

Choice and Expenditure: A Double Hurdle Model of Private Tutoring in Qatar

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I. Introduction

- This paper examines the effect of social and economic factors on choice and expenditure associated with using private tutoring (shadow education) in the State of Qatar.
- The results of this study are meant to contribute to the literature on shadow education, and to inform education policy.

II. Research Objective

- To establish the demand for private tutoring in the State of Qatar.

III Methodology

- Data for the present study come from the 2012 Qatar Education Study (QES), a cross-sectional and nationally representative survey.
- The Cragg (1971) double hurdle model was used to evaluate choice and expenditure decisions associated with private tutoring.
- Figure 2, illustrates that households spend zero or a positive amount on private tutoring.

Bootstrap replications (100)

Number of obs = 1,226
 Replications = 100

command: APEbootbi
 ape_gradecat4: r(ape_gradecat4)

	Observed Coef.	Bootstrap Std. Err.	z	P> z	Normal-based [95% Conf. Interval]
ape_gradecat4	.8599415	.3135486	2.74	0.006	.2453976 1.474485

Figure 1: 12th Grade Bootstrap Standard Errors Estimation

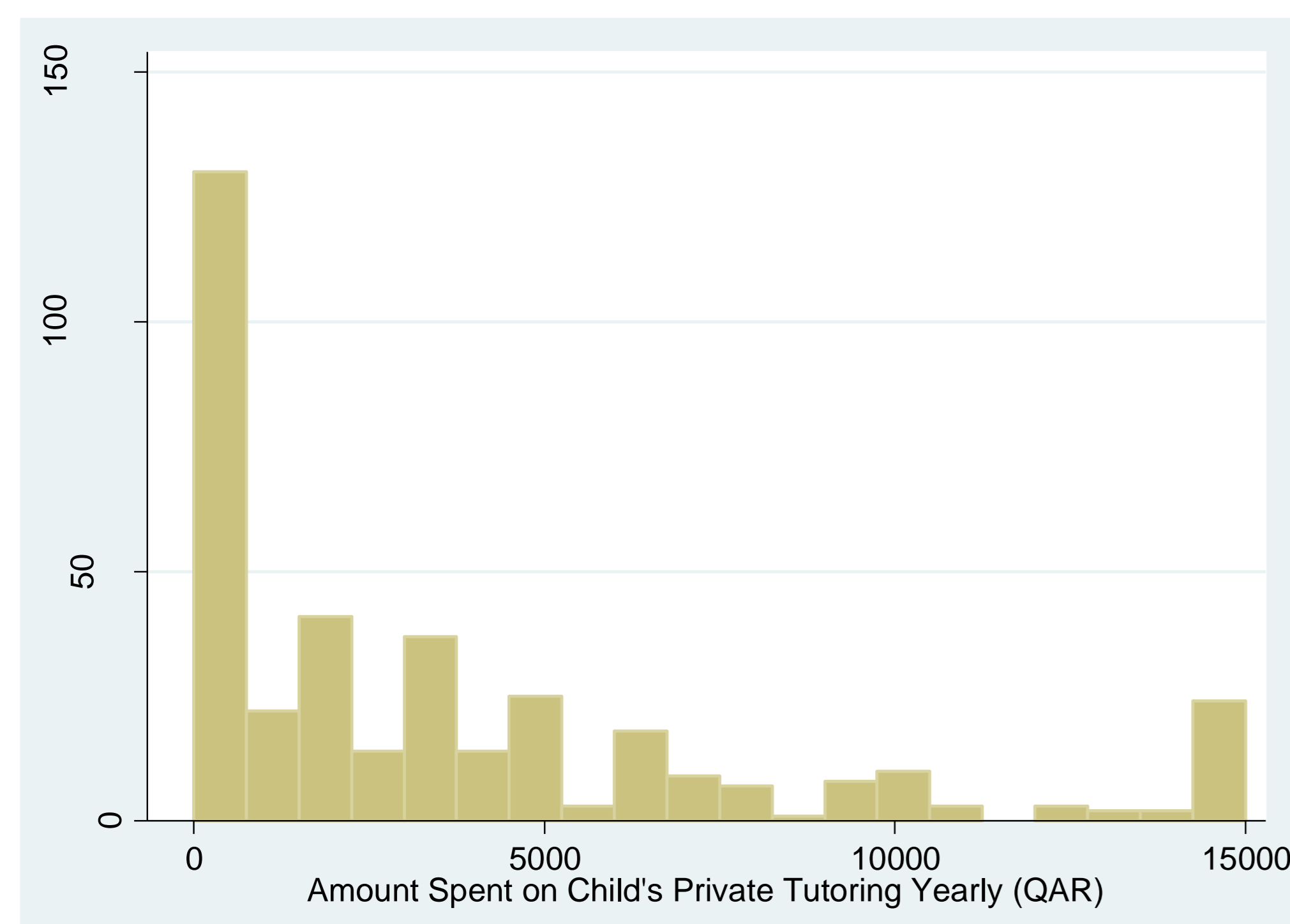


Figure 2: 12th Grade Bootstrap Standard Errors Estimation

IV. Results

- Qataris are 23% more likely to use private tutoring. Additionally, Qataris spend 1.92 times more than non-Qataris.
- Student grade influences use and cost of private tutoring.
- Attending an international private school is associated use and private tutoring expenditure.
- Mother's education is associated with private tutoring expenditure.

Table 1: Marginal Effects and Average Partial Effects

	pvttut	Incostpvttut
nationality	0.227*** (0.03)	1.920*** (0.26)
gender	0.045* (0.03)	0.435** (0.19)
age	0.0159 (0.01)	0.120 (-0.96)
age_squared	-0.0179 (0.01)	-0.134 (0.10)
8 th grade	-0.0204 (0.03)	-0.042 (0.24)
11 th grade	0.0015 (0.03)	0.004 (0.25)
12 th grade	0.0781** (0.03)	0.860*** (0.31)
maleeducat1	-0.0020 (-0.05)	-0.013 (0.43)
maleeducat2	0.0271 (0.04)	0.147 (0.29)
maleeducat3	0.0082 (0.04)	0.013 (0.31)
maleeducat5	0.0169 (0.05)	0.169 (0.45)
femaleeducat2	0.0358 (0.04)	0.340 (0.36)
femaleeducat3	0.0378 (0.05)	0.322 (0.49)
femaleeducat4	0.0708 (0.05)	0.709* (0.42)
femaleeducat5	-0.0662 (0.08)	-0.460 (0.59)
regrade	0.0336 (0.04)	0.182 (0.35)
absenteeism	-0.0307 (0.03)	-0.320 (0.21)
intschool	0.2392*** (0.03)	2.047*** (0.29)

V. Discussion

- In Qatar, despite its ban, private tutoring remains a feature of the education system.
- Findings suggest that the use and spending of private tutoring is more pronounced in the final year (grade 12).
- Similar to related studies most factors influencing the use of private tutoring also influence expenditure or allocation.



Figure 3: Computer Assisted Learning



Figure 4: Equal Access to Quality Education

VII. Conclusion

- From a policy point of view, establishing the determinants of choice and expenditure associated with private tutoring can support the implementation of education programs that champion equal access to quality education.

VIII. Acknowledgements

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IX. References

Cragg, J. G. (1971). Some statistical models for limited dependent variables with application to the demand for durable goods. *Econometrica: Journal of the Econometric Society*, 1, 829–844.