

Prestige Matters: Wage Premium and Value Addition in Elite Colleges

By SHEETAL SEKHRI*

Online Appendix : Not for Publication

I. Data Appendix

Admission data linked to university wide college exit test scores was available for 5 cohorts. The original addresses for students from their application forms along with a phone number were obtained from the colleges. However, the addresses for the oldest cohort were not available so I did not survey this cohort. The sample frame for the survey included graduates for whom I also had exit tests final scores in the university exam. Because of cost of survey and tracking revisits, the frame was restricted to urban areas only. Rural students were not interviewed. This survey was also not administered to anyone who was admitted to the colleges on a reserved seat.¹ Target list was everyone for whom we had an address and or a phone number.

The tracking system was quite onerous and expensive. We made contact over the phone to ascertain if the resident knew the respondent. But a lot of phone numbers had changed. So we made a first visit to the household to verify the addresses. In majority of cases, we were able to verify the residents either lived at the address or a family member/ neighbor was able to provide a contact address. Subsequently, we visited the households and tried to conduct the survey. The revisit rate was high as this population is employed and was not readily available for interviews. We set a maximum of 3 visits to conclude the surveys. If we did not get a response by the third visit, we did not revisit the respondent. Median cases were visited twice.

On comparing the admission characteristics of the individuals successfully surveyed (matched) versus those who were not (unmatched), I observe several differences in the full sample. However, these samples are comparable in a narrow interval of -5 to +5 points around the threshold. Individuals whose father's were employed in service in formal sector were marginally less successfully surveyed. This may be because of transferable nature of the jobs. The difference is small. Science graduates were less successfully

* Sekhri: University of Virginia, PO Box 400182, Department of Economics, Monroe Hall, Charlottesville, VA 22904-4182, USA, Email: SSekhri@virginia.edu, Phone:434-982-4286,Fax:434-982-2904. Funding from International Growth Centre, India Country Team (CPP-IND-CEN-2010-008) is greatly acknowledged. Zhou Zhang and Sisir Debnath provided excellent research assistance. This paper has benefitted from discussions with Ken Chay, Andrew Foster, Leora Friedberg, Claudia Goldin, Kevin Lang, John Pepper, Sarah Turner, Miguel Urquiola, Eric Chyn, Amalia Miller, John Pepper, Harald Tauchmann and from suggestions of seminar participants at Boston University and IGC Growth Week.

¹There is reservation for lower caste students, victims of riots, children or grand children of freedom fighters, and non reserved candidates.

surveyed albeit the difference is again small. Any bias can only result if these characteristics are different by colleges types in a narrow margin around the cutoff. This is addressed in the manuscript in subsection 6.1.

II. Procedure Details for the Lee Bounds

I compute a trimmed mean for the private colleges trimming the distribution in the right and the left tails by an amount equal to the difference in these shares. Evaluating the difference of the mean of the public colleges and these trimmed means gives us the lower and upper bounds respectively. The bounds for the 5 point interval are calculated analogously and reported in column (ii) of Appendix Table 9.

In the full sample, the fraction with missing value are 0.329 and 0.454 in private and public colleges respectively. The difference in shares is 0.1865. This implies that the private college mean will be trimmed by the trimming share equal to 0.1865. Hence, 49.806 highest and lowest observations from the private college distribution have to be excluded to calculate the trimmed mean. The trimmed average of salary for the private colleges with lowest values excluded is 19205.4 and the highest value excluded is 13099.08. Now taking the difference of the mean of the public colleges and these trimmed means gives us the lower and the upper bounds of 6147.7 and 12254.3 respectively. These trimmed means use 49 highest and lowest values. If we use 49 lowest and highest values with a weight of 1 and the 50th value with a weight of 0.194 (that is, the difference between 50 and 49.806) for the calculation of the trimmed means, we get the lower bound of 6,158.8 and an upper bound of 12,243.6 rupees both significant at the 1 percent significance level. The bounds for the 5 point interval are calculated analogously and reported in column (ii).²

REFERENCES

- Lee, David S.** 2009. "Training, wages, and sample selection: Estimating sharp bounds on treatment effects." *The Review of Economic Studies*, 76(3): 1071–1102.
- Tauchmann, Harald.** 2014. "Lee (2009) treatment-effect bounds for nonrandom sample selection." *The Stata Journal*, 14(4): 884–894.

²This exercise has been done using Lee's bound STATA module (Lee 2009). I thank Harald Tauchman (Tauchmann 2014) for extensive discussion about this module.

APPENDIX FIGURES & TABLES

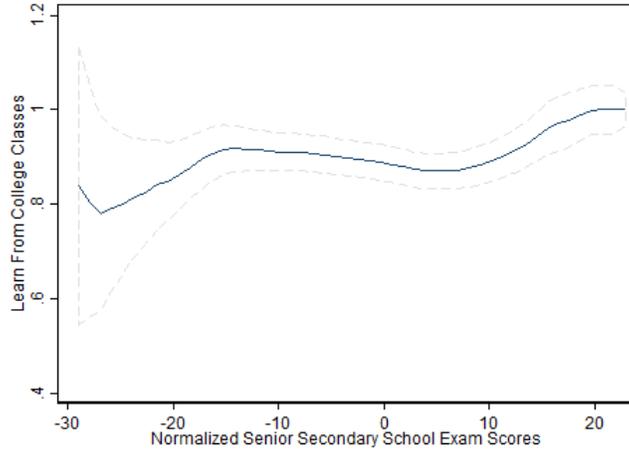


FIGURE A1. SELF-REPORTED ASSESSMENT OF LEARNING FROM COLLEGE CLASSES

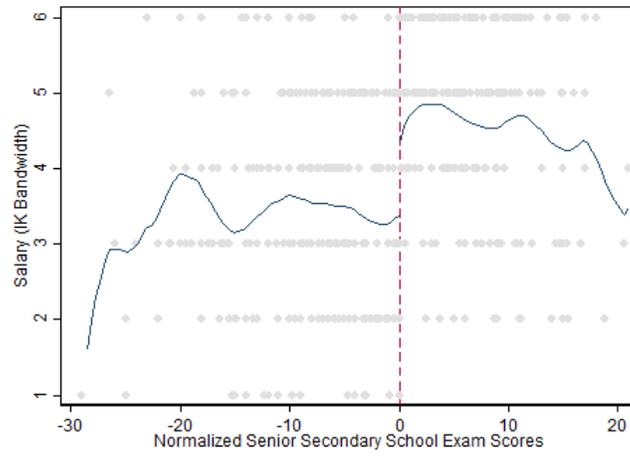


FIGURE A2. DISCONTINUITY IN SALARY AT THE PUBLIC COLLEGE ADMISSION CUTOFF (IK BANDWIDTH)

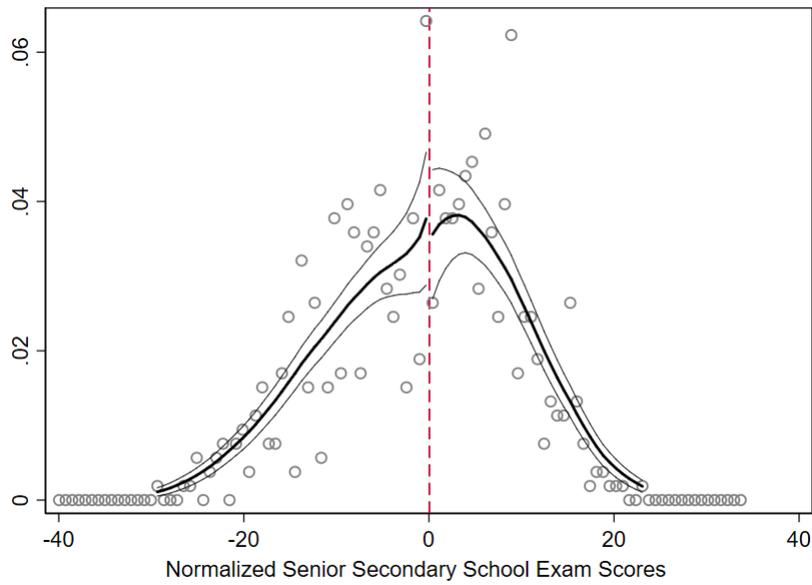


FIGURE A3. SMOOTH DENSITY OF FORCING VARIABLE

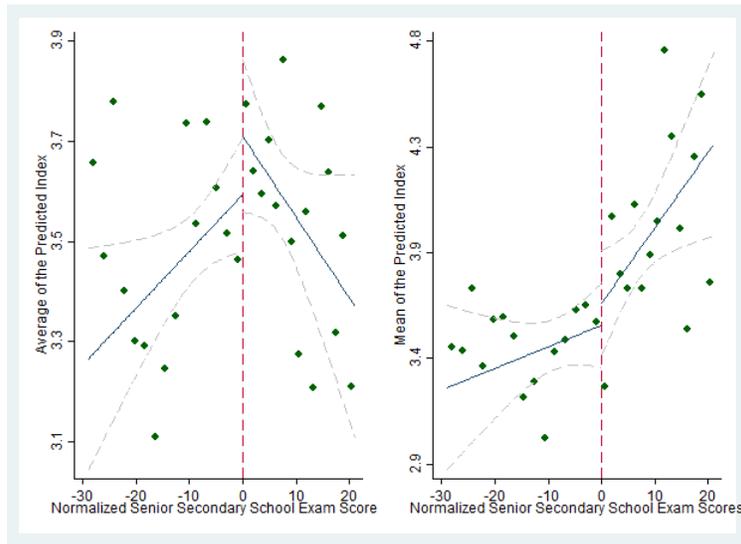


FIGURE A4. CONTINUITY IN BACKGROUND CHARACTERISTICS

Note: Index is predicted salary based on a regression of salary on background covariates in a sample restricted to private colleges in Panel A and in a sample outside the -15 to +15 points intervals of the Normalized Senior Secondary Exam scores in Panel B. The figures plot the average value of the index by bins of normalized Senior Secondary School Exam Scores along with the line of best fit and confidence intervals.

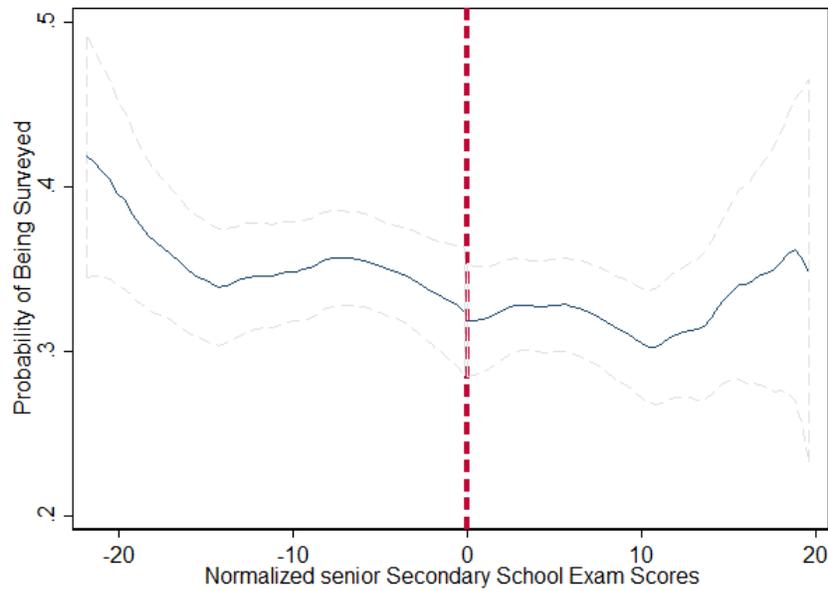


FIGURE A5. PROBABILITY OF SURVEY SUCCESS

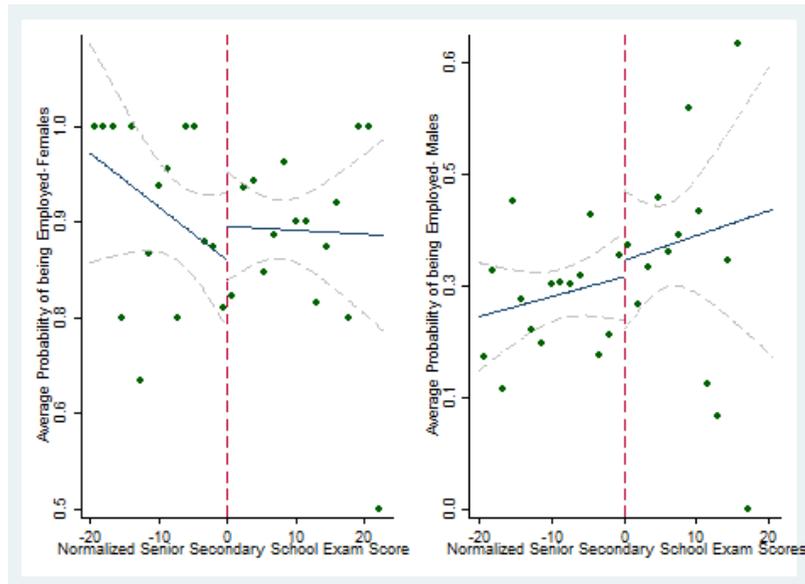


FIGURE A6. PROBABILITY OF BEING EMPLOYED

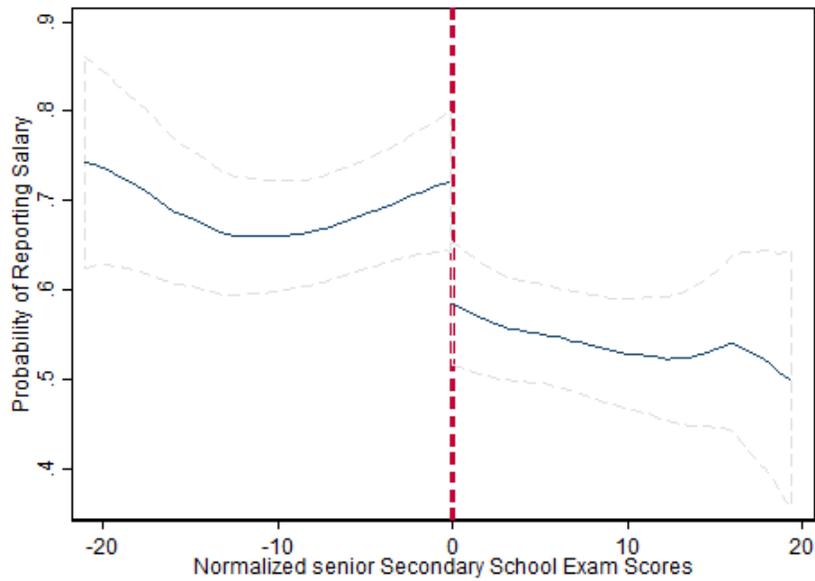


FIGURE A7. DISCONTINUITY IN PROBABILITY OF REPORTING SALARY (IK BANDWIDTH)

TABLE A1—SUMMARY STATISTICS BY COLLEGE TYPE IN -5 TO 5 INTERVAL OF SENIOR SECONDARY SCHOOL NORMALIZED SCORES

	Public		Private		Difference
	mean	std dev	mean	std dev	
Salary	5.00	1.00	3.55	1.44	1.36
Senior Secondary School Exam Scores	70.40	8.00	67.26	7.40	3.20
Central Board of Secondary Education	0.22	0.42	0.21	0.41	0.01
Age at Starting College	18.00	0.91	18.00	0.90	0.08
Father's Occupation					
Government Service	0.10	0.30	0.09	0.28	0.01
Labor in Unorganized Sector	0.03	0.02	0.06	0.02	0.03
Professional	0.06	0.24	0.05	0.23	0.01
Service in Formal Sector	0.35	0.48	0.23	0.42	0.11
Agriculture	0.08	0.27	0.09	0.29	0.01
Business	0.25	0.43	0.32	0.47	0.07
Admission Year					
1999	0.20	0.40	0.26	0.44	0.05
2000	0.37	0.48	0.19	0.40	0.18
2001	0.30	0.45	0.26	0.44	0.03
2002	0.12	0.33	0.28	0.45	0.15
Male	0.46	0.50	0.35	0.05	0.11
Stream					
Commerce	0.27	0.45	0.30	0.45	0.016
Liberal Arts	0.51	0.50	0.45	0.5	0.06
Science	0.20	0.40	0.25	0.43	0.047
College Exit Test Scores	1272.35	276.00	1247.00	271.20	25.27
Observations	79		88		

TABLE A2—NON-PARAMETRIC RDD ESTIMATES OF THE EFFECT OF PUBLIC COLLEGES ON SALARY

Dependent Variable: Reported Salary (Midpoint of the Bins for the Categorical Variable)				
Panel B: Non-Parametric Estimates	Bandwidth 10 (i)	Bandwidth 7.5 (ii)	Bandwidth 5 (iii)	Bandwidth IK (iv)
Kernel Triangle	10727.4 (2299.1)	17476.44 (4310.5)	17753.8 (5855.8)	15340.3 (2756.8)
Kernel Rectangular	16668.4 (3015.8)	16336.0 (3575.5)	18946.3 (4789.6)	11035.62 (2027.5)

Notes: Demographic controls included are gender, year of admission in college, age at entering college, stream of study, board of education for Senior Secondary school, and father's occupation. Robust standard errors are reported in parenthesis. Public College is an indicator equal to 1 if the individual attended public college and 0 if the individual graduated from a private college.

TABLE A3—SURVEY SUCCESS BY COLLEGE TYPE IN 5 POINT INTERVAL

Variable	Public		Private		Equivalence Test
	Coefficient	Standard Error	Coefficient	Standard Error	p-value
Commerce	0.08	1.50	0.06	0.91	0.51
Science	-0.03	0.07	0.01	0.06	0.66
Age at Entering College	-0.02	0.03	0.02	0.03	0.33
Father Skilled Profession	0.08	0.10	-0.04	0.09	0.35
Father in Agriculture	0.18	0.10	-0.05	0.09	0.09
Father in Business	0.18	0.05	0.03	0.04	0.02
Admission Year 1999	0.09	0.06	0.00	0.05	0.27
Admission Year 2000	0.11	0.05	0.11	0.06	0.96

Notes: Dependent variable 'survey success' takes value 1 if individual was successfully surveyed and 0 otherwise. Columns (i) and (iii) report the coefficients from the regression of 'survey success' on background characteristics for public and private colleges respectively. Columns (ii) and (iv) report the standard errors from these regressions. Column (v) reports the p-value from the test of equivalence of the regressors. Public College is an indicator equal to 1 if the individual attended public college and 0 if the individual graduated from a private college.

TABLE A4—PARAMETRIC RD ESTIMATES OF THE EFFECT OF PUBLIC COLLEGES ON BEING EMPLOYED

Dependent Variable: Self Employed or Working for Salary				
	Full sample	15 Point Interval	10 Point Interval	5 Point Interval
Senior Secondary School Exam Scores	(i)	(ii)	(iii)	(iv)
Linear	0.05 (0.03)	0.06 (0.04)	0.03 (0.04)	0.06 (0.05)
Quadratic	0.05 (0.03)	0.06 (0.04)	0.04 (0.04)	0.067 (0.053)
Cubic	0.04 (0.036)	0.06 (0.04)	0.03 (0.04)	0.05 (0.05)
Observations	1505	1285	1017	549

Notes: Demographic controls include gender, year of admission in college, age at entering college, stream of study, board of education for Senior Secondary school, and father's occupation. Robust standard errors are reported in parenthesis. Public College is an indicator equal to 1 if the individual attended public college and 0 if the individual graduated from a private college.

TABLE A5—PARAMETRIC RD ESTIMATES OF THE EFFECT OF PUBLIC COLLEGES ON PROBABILITY OF EMPLOYMENT BY GENDER

Dependent Variable: Self Employed or Working for Salary			
	15 Point Interval	10 Point Interval	5 point Interval
	(i)	(ii)	(iii)
Males	0.035 (0.051)	-0.0004 (0.06)	-0.014 (0.07)
Females	0.05 (0.057)	0.03 (0.063)	0.09 (0.091)

Notes: Demographic controls include year of admission in college, age at entering college, stream of study, board of education for Senior Secondary school, and father's occupation. Robust standard errors are reported in parenthesis. Public College is an indicator equal to 1 if the individual attended public college and 0 if the individual graduated from a private college. Linear control function specification is used.

TABLE A6—RD ESTIMATES OF THE EFFECT OF PUBLIC COLLEGES ON SALARY BY GENDER

Dependent Variable: Reported Salary (Midpoint of the Bins for the Categorical Variable)			
	15 Point Interval	10 Point Interval	5 point Interval
	(i)	(ii)	(iii)
Males	8229.19 (2850.5)	8457.01 (3577.1)	10660.85 (4376.2)
Females	7339.2 (2179.7)	6485.7 (2347.8)	6670.4 (2956.6)

Notes: Each column reports the coefficient from a different regression controlling for year of admission in college, age at entering college, stream of study, board of education for Senior Secondary school, and father's occupation. Robust standard errors are reported in parenthesis. Public College is an indicator equal to 1 if the individual attended public college and 0 if the individual graduated from a private college. Linear control function specification is used.

TABLE A7—CHARACTERISTICS OF INDIVIDUALS REPORTING SALARY VERSUS NOT

	Salary Reported	Salary not Reported	Difference
Senior Secondary School Exam Scores	66.57 (0.48)	66.35 (0.63)	-0.21
Age at Entering Colleges	18.03 (0.046)	18.15 (0.04)	0.12
Admission Year 1999	0.21 (0.02)	0.26 (0.02)	0.04
Admission Year 2000	0.29 (0.02)	0.30 (0.02)	0.01
Admission year 2001	0.24 (0.02)	0.02 (0.02)	-0.03
Admission year 2002	0.24 (0.02)	0.23 (0.02)	-0.017
Central Board of Secondary Education	0.31 (0.02)	0.25 (0.02)	0.06
Male	0.40 (0.023)	0.78 (0.02)	0.38
Father's occupation			
Government Service	0.08 (0.01)	0.04 (0.01)	-0.04
Labor in Unorganized Sector	0.07 (0.01)	0.05 (0.01)	-0.02
Professional	0.05 (0.01)	0.02 (0.008)	-0.03
Service in Formal sector	0.30 (0.02)	0.25 (0.02)	-0.067
Agriculture	0.07 (0.01)	0.06 (0.01)	-0.007
Business	0.30 (0.02)	0.36 (0.03)	0.07
Streams			
Commerce	0.24 (0.02)	0.35 (0.03)	0.1
Liberal Arts	0.51 (0.02)	0.57 (0.03)	0.06
Science	0.24 (0.02)	0.06 (0.01)	-0.17

TABLE A8—PARAMETRIC RDD ESTIMATES EFFECT OF PUBLIC COLLEGES ON SALARY (IMPUTED)

Dependent Variable: Imputed Salary Conditional on employment			
	(Midpoint of the Bins for the Categorical Variable)		
	15 Point Interval	10 Point Interval	5 Point Interval
	(i)	(ii)	(iii)
Linear Control Function	7590.16 (1555.483)	7194.5 (1831.61)	7612.304 (2069.9)
Quadratic Control Function	7726.9 (1621.8)	7204.9 (1823.6)	7321.8 (2067.2)
Cubic Control Function	7826.2 1618.05	7200.7 (1759.1)	7346.2 (2216.2)
Observations	629	510	261

Notes: Demographic controls include gender, year of admission in college, age at entering college, stream of study, board of education for Senior Secondary school, and father's occupation. Robust standard errors are reported in parenthesis. Public College is an indicator equal to 1 if the individual attended public college and 0 if the individual graduated from a private college.

TABLE A9—BOUNDED EFFECT OF PUBLIC COLLEGES ON SALARY BASED ON LEE'S BOUNDS

Dependent Variable: Reported Salary in 6 Categorical Brackets		
	Full sample	-5 to +5 Interval around cutoff
	(i)	(ii)
Number of Observations	748	274
Number of Observations with Non Missing Salary	458	171
Trimming Proportion	0.1865	0.1947
Confidence Interval for the Treatment Effect [95 percent]	[0.443 1.90]	[0.503 2.3]
Lower Bound		
Coefficient	6158.804	7705.6
Standard Error	1264.5	(1973.3)
Upper Bound		
Coefficient	12243.6	13777.4
Standard Error	(1187.0)	(1848.4)

Notes: Both specifications control for year of admission in college, age at entering college, stream of study, board of education for Senior Secondary school, and father's occupation. Robust standard errors are reported in parenthesis. Public College is an indicator equal to 1 if the individual attended public college and 0 if the individual graduated from a private college. Linear control function specification is used.