Economics 312
Daily Problem #38

Spring 2014
April 18

This table is from a recently published paper on the effects of "dorm-mates" on success in Econ 201:

TABLE 4
Economics 201 Ordered-Probit Regression Results

Kind	Variable	(1)	(2)	(3)	(4)	(5)
Own control variables	Reader rating	0.597***	0.591***	0.584***	0.573***	0.584***
	(1–5 scale)	(0.112)	(0.112)	(0.111)	(0.111)	(0.111)
	Verbal SAT	0.0823	0.0885	0.0835	0.0855	0.0849
	(in 100s)	(0.124)	(0.124)	(0.123)	(0.123)	(0.124)
	Math SAT	0.286***	0.289***	0.301***	0.295***	0.295***
	(in 100s)	(0.110)	(0.109)	(0.111)	(0.109)	(0.108)
Dorm mates currently taking Economics 201	Total	0.265**	0.198**	0.161**	0.160**	0.164**
		(0.112)	(0.0854)	(0.0683)	(0.0680)	(0.0681)
	Predicted grade above 50th percentile	−0.170				
		(0.147)				
	Predicted grade above 75th percentile		−0.109			
			(0.159)			
Dorm mates having previously taken Economics 201	Total	−0.0561	−0.0537	−0.0521	−0.0326	−0.0338
		(0.0455)	(0.0461)	(0.0491)	(0.0507)	(0.0509)
	Economics majors			0.00535		
				(0.125)		
	Earned B+ or better?				−0.141	
					(0.156)	
	Earned A− or better?					−0.150
						(0.170)
Estimated cutoff values	A/A−	5.755	5.799	5.804	5.725	5.775
	A−/B+	5.352	5.400	5.405	5.325	5.376
	B+/B	4.896	4.945	4.950	4.869	4.921
	B/B−	4.350	4.399	4.404	4.323	4.373
	B−/C+	3.979	4.029	4.034	3.952	4.003
	C+/C	3.677	3.726	3.731	3.648	3.699
	C/C−	3.160	3.210	3.215	3.132	3.181
	C−/D	2.783	2.831	2.838	2.754	2.804
	D/F	2.520	2.567	2.575	2.490	2.541
	Range of standard errors	(0.926–0.956)	(0.916–0.948)	(0.930–0.962)	(0.910–0.942)	(0.918–0.949)
	Observations	225	225	225	225	225

Notes: Dependent variable is grade earned in Economics 201, which is treated as a 10-level ordinal variable with levels A, A−, B+, B, B−, C+, C, C−, D, and F. Robust standard errors are in parentheses.
*$p < 0.10$; **$p < 0.05$; ***$p < 0.01$.

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1. Given that the dependent variable is Econ 201 grade, why might ordered probit be more appropriate than OLS for estimating this model?

2. The "estimated cutoff values" appear to decline approximately linearly for most grade boundaries. What does this imply about whether the difference between an A– and B+ is the same as the difference between a B– and C+? What does this imply about the validity of OLS?