.507	0.752	4.660	0.000
hispanic	1.884	0.629	2.996	0.003
expect	0.222	0.025	8.828	0.000
learn	8.102	0.210	38.651	0.000
english	3.084	0.565	5.460	0.000
timewchild~n	-0.936	0.036	-25.872	0.000
ses	3.924	0.146	26.898	0.000

Outcome var.	math	S. Err.	t	P> t
Before				
Control	17.021			
Treated	17.314			
Diff (T-C)	0.293	0.207	1.42	0.156
After				
Control	66.044			
Treated	67.417			
Diff (T-C)	1.373	0.472	2.91	0.004***
Diff-in-Diff	1.079	0.511	2.11	0.035**

R-square: **0.63**

* Means and Standard Errors are estimated by linear regression

**Robust Std. Errors

Inference: * p<0.01; ** p<0.05; * p<0.1

```

79 .
80 . ///Wave5
    > //Museum//
81 . drop psm psm_block

82 . set more off

83 . qui pscore tmuseum1 gender white black asian hispanic expect learn ///
    > english timewchildren ses [pw=c245pw0], pscore(psm) blockid(psm_block) logit detail
The balancing property is not satisfied
Try a different specification of the propensity score

84 . //bysort childid (round): replace psm = psm[3]
85 . //psgraph, treated(tmuseum1) pscore(psm)
86 . //graph export "C:\Users\soyou\Documents\GitHub\EduTravel\ps_score_museum.pdf", as(pdf) replace
87 .
88 . qui psmatch2 tmuseum1, outcome(reading) pscore(psm)

89 . qui psmatch2 tmuseum1, outcome(math) pscore(psm)

90 . qui pstest gender white black asian hispanic expect learn ///
    > english timewchildren ses, treated(tmuseum1) both graph

91 . graph export "C:\Users\soyou\Documents\GitHub\EduTravel\matched_museum.pdf", as(pdf) replace
    (file C:\Users\soyou\Documents\GitHub\EduTravel\matched_museum.pdf written in PDF format)

92 .
93 . diff reading, t(tmuseum1) p(time) cov(gender white black asian hispanic expect learn ///
    > english timewchildren ses) ps(psm) robust report

```

DIFFERENCE-IN-DIFFERENCES WITH COVARIATES

DIFFERENCE-IN-DIFFERENCES ESTIMATION RESULTS

Number of observations in the DIFF-IN-DIFF: **24694**

	Before	After	
Control:	7825	8099	15924
Treated:	4353	4417	8770
	12178	12516	

Report - Covariates and coefficients:

Variable(s)	Coeff.	Std. Err.	t	P> t
gender	-0.670	0.336	-1.998	0.046
white	3.251	0.557	5.832	0.000
black	-0.769	0.788	-0.976	0.329
asian	6.141	0.893	6.876	0.000
hispanic	2.167	0.799	2.712	0.007
expect	0.276	0.032	8.658	0.000
learn	8.271	0.265	31.196	0.000
english	4.081	0.701	5.826	0.000
timewchild~n	-1.108	0.046	-24.233	0.000
ses	5.002	0.187	26.783	0.000

Outcome var.	reading	S. Err.	t	P> t
Before				
Control	30.207			
Treated	31.370			
Diff (T-C)	1.163	0.279	4.18	0.000***
After				
Control	92.686			
Treated	95.734			
Diff (T-C)	3.048	0.632	4.82	0.000***
Diff-in-Diff	1.885	0.683	2.76	0.006***

R-square: **0.63**

* Means and Standard Errors are estimated by linear regression
 **Robust Std. Errors
 Inference: * p<0.01; ** p<0.05; * p<0.1

```
94 . diff math, t(tmuseum1) p(time) cov(gender white black asian hispanic expect learn ///
> english timewchildren ses) ps(psm) robust report
```

DIFFERENCE-IN-DIFFERENCES WITH COVARIATES

DIFFERENCE-IN-DIFFERENCES ESTIMATION RESULTS

Number of observations in the DIFF-IN-DIFF: **24694**

	Before	After	
Control:	7825	8099	15924
Treated:	4353	4417	8770
	12178	12516	

Report - Covariates and coefficients:

Variable(s)	Coeff.	Std. Err.	t	P> t
gender	4.627	0.264	17.534	0.000
white	4.155	0.447	9.294	0.000
black	-2.810	0.620	-4.533	0.000
asian	3.388	0.751	4.514	0.000
hispanic	1.878	0.628	2.989	0.003
expect	0.221	0.025	8.745	0.000
learn	8.125	0.210	38.772	0.000
english	3.075	0.564	5.449	0.000
timewchild~n	-0.955	0.036	-26.171	0.000
ses	3.873	0.146	26.444	0.000

Outcome var.	math	S. Err.	t	P> t
Before				
Control	17.156			
Treated	18.033			
Diff (T-C)	0.877	0.222	3.95	0.000***
After				
Control	66.376			
Treated	68.135			
Diff (T-C)	1.759	0.495	3.56	0.000***
Diff-in-Diff	0.882	0.535	1.65	0.099*

R-square: **0.63**

* Means and Standard Errors are estimated by linear regression
 **Robust Std. Errors
 Inference: * p<0.01; ** p<0.05; * p<0.1

```
95 . drop psm psm_block
```

```
96 .
```

```
97 . //Concert//
```

```
98 . qui pscore tconcrtr gender white black asian hispanic expect learn ///
> english timewchildren ses [pw=c245pw0], pscore(psm) blockid(psm_block)
```

The balancing property is not satisfied

Try a different specification of the propensity score

```

99 . //bysort childid (round): replace psm = psm[3]
100 . //psgraph, treated(tconcr) pscore(psm)
101 . //graph export "C:\Users\soyou\Documents\GitHub\EduTravel\ps_score_concert.pdf", as(pdf) replace
102 .
103 . psmatch2 tconcr, outcome(reading) pscore(psm)

```

Variable	Sample	Treated	Controls	Difference	S.E.	T-stat
reading	Unmatched	76.4629631	74.8789351	1.584028	.546712998	2.90
	ATT	76.4629631	70.9555784	5.50738471	.935989391	5.88

Note: S.E. does not take into account that the propensity score is estimated.

psmatch2: Treatment assignment	psmatch2: Common support On suppor	Total
Untreated	14,630	14,630
Treated	10,064	10,064
Total	24,694	24,694

```

104 . psmatch2 tconcr, outcome(math) pscore(psm)

```

Variable	Sample	Treated	Controls	Difference	S.E.	T-stat
math	Unmatched	60.3855067	58.865851	1.51965577	.433202913	3.51
	ATT	60.3855067	55.3977662	4.98774051	.740327607	6.74

Note: S.E. does not take into account that the propensity score is estimated.

psmatch2: Treatment assignment	psmatch2: Common support On suppor	Total
Untreated	14,630	14,630
Treated	10,064	10,064
Total	24,694	24,694

```

105 . qui pstest gender white black asian hispanic expect learn ///
    > english timewchildren ses, treated(tconcr) both graph
106 . graph export "C:\Users\soyou\Documents\GitHub\EduTravel\matched_concert.pdf", as(pdf) replace
    (file C:\Users\soyou\Documents\GitHub\EduTravel\matched_concert.pdf written in PDF format)
107 .
108 . diff reading, t(tconcr) p(time) cov(gender white black asian hispanic expect learn ///
    > english timewchildren ses) ps(psm) robust report

```

DIFFERENCE-IN-DIFFERENCES WITH COVARIATES

DIFFERENCE-IN-DIFFERENCES ESTIMATION RESULTS

Number of observations in the DIFF-IN-DIFF: **24694**

	Before	After	
Control:	7185	7445	14630
Treated:	4993	5071	10064
	12178	12516	

Report - Covariates and coefficients:

Variable(s)	Coeff.	Std. Err.	t	P> t
gender	-0.637	0.336	-1.893	0.058
white	3.160	0.559	5.657	0.000

black	-0.887	0.789	-1.124	0.261
asian	6.083	0.894	6.803	0.000
hispanic	2.150	0.799	2.692	0.007
expect	0.277	0.032	8.681	0.000
learn	8.262	0.265	31.153	0.000
english	4.216	0.701	6.013	0.000
timewchild~n	-1.078	0.046	-23.679	0.000
ses	5.099	0.187	27.338	0.000

Outcome var.	reading	S. Err.	t	P> t
Before				
Control	29.890			
Treated	29.963			
Diff (T-C)	0.073	0.264	0.28	0.782
After				
Control	92.444			
Treated	94.069			
Diff (T-C)	1.626	0.613	2.65	0.008***
Diff-in-Diff	1.553	0.662	2.35	0.019**

R-square: **0.63**

* Means and Standard Errors are estimated by linear regression

**Robust Std. Errors

Inference: * p<0.01; ** p<0.05; * p<0.1

109 .

110 . diff math, t(tconcr) p(time) cov(gender white black asian hispanic expect learn ///

> english timewchildren ses) ps(psm) robust report

DIFFERENCE-IN-DIFFERENCES WITH COVARIATES**DIFFERENCE-IN-DIFFERENCES ESTIMATION RESULTS**Number of observations in the DIFF-IN-DIFF: **24694**

	Before	After	
Control:	7185	7445	14630
Treated:	4993	5071	10064
	12178	12516	

Report - Covariates and coefficients:

Variable(s)	Coeff.	Std. Err.	t	P> t
gender	4.687	0.265	17.706	0.000
white	4.069	0.447	9.094	0.000
black	-2.930	0.621	-4.720	0.000
asian	3.358	0.750	4.479	0.000
hispanic	1.854	0.627	2.956	0.003
expect	0.220	0.025	8.713	0.000
learn	8.109	0.210	38.687	0.000
english	3.168	0.564	5.618	0.000
timewchild~n	-0.947	0.036	-26.111	0.000
ses	3.901	0.146	26.762	0.000

Outcome var.	math	S. Err.	t	P> t
Before				
Control	17.010			
Treated	17.771			
Diff (T-C)	0.762	0.213	3.57	0.000***
After				
Control	66.175			
Treated	67.867			
Diff (T-C)	1.692	0.481	3.52	0.000***
Diff-in-Diff	0.930	0.522	1.78	0.075*

R-square: **0.63**

* Means and Standard Errors are estimated by linear regression

**Robust Std. Errors

Inference: * p<0.01; ** p<0.05; * p<0.1

```

111 . drop psm psm_block

112 .
113 . //Zoo//
114 . qui pscore tzoo gender white black asian hispanic expect learn ///
    > english timewchildren ses [pw=c245pw0], pscore(psm) blockid(psm_block) detail
The balancing property is not satisfied
Try a different specification of the propensity score

115 . //psgraph, treated(tzoo) pscore(psm)
116 . //graph export "C:\Users\soyou\Documents\GitHub\EduTravel\ps_score_zoo.pdf", as(pdf) replace
117 .
118 . psmatch2 tzoo, outcome(reading) pscore(psm)

```

Variable	Sample	Treated	Controls	Difference	S.E.	T-stat
reading	Unmatched	76.2475203	75.0622982	1.18522207	.550828851	2.15
	ATT	76.2475203	69.4448661	6.80265421	.942624983	7.22

Note: S.E. does not take into account that the propensity score is estimated.

psmatch2: Treatment assignment	psmatch2: Common support On suppor		Total
	Untreated	Treated	
	15,064	9,630	15,064
	9,630	9,630	9,630
Total	24,694	24,694	24,694

```

119 . psmatch2 tzoo, outcome(math) pscore(psm)

```

Variable	Sample	Treated	Controls	Difference	S.E.	T-stat
math	Unmatched	59.5921381	59.4168116	.175326516	.43653827	0.40
	ATT	59.5921381	54.5887248	5.00341329	.750488929	6.67

Note: S.E. does not take into account that the propensity score is estimated.

psmatch2: Treatment assignment	psmatch2: Common support On suppor		Total
	Untreated	Treated	
	15,064	9,630	15,064
	9,630	9,630	9,630
Total	24,694	24,694	24,694

```

120 . qui pstest gender white black asian hispanic expect learn ///
    > english timewchildren ses, treated(tzoo) both graph

121 . graph export "C:\Users\soyou\Documents\GitHub\EduTravel\matched_zoo.pdf", as(pdf) replace
    (file C:\Users\soyou\Documents\GitHub\EduTravel\matched_zoo.pdf written in PDF format)

122 .
123 . diff reading, t(tzoo) p(time) cov(gender white black asian hispanic expect learn ///
    > english timewchildren ses) ps(psm) robust report

```

DIFFERENCE-IN-DIFFERENCES WITH COVARIATES

DIFFERENCE-IN-DIFFERENCES ESTIMATION RESULTS

Number of observations in the DIFF-IN-DIFF: **24694**

	Before	After	
Control:	7431	7633	15064
Treated:	4747	4883	9630
	12178	12516	

Report - Covariates and coefficients:

Variable(s)	Coeff.	Std. Err.	t	P> t
gender	-0.664	0.336	-1.978	0.048
white	3.256	0.559	5.824	0.000
black	-0.817	0.789	-1.035	0.301
asian	6.057	0.895	6.770	0.000
hispanic	2.134	0.800	2.669	0.008
expect	0.275	0.032	8.614	0.000
learn	8.283	0.265	31.241	0.000
english	4.210	0.701	6.005	0.000
timewchild~n	-1.081	0.046	-23.756	0.000
ses	5.104	0.186	27.475	0.000

Outcome var.	reading	S. Err.	t	P> t
Before				
Control	29.690			
Treated	30.246			
Diff (T-C)	0.555	0.264	2.11	0.035**
After				
Control	92.474			
Treated	94.046			
Diff (T-C)	1.571	0.616	2.55	0.011**
Diff-in-Diff	1.016	0.667	1.52	0.128

R-square: **0.63**

* Means and Standard Errors are estimated by linear regression

**Robust Std. Errors

Inference: * p<0.01; ** p<0.05; * p<0.1

```

124 .
125 . diff math, t(tzoo) p(time) cov(gender white black asian hispanic expect learn ///
    > english timewchildren ses) ps(psm) robust report

```

DIFFERENCE-IN-DIFFERENCES WITH COVARIATES

DIFFERENCE-IN-DIFFERENCES ESTIMATION RESULTSNumber of observations in the DIFF-IN-DIFF: **24694**

	Before	After	
Control:	7431	7633	15064
Treated:	4747	4883	9630
	12178	12516	

Report - Covariates and coefficients:

Variable(s)	Coeff.	Std. Err.	t	P> t
gender	4.625	0.264	17.512	0.000
white	4.141	0.448	9.245	0.000
black	-2.842	0.620	-4.581	0.000
asian	3.343	0.751	4.452	0.000
hispanic	1.869	0.628	2.973	0.003
expect	0.221	0.025	8.762	0.000
learn	8.130	0.210	38.783	0.000
english	3.156	0.564	5.592	0.000
timewchild~n	-0.933	0.036	-25.712	0.000
ses	3.948	0.146	27.135	0.000

Outcome var.	math	S. Err.	t	P> t
Before				
Control	16.834			
Treated	17.039			
Diff (T-C)	0.205	0.212	0.97	0.333
After				
Control	66.293			
Treated	66.757			
Diff (T-C)	0.464	0.483	0.96	0.337
Diff-in-Diff	0.259	0.524	0.49	0.621

R-square: **0.63**

* Means and Standard Errors are estimated by linear regression

**Robust Std. Errors

Inference: * p<0.01; ** p<0.05; * p<0.1

```

126 . drop psm psm_block

127 .
128 . //Sport//
129 . qui pscore tsport gender white black asian hispanic expect learn ///
    > english timewchildren ses [pw=c245pw0], pscore(psm) blockid(psm_block) detail
The balancing property is not satisfied
Try a different specification of the propensity score

130 . //psgraph, treated(tsport) pscore(psm)
131 . //graph export "C:\Users\soyou\Documents\GitHub\EduTravel\ps_score_sport.pdf", as(pdf) replace
132 .
133 . psmatch2 tsport, outcome(reading) pscore(psm)

```

Variable	Sample	Treated	Controls	Difference	S.E.	T-stat
reading	Unmatched	75.5134398	75.5352277	-.02178797	.537442172	-0.04
	ATT	75.5134398	71.811249	3.70219079	.92877412	3.99

Note: S.E. does not take into account that the propensity score is estimated.

psmatch2: Treatment assignment	psmatch2: Common support On suppor	Total
Untreated	12,539	12,539
Treated	12,155	12,155
Total	24,694	24,694

134 . psmatch2 tsport, outcome(math) pscore(psm)

Variable	Sample	Treated	Controls	Difference	S.E.	T-stat
math	Unmatched	60.321596	58.6743871	1.64720893	.425761623	3.87
	ATT	60.321596	55.7088646	4.6127314	.739157913	6.24

Note: S.E. does not take into account that the propensity score is estimated.

psmatch2: Treatment assignment	psmatch2: Common support On suppor	Total
Untreated	12,539	12,539
Treated	12,155	12,155
Total	24,694	24,694

135 . qui pstest gender white black asian hispanic expect learn ///
> english timewchildren ses, treated(tsport) both graph

136 . graph export "C:\Users\soyou\Documents\GitHub\EduTravel\matched_sport.pdf", as(pdf) replace
(file C:\Users\soyou\Documents\GitHub\EduTravel\matched_sport.pdf written in PDF format)

137 .

138 . diff reading, t(tsport) p(time) cov(gender white black asian hispanic expect learn ///
> english timewchildren ses) ps(psm) robust report

DIFFERENCE-IN-DIFFERENCES WITH COVARIATES

DIFFERENCE-IN-DIFFERENCES ESTIMATION RESULTS

Number of observations in the DIFF-IN-DIFF: 24694

	Before	After	
Control:	6152	6387	12539
Treated:	6026	6129	12155
	12178	12516	

Report - Covariates and coefficients:

Variable(s)	Coeff.	Std. Err.	t	P> t
gender	-0.653	0.336	-1.944	0.052
white	3.210	0.559	5.746	0.000
black	-0.821	0.789	-1.041	0.298
asian	5.982	0.897	6.666	0.000
hispanic	2.163	0.799	2.706	0.007
expect	0.279	0.032	8.742	0.000
learn	8.293	0.265	31.254	0.000
english	4.255	0.702	6.065	0.000
timewchild~n	-1.059	0.045	-23.302	0.000
ses	5.163	0.187	27.680	0.000

Outcome var.	reading	S. Err.	t	P> t
Before				

Control	29.778			
Treated	28.846			
Diff (T-C)	-0.932	0.257	-3.63	0.000***
After				
Control	92.636			
Treated	92.417			
Diff (T-C)	-0.220	0.601	0.37	0.715
Diff-in-Diff	0.712	0.648	1.10	0.272

R-square: **0.63**

* Means and Standard Errors are estimated by linear regression

**Robust Std. Errors

Inference: * p<0.01; ** p<0.05; * p<0.1

139 .

```
140 . diff math, t(tsport) p(time) cov(gender white black asian hispanic expect learn ///
> english timewchildren ses) ps(psm) robust report
```

DIFFERENCE-IN-DIFFERENCES WITH COVARIATES**DIFFERENCE-IN-DIFFERENCES ESTIMATION RESULTS**Number of observations in the DIFF-IN-DIFF: **24694**

	Before	After	
Control:	6152	6387	12539
Treated:	6026	6129	12155
	12178	12516	

Report - Covariates and coefficients:

Variable(s)	Coeff.	Std. Err.	t	P> t
gender	4.575	0.264	17.312	0.000
white	4.107	0.448	9.165	0.000
black	-2.851	0.621	-4.593	0.000
asian	3.507	0.752	4.660	0.000
hispanic	1.884	0.629	2.996	0.003
expect	0.222	0.025	8.828	0.000
learn	8.102	0.210	38.651	0.000
english	3.084	0.565	5.460	0.000
timewchild~n	-0.936	0.036	-25.872	0.000
ses	3.924	0.146	26.898	0.000

Outcome var.	math	S. Err.	t	P> t
Before				
Control	17.021			
Treated	17.314			
Diff (T-C)	0.293	0.207	1.42	0.156
After				
Control	66.044			
Treated	67.417			
Diff (T-C)	1.373	0.472	2.91	0.004***
Diff-in-Diff	1.079	0.511	2.11	0.035**

R-square: **0.63**

* Means and Standard Errors are estimated by linear regression

**Robust Std. Errors

Inference: * p<0.01; ** p<0.05; * p<0.1

```

141 .
142 . ///wave 2 &5
143 . //Museum//
144 . drop psm psm_block

145 . set more off

146 . qui pscore tmuseum2 gender white black asian hispanic expect learn ///
> english timewchildren ses [pw=c245pw0], pscore(psm) blockid(psm_block) logit detail
The balancing property is not satisfied
Try a different specification of the propensity score

147 . //bysort childid (round): replace psm = psm[3]
148 . //psgraph, treated(tmuseum2) pscore(psm)
149 . //graph export "C:\Users\soyou\Documents\GitHub\EduTravel\ps_score_museum.pdf", as(pdf) replace
150 .
151 . qui psmatch2 tmuseum2, outcome(reading) pscore(psm)

152 . qui psmatch2 tmuseum2, outcome(math) pscore(psm)

153 . qui pstest gender white black asian hispanic expect learn ///
> english timewchildren ses, treated(tmuseum2) both graph

154 . graph export "C:\Users\soyou\Documents\GitHub\EduTravel\matched_museum.pdf", as(pdf) replace
(file C:\Users\soyou\Documents\GitHub\EduTravel\matched_museum.pdf written in PDF format)

155 .
156 . diff reading, t(tmuseum2) p(time) cov(gender white black asian hispanic expect learn ///
> english timewchildren ses) ps(psm) robust report

```

DIFFERENCE-IN-DIFFERENCES WITH COVARIATES

DIFFERENCE-IN-DIFFERENCES ESTIMATION RESULTS

Number of observations in the DIFF-IN-DIFF: **24694**

	Before	After	
Control:	10282	10595	20877
Treated:	1896	1921	3817
	12178	12516	

Report - Covariates and coefficients:

Variable(s)	Coeff.	Std. Err.	t	P> t
gender	-0.659	0.336	-1.963	0.050
white	3.283	0.558	5.879	0.000
black	-0.762	0.789	-0.967	0.334
asian	6.130	0.893	6.866	0.000
hispanic	2.191	0.800	2.738	0.006
expect	0.270	0.032	8.473	0.000
learn	8.292	0.265	31.279	0.000
english	4.114	0.701	5.872	0.000
timewchild~n	-1.113	0.046	-24.310	0.000
ses	4.955	0.187	26.509	0.000

Outcome var.	reading	S. Err.	t	P> t
Before				
Control	30.421			
Treated	32.200			
Diff (T-C)	1.779	0.400	4.44	0.000***
After				
Control	93.152			
Treated	97.578			
Diff (T-C)	4.426	0.849	5.22	0.000***
Diff-in-Diff	2.647	0.927	2.86	0.004***

R-square: **0.63**

* Means and Standard Errors are estimated by linear regression

**Robust Std. Errors

Inference: * p<0.01; ** p<0.05; * p<0.1

```
157 . diff math, t(tmuseum2) p(time) cov(gender white black asian hispanic expect learn ///
> english timewchildren ses) ps(psm) robust report
```

DIFFERENCE-IN-DIFFERENCES WITH COVARIATES

DIFFERENCE-IN-DIFFERENCES ESTIMATION RESULTS

Number of observations in the DIFF-IN-DIFF: **24694**

	Before	After	
Control:	10282	10595	20877
Treated:	1896	1921	3817
	12178	12516	

Report - Covariates and coefficients:

Variable(s)	Coeff.	Std. Err.	t	P> t
gender	4.635	0.264	17.562	0.000
white	4.175	0.448	9.322	0.000
black	-2.806	0.620	-4.526	0.000
asian	3.380	0.750	4.505	0.000
hispanic	1.893	0.629	3.011	0.003
expect	0.217	0.025	8.605	0.000
learn	8.138	0.210	38.833	0.000
english	3.095	0.564	5.486	0.000
timewchild~n	-0.958	0.037	-26.232	0.000
ses	3.845	0.147	26.194	0.000

Outcome var.	math	S. Err.	t	P> t
Before				
Control	17.311			
Treated	18.601			
Diff (T-C)	1.290	0.305	4.23	0.000***
After				
Control	66.646			
Treated	69.186			
Diff (T-C)	2.541	0.664	3.83	0.000***
Diff-in-Diff	1.251	0.720	1.74	0.082*

R-square: **0.63**

* Means and Standard Errors are estimated by linear regression

**Robust Std. Errors

Inference: * p<0.01; ** p<0.05; * p<0.1

```
158 . drop psm psm_block
```

```
159 .
```

```
160 . //Concert//
```

```
161 . qui pscore tconcr gender white black asian hispanic expect learn ///
> english timewchildren ses [pw=c245pw0], pscore(psm) blockid(psm_block)
```

The balancing property is not satisfied

Try a different specification of the propensity score

```

162 . //bysort childid (round): replace psm = psm[3]
163 . //psgraph, treated(tconcr) pscore(psm)
164 . //graph export "C:\Users\soyou\Documents\GitHub\EduTravel\ps_score_concert.pdf", as(pdf) replace
165 .
166 . psmatch2 tconcr, outcome(reading) pscore(psm)

```

Variable	Sample	Treated	Controls	Difference	S.E.	T-stat
reading	Unmatched	76.4629631	74.8789351	1.584028	.546712998	2.90
	ATT	76.4629631	70.9555784	5.50738471	.935989391	5.88

Note: S.E. does not take into account that the propensity score is estimated.

psmatch2: Treatment assignment	psmatch2: Common support On suppor	Total
Untreated	14,630	14,630
Treated	10,064	10,064
Total	24,694	24,694

```

167 . psmatch2 tconcr, outcome(math) pscore(psm)

```

Variable	Sample	Treated	Controls	Difference	S.E.	T-stat
math	Unmatched	60.3855067	58.865851	1.51965577	.433202913	3.51
	ATT	60.3855067	55.3977662	4.98774051	.740327607	6.74

Note: S.E. does not take into account that the propensity score is estimated.

psmatch2: Treatment assignment	psmatch2: Common support On suppor	Total
Untreated	14,630	14,630
Treated	10,064	10,064
Total	24,694	24,694

```

168 . qui pstest gender white black asian hispanic expect learn ///
    > english timewchildren ses, treated(tconcr) both graph

169 . graph export "C:\Users\soyou\Documents\GitHub\EduTravel\matched_concert.pdf", as(pdf) replace
    (file C:\Users\soyou\Documents\GitHub\EduTravel\matched_concert.pdf written in PDF format)

170 .
171 . diff reading, t(tconcr) p(time) cov(gender white black asian hispanic expect learn ///
    > english timewchildren ses) ps(psm) robust report

```

DIFFERENCE-IN-DIFFERENCES WITH COVARIATES

DIFFERENCE-IN-DIFFERENCES ESTIMATION RESULTS

Number of observations in the DIFF-IN-DIFF: **24694**

	Before	After	
Control:	7185	7445	14630
Treated:	4993	5071	10064
	12178	12516	

Report - Covariates and coefficients:

Variable(s)	Coeff.	Std. Err.	t	P> t
gender	-0.637	0.336	-1.893	0.058
white	3.160	0.559	5.657	0.000

black	-0.887	0.789	-1.124	0.261
asian	6.083	0.894	6.803	0.000
hispanic	2.150	0.799	2.692	0.007
expect	0.277	0.032	8.681	0.000
learn	8.262	0.265	31.153	0.000
english	4.216	0.701	6.013	0.000
timewchild~n	-1.078	0.046	-23.679	0.000
ses	5.099	0.187	27.338	0.000

Outcome var.	reading	S. Err.	t	P> t
Before				
Control	29.890			
Treated	29.963			
Diff (T-C)	0.073	0.264	0.28	0.782
After				
Control	92.444			
Treated	94.069			
Diff (T-C)	1.626	0.613	2.65	0.008***
Diff-in-Diff	1.553	0.662	2.35	0.019**

R-square: **0.63**

* Means and Standard Errors are estimated by linear regression

**Robust Std. Errors

Inference: * p<0.01; ** p<0.05; * p<0.1

172 .

173 . diff math, t(tconcr) p(time) cov(gender white black asian hispanic expect learn ///

> english timewchildren ses) ps(psm) robust report

DIFFERENCE-IN-DIFFERENCES WITH COVARIATES**DIFFERENCE-IN-DIFFERENCES ESTIMATION RESULTS**Number of observations in the DIFF-IN-DIFF: **24694**

	Before	After	
Control:	7185	7445	14630
Treated:	4993	5071	10064
	12178	12516	

Report - Covariates and coefficients:

Variable(s)	Coeff.	Std. Err.	t	P> t
gender	4.687	0.265	17.706	0.000
white	4.069	0.447	9.094	0.000
black	-2.930	0.621	-4.720	0.000
asian	3.358	0.750	4.479	0.000
hispanic	1.854	0.627	2.956	0.003
expect	0.220	0.025	8.713	0.000
learn	8.109	0.210	38.687	0.000
english	3.168	0.564	5.618	0.000
timewchild~n	-0.947	0.036	-26.111	0.000
ses	3.901	0.146	26.762	0.000

Outcome var.	math	S. Err.	t	P> t
Before				
Control	17.010			
Treated	17.771			
Diff (T-C)	0.762	0.213	3.57	0.000***
After				
Control	66.175			
Treated	67.867			
Diff (T-C)	1.692	0.481	3.52	0.000***
Diff-in-Diff	0.930	0.522	1.78	0.075*

R-square: **0.63**

* Means and Standard Errors are estimated by linear regression

**Robust Std. Errors

Inference: * p<0.01; ** p<0.05; * p<0.1

174 . drop psm psm_block

175 .

176 . //Zoo//

177 . qui pscore tzoo gender white black asian hispanic expect learn ///

> english timewchildren ses [pw=c245pw0], pscore(psm) blockid(psm_block) detail

The balancing property is not satisfied

Try a different specification of the propensity score

178 . //psgraph, treated(tzoo) pscore(psm)

179 . //graph export "C:\Users\soyou\Documents\GitHub\EduTravel\ps_score_zoo.pdf", as(pdf) replace

180 .

181 . psmatch2 tzoo, outcome(reading) pscore(psm)

Variable	Sample	Treated	Controls	Difference	S.E.	T-stat
reading	Unmatched	76.2475203	75.0622982	1.18522207	.550828851	2.15
	ATT	76.2475203	69.4448661	6.80265421	.942624983	7.22

Note: S.E. does not take into account that the propensity score is estimated.

psmatch2: Treatment assignment	psmatch2: Common support On suppor		Total
Untreated	15,064		15,064
Treated	9,630		9,630
Total	24,694		24,694

182 . psmatch2 tzoo, outcome(math) pscore(psm)

Variable	Sample	Treated	Controls	Difference	S.E.	T-stat
math	Unmatched	59.5921381	59.4168116	.175326516	.43653827	0.40
	ATT	59.5921381	54.5887248	5.00341329	.750488929	6.67

Note: S.E. does not take into account that the propensity score is estimated.

psmatch2: Treatment assignment	psmatch2: Common support On suppor		Total
Untreated	15,064		15,064
Treated	9,630		9,630
Total	24,694		24,694

```

183 . qui pstest gender white black asian hispanic expect learn ///
    > english timewchildren ses, treated(tzoo) both graph

184 . graph export "C:\Users\soyou\Documents\GitHub\EduTravel\matched_zoo.pdf", as(pdf) replace
    (file C:\Users\soyou\Documents\GitHub\EduTravel\matched_zoo.pdf written in PDF format)

185 .
186 . diff reading, t(tzoo) p(time) cov(gender white black asian hispanic expect learn ///
    > english timewchildren ses) ps(psm) robust report

```

DIFFERENCE-IN-DIFFERENCES WITH COVARIATES

DIFFERENCE-IN-DIFFERENCES ESTIMATION RESULTS

Number of observations in the DIFF-IN-DIFF: **24694**

	Before	After	
Control:	7431	7633	15064
Treated:	4747	4883	9630
	12178	12516	

Report - Covariates and coefficients:

Variable(s)	Coeff.	Std. Err.	t	P> t
gender	-0.664	0.336	-1.978	0.048
white	3.256	0.559	5.824	0.000
black	-0.817	0.789	-1.035	0.301
asian	6.057	0.895	6.770	0.000
hispanic	2.134	0.800	2.669	0.008
expect	0.275	0.032	8.614	0.000
learn	8.283	0.265	31.241	0.000
english	4.210	0.701	6.005	0.000
timewchild~n	-1.081	0.046	-23.756	0.000
ses	5.104	0.186	27.475	0.000

Outcome var.	reading	S. Err.	t	P> t
Before				
Control	29.690			
Treated	30.246			
Diff (T-C)	0.555	0.264	2.11	0.035**
After				
Control	92.474			
Treated	94.046			
Diff (T-C)	1.571	0.616	2.55	0.011**
Diff-in-Diff	1.016	0.667	1.52	0.128

R-square: **0.63**

* Means and Standard Errors are estimated by linear regression

**Robust Std. Errors

Inference: * p<0.01; ** p<0.05; * p<0.1

```

187 .
188 . diff math, t(tzoo) p(time) cov(gender white black asian hispanic expect learn ///
    > english timewchildren ses) ps(psm) robust report

```

DIFFERENCE-IN-DIFFERENCES WITH COVARIATES

DIFFERENCE-IN-DIFFERENCES ESTIMATION RESULTSNumber of observations in the DIFF-IN-DIFF: **24694**

	Before	After	
Control:	7431	7633	15064
Treated:	4747	4883	9630
	12178	12516	

Report - Covariates and coefficients:

Variable(s)	Coeff.	Std. Err.	t	P> t
gender	4.625	0.264	17.512	0.000
white	4.141	0.448	9.245	0.000
black	-2.842	0.620	-4.581	0.000
asian	3.343	0.751	4.452	0.000
hispanic	1.869	0.628	2.973	0.003
expect	0.221	0.025	8.762	0.000
learn	8.130	0.210	38.783	0.000
english	3.156	0.564	5.592	0.000
timewchild~n	-0.933	0.036	-25.712	0.000
ses	3.948	0.146	27.135	0.000

Outcome var.	math	S. Err.	t	P> t
Before				
Control	16.834			
Treated	17.039			
Diff (T-C)	0.205	0.212	0.97	0.333
After				
Control	66.293			
Treated	66.757			
Diff (T-C)	0.464	0.483	0.96	0.337
Diff-in-Diff	0.259	0.524	0.49	0.621

R-square: **0.63**

* Means and Standard Errors are estimated by linear regression

**Robust Std. Errors

Inference: * p<0.01; ** p<0.05; * p<0.1

```

189 . drop psm psm_block
190 .
191 . //Sport//
192 . qui pscore tsport gender white black asian hispanic expect learn ///
    > english timewchildren ses [pw=c245pw0], pscore(psm) blockid(psm_block) detail
The balancing property is not satisfied
Try a different specification of the propensity score
193 . //psgraph, treated(tsport) pscore(psm)
194 . //graph export "C:\Users\soyou\Documents\GitHub\EduTravel\ps_score_sport.pdf", as(pdf) replace
195 .
196 . psmatch2 tsport, outcome(reading) pscore(psm)

```

Variable	Sample	Treated	Controls	Difference	S.E.	T-stat
reading	Unmatched	75.5134398	75.5352277	-.02178797	.537442172	-0.04
	ATT	75.5134398	71.811249	3.70219079	.92877412	3.99

Note: S.E. does not take into account that the propensity score is estimated.

psmatch2: Treatment assignment	psmatch2: Common support On suppor	Total
Untreated	12,539	12,539
Treated	12,155	12,155
Total	24,694	24,694

```
197 . psmatch2 tsport, outcome(math) pscore(psm)
```

Variable	Sample	Treated	Controls	Difference	S.E.	T-stat
math	Unmatched	60.321596	58.6743871	1.64720893	.425761623	3.87
	ATT	60.321596	55.7088646	4.6127314	.739157913	6.24

Note: S.E. does not take into account that the propensity score is estimated.

psmatch2: Treatment assignment	psmatch2: Common support On suppor	Total
Untreated	12,539	12,539
Treated	12,155	12,155
Total	24,694	24,694

```
198 . qui pstest gender white black asian hispanic expect learn ///
> english timewchildren ses, treated(tsport) both graph
```

```
199 . graph export "C:\Users\soyou\Documents\GitHub\EduTravel\matched_sport.pdf", as(pdf) replace
(file C:\Users\soyou\Documents\GitHub\EduTravel\matched_sport.pdf written in PDF format)
```

```
200 .
```

```
201 . diff reading, t(tsport) p(time) cov(gender white black asian hispanic expect learn ///
> english timewchildren ses) ps(psm) robust report
```

DIFFERENCE-IN-DIFFERENCES WITH COVARIATES

DIFFERENCE-IN-DIFFERENCES ESTIMATION RESULTS

Number of observations in the DIFF-IN-DIFF: **24694**

	Before	After	
Control:	6152	6387	12539
Treated:	6026	6129	12155
	12178	12516	

Report - Covariates and coefficients:

Variable(s)	Coeff.	Std. Err.	t	P> t
gender	-0.653	0.336	-1.944	0.052
white	3.210	0.559	5.746	0.000
black	-0.821	0.789	-1.041	0.298
asian	5.982	0.897	6.666	0.000
hispanic	2.163	0.799	2.706	0.007
expect	0.279	0.032	8.742	0.000
learn	8.293	0.265	31.254	0.000
english	4.255	0.702	6.065	0.000
timewchild~n	-1.059	0.045	-23.302	0.000
ses	5.163	0.187	27.680	0.000

Outcome var.	reading	S. Err.	t	P> t
Before				

Control	29.778			
Treated	28.846			
Diff (T-C)	-0.932	0.257	-3.63	0.000***
After				
Control	92.636			
Treated	92.417			
Diff (T-C)	-0.220	0.601	0.37	0.715
Diff-in-Diff	0.712	0.648	1.10	0.272

R-square: **0.63**

* Means and Standard Errors are estimated by linear regression

**Robust Std. Errors

Inference: * p<0.01; ** p<0.05; * p<0.1

202 .

```
203 . diff math, t(tsport) p(time) cov(gender white black asian hispanic expect learn ///
> english timewchildren ses) ps(psm) robust report
```

DIFFERENCE-IN-DIFFERENCES WITH COVARIATES**DIFFERENCE-IN-DIFFERENCES ESTIMATION RESULTS**Number of observations in the DIFF-IN-DIFF: **24694**

	Before	After	
Control:	6152	6387	12539
Treated:	6026	6129	12155
	12178	12516	

Report - Covariates and coefficients:

Variable(s)	Coeff.	Std. Err.	t	P> t
gender	4.575	0.264	17.312	0.000
white	4.107	0.448	9.165	0.000
black	-2.851	0.621	-4.593	0.000
asian	3.507	0.752	4.660	0.000
hispanic	1.884	0.629	2.996	0.003
expect	0.222	0.025	8.828	0.000
learn	8.102	0.210	38.651	0.000
english	3.084	0.565	5.460	0.000
timewchild~n	-0.936	0.036	-25.872	0.000
ses	3.924	0.146	26.898	0.000

Outcome var.	math	S. Err.	t	P> t
Before				
Control	17.021			
Treated	17.314			
Diff (T-C)	0.293	0.207	1.42	0.156
After				
Control	66.044			
Treated	67.417			
Diff (T-C)	1.373	0.472	2.91	0.004***
Diff-in-Diff	1.079	0.511	2.11	0.035**

R-square: **0.63**

* Means and Standard Errors are estimated by linear regression

**Robust Std. Errors

Inference: * p<0.01; ** p<0.05; * p<0.1

204 .

end of do-file

205 .