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On Time: An Empirical Analysis of U.S. Law School Admissions Deadlines

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Abstract

Setting an application deadline is an important decision for a law school admissions committee because the deadline partly determines the quantity and quality of applications that a law school receives. As such, information that would help an admissions committee set its deadline appropriately and strategically is valuable. The intention of this essay is to provide such information. To do so, we treat law school admissions as a market and set up an econometric model, which provides information on how various types of schools set their deadlines. From this, we interpret a number of strategies in which law schools seem to engage. We find that better law schools tend to set earlier deadlines, generally. However, we also find that the most elite schools tend to set later deadlines than the general model would predict while medium-quality law schools tend to set deadlines earlier than the general model would predict. We use economic theory to interpret these deviations from the general model as strategic signaling of quality to potential applicants. Furthermore, we find that some in-state tuition reciprocity agreements may significantly affect deadlines.

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I. Introduction

Law schools seek to attract the best students possible while prospective law students seek to enroll in the best program that will grant them admission. Law schools, therefore, have the incentive to maximize the number of applications because doing so maximizes application fee revenues and potentially the quality of admitted students. Law students, however, wish to increase the number of acceptances they receive while decreasing application fees. To that end, students seek information that indicates their chances of being accepted to any given school.

One source of available information may be a law school's application deadline. While early application deadlines generally discourage students from applying, law schools may set earlier application deadlines in order to strategically signal quality and, therefore, attract more (or higher quality) applications.

To analyze law school admissions as a market, we gather rankings and application deadlines for law schools in the United States. Additionally, we test for the potential for excessive signaling and reverse-signaling.

II. Brief Summary of Relevant Economic Literature

According to Hotelling's Law,¹ sellers of a homogenous good, who are located on a line, will consolidate toward a single point at the center, assuming costs are uniform along the line. Egli finds that differentiation occurs when the assumption of uniform costs is relaxed and concludes that "the degree of product differentiation depends on the fraction of consumer types."² Kitahara and Matsumura corroborate this when they "investigate how unit (or specific) tax and ad volorem tax affect equilibrium location and choice in a model of product

¹ Harold Hotelling, *Stability in Competition*, 39 Econ. J. 41 (1929).

² Alain Egli, *Hotelling's Beach with Linear and Quadratic Transportation Costs: Existence of Pure Strategy Equilibria*, 46 Australian Econ. Papers 39 (2007).

differentiation.³” They find that, “taxes can yield different location patterns under cost heterogeneity among firms.⁴”

Feltovich, Harbaugh and To argue that a firm’s signals vary based on quality.⁵ Low-quality firms tend to avoid signaling due to costs and futility. Medium-quality firms tend to signal (often excessively) in order to differentiate themselves from low-quality firms. High-quality firms tend to rely on exogenous information such as reputation rather than signal, and may even reverse-signal in order to differentiate themselves from medium-quality firms. We borrow these ideas later when interpreting a law school’s behavior as a strategy.

III. Methodology

To investigate how law schools set admissions deadlines, we first specify quality metrics. Then, we develop a general model which predicts a school’s deadline based on its quality alone. Next, we test for excessive- and reverse-signaling by identifying groups of schools that behave differently than the general model predicts. Finally, we identify in-state tuition reciprocity agreements to control for the potential effects of these agreements on application deadlines.

To specify quality metrics, we assume that the Hylton score⁶ is an accurate reflection of quality for law schools. We choose the Hylton score because it correlates with the more widely recognized U.S. News and World Report ranking score with a coefficient of 0.97 while including a significantly larger and more diverse sample of schools⁷.

³ Minora Kitahara & Toshihino Matsumura, *Tax Effects in a Model of Product Differentiation: a Note*, 89 J. of Economics 7 (2006).

⁴ Id.

⁵ Nick Feltovich, Richmond Harbaugh & Ted To, *Too Cool for School? Signalling and Sountersignalling*. 33 RAND J. of Econ. 630 (2002)

⁶ The Hylton score for a law school is (10 times the U.S. News Peer Assessment score) plus (the average of 75th and 25th percentile LSAT scores minus 130). J. Gordon Hylton, *The US News and World Report Rankings Without the Clutter*, available at http://www.elsblog.org/the_empirical_legal_studi/files/the_us_news_and_world_report_rankings_without_the_clutter.pdf (last visited July 2009).

⁷ The U.S. News and World Report only provides scores for the top 103 law programs.

Second, to test for excessive signaling and reverse-signaling, we observe how elite and medium-quality programs deviate from the general model. Since we expect the general trend will be that better schools set earlier deadlines, excessive signaling is defined as setting a deadline significantly earlier than the general model would suggest and reverse-signaling is defined as setting a deadline significantly later than the general model would suggest. We define elite law schools as those having the highest 15 Hylton scores in the sample. We define medium-quality law schools as those having Hylton scores between $(\bar{x} - s_n)$ and $(\bar{x} - s_n/2)$ or approximately 39 and 46. We intuitively predict that elite programs will reverse-signal and medium-quality programs will excessively signal.

Third, we identify four tuition reciprocity agreements that may influence application deadlines: the Academic Common Market (ACM), the Midwest Student Exchange Program (MSEP), the New England Regional Student Program (NERSP), and the Western Interstate Commission for Higher Education (WICHE).⁸ We also discover that Indiana, Ohio, and Kentucky engage in bilateral reciprocity agreements between each combination of states.⁹ The ACM includes schools in the Southern United States and only applies if no school in the student's home state offers the desired out-of-state program. The MSEP includes schools in the Midwestern United States. NERSP includes schools in the Northeastern United States. The WICHE includes schools in the Western United States. Students claiming tuition benefits under WICHE often pay above in-state tuition while receiving discounts.

⁸ Rizzo, M.J. *Survey of Tuition Reciprocity Agreements at Public Research and Doctoral Universities, CHERI and CAST at Cornell University*, available at <http://www.ilr.cornell.edu/cheri/survey/survey2001/summary.html> (last visited March 2008).

⁹ State of Indiana Commission of Higher Education, *Minutes of the Executive Committee Meeting, July 10, 2007*, available at <http://www.che.state.in.us/meetings/agendas/2007/0708julyexecmtmins.pdf> (last visited July 2009). See also, State of Indiana Commission of Higher Education, *Memorandum of Understanding Between Indiana and Kentucky Regarding Tuition Reciprocity, 2005-2007*, available at <http://www.che.state.in.us/meetings/agendas/2005/0505055.pdf> (last visited July 2009). See also, Ohio Board of Regents, *Minutes: June 16, 2005*, available at http://pilot.regents.ohio.gov/board_meetings/bdmeet/july05/JuneBoardMinutes.pdf (last visited July 2009).

Intuitively, we predict that law schools in states subject to in-state tuition reciprocity agreements will set deadlines similarly to each other, controlling for quality, because these agreements significantly modify an institution’s cost structure by incentivizing local candidates to apply. We expect the ACM will produce the least significant effect on deadlines because almost all of the states subject to the ACM have law schools, making the agreement irrelevant.

IV. Data Description

To test the relationship between law school quality and application deadlines, we obtain the Hylton scores, priority deadlines, non-priority deadlines, and membership to a tuition reciprocity agreement. Table 1 reports the descriptive statistics for the sample.

Table 1: Descriptive Statistics

	Mean	Std. Dev.	Min	Max
USNews	53.2	14.3	37	100
Hylton	53.0	13.2	30.5	92
Priority Deadline	65.3	32.9	17	199
Non-priority Deadline	57.8	36.4	0	199
Observations	181			

We used the law school priority and non-priority deadlines published by the American Bar Association (ABA). If deadlines were unclear (e.g. ABA listed multiple admission deadlines) or clearly incorrect (e.g. a financial aid deadline prior to the FAFSA becoming available), we investigated school websites to determine application deadlines. We excluded schools from the sample if their deadlines were unclear after investigation. The final sample contains data for total of 181 law schools.

The average U.S. News and World Report score and Hylton score, are 53.2 and 53.0, respectively. These scores had standard deviations of 14.3, and 13.2, respectively. Deadline variables were calculated as the number of days after the earliest deadline. Law school application deadlines ranged from 01/15/2008 to 08/01/2008.

V. Econometric Models

The marginal effect of school quality on deadline is estimated by the following equation:

$$\text{Deadline}_i = \beta_0 + \beta_1(\text{Quality}_i) + \beta_2(\text{Elite}) + \beta_3(\text{Medium-quality}_i) + \beta_4(\text{ACM}_i) + \beta_5(\text{MSEP}_i) + \beta_6(\text{NERSP}_i) + \beta_7(\text{WICHE}_i) + \beta_8(\text{Indiohken}_i) + \varepsilon_i$$

where the dependent variable is the application deadline i , the β 's are parameters to be estimated ε is a zero-median error term, and $i = P, N$ indicates priority and non-priority, respectively.

The model includes nine explanatory variables. *Quality* takes the value of the natural logarithm of a law school's Hylton score. We use the logarithm specifically to allow the parameter to be flexible and curve. *Elite* takes the value of one if a school ranks among the top 15 law schools. *Medium-quality* takes the value of one if a law school has a Hylton score between 39 and 46. Because the parameter on quality is logarithmic, the significance of the parameters on *Elite* and *Medium-quality* can be interpreted as true deviation from the general model rather than evidence that the model fails to allow for elasticity. *ACM*, *MSEP*, *NERSP*, and *WICHE* take the value of one if a program is located within each of these agreements, respectively. *Indiohken* takes the value of one if a program is located within the states of Indiana, Ohio, or Kentucky.

We predict a negative parameter estimate on *Quality* as lower quality law schools are likely to have later deadlines in order to encourage more potential students to apply. We predict that the parameter estimates on *Elite* and *Medium-quality* will be positive and negative

respectively in both models, indicating that elite programs will reverse-signal and medium-quality programs will excessively signal. The remaining parameter estimates are ambiguous. While in-state tuition reciprocity agreements should put downward pressure on application deadlines by incentivizing local candidates to apply, we acknowledge that many students choose (avoid) a program based partly on the (un)desirability of its geographic location and that institutions with particularly undesirable locations may have the most incentive to engage in these agreements. The parameter estimates on each agreement dummy variable should, therefore, reflect the sum of these two opposing forces.

Table 2 reports the estimation results for the three deadline models. The results suggest that there are statistically significant relationships between the quality of a law schools and its application deadline.

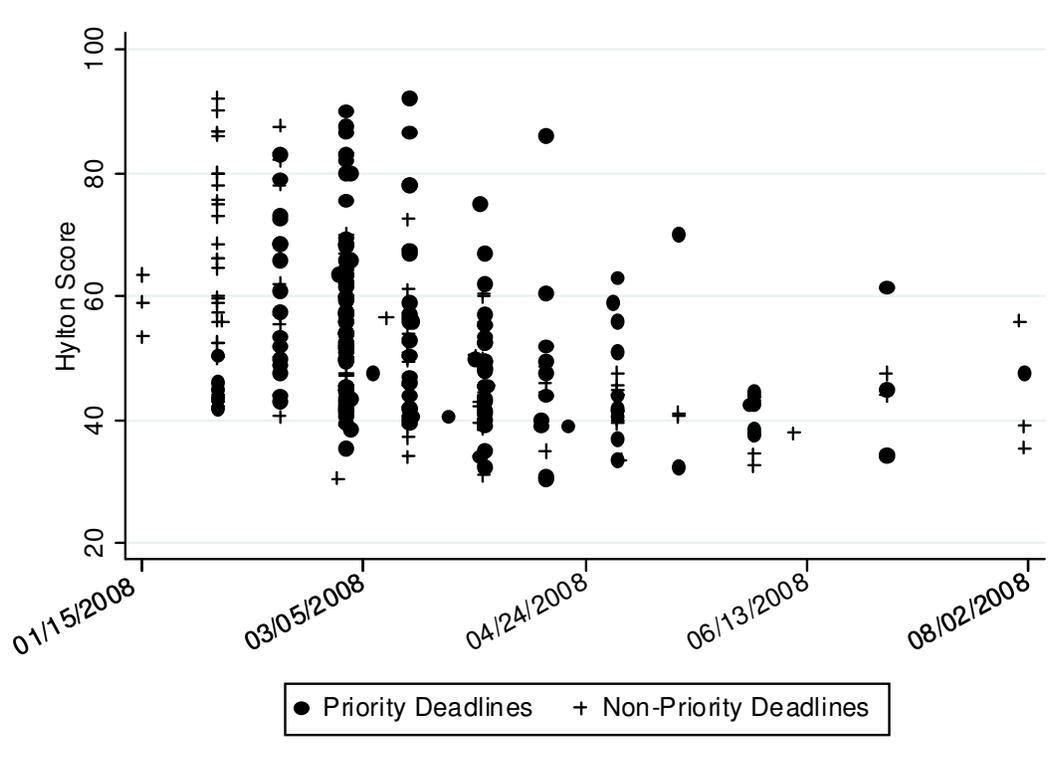
Table 2: Deadline Models

	Deadline_P	Deadline_N
Ln(Hylton)	-72.8*** (13.4)	-80.4*** (9.3)
Elite	22.6** (10.0)	--
Medium-quality	-11.5** (5.7)	--
ACM	--	--
Indiohken	18.7** (7.9)	--
MSEP	22.3*** (7.4)	13.4** (7.4)
NERSP	--	--
WICHE	--	--
Intercept	349.7*** (53.0)	373.8*** (38.2)

Notes: * p < 0.10, **p < 0.05, ***p < 0.01. Terms were excluded from the calculation if an initial p>0.10. Robust standard errors are reported for the Deadline_N model because a White test (White 1980) determined that the error terms are heteroskedastic at the p = 0.15 level.

The parameter estimates are interpreted as conditional marginal impacts of the independent variables on deadlines. As expected, the natural logarithms of Hylton scores are negatively related to deadlines in all three models, indicating that better (worse) law schools generally earlier (later) deadlines. These relationships are visible in the plots of Figures 1.

Figure 1: Law School Deadlines and Hylton Score



The parameter estimates on *MSEP* indicate that law schools within *MSEP* set priority and non-priority deadlines an average of 22 and 13 days later than others respectively, controlling for quality. The parameter estimates on *Indiohken* indicate that law schools located in Indiana, Ohio, or Kentucky, set their priority deadlines an average of approximately 16 or 19 days later than others respectively, controlling for quality.

The parameter estimates *ACM*, *NERSP*, *WICHE* are not found to be significant at the $p = 0.10$ level either of the models. This is likely because almost all of the states subject to the *ACM* have both law schools, making the agreement irrelevant. The *NERSP* and *WICHE* agreements

do not seem strong enough to affect law school admission deadlines, but we do not have information to explain why.

The parameter estimates on *Elite* and *Medium-quality* indicate that elite law schools set priority deadlines an average of 23 days later than the general model would predict while medium-quality law schools set priority deadlines an average of 12 days earlier than the general model would predict. This is likely due to elite law schools reverse-signaling while medium-quality schools signal excessively.

Table 3 reports the results of a Ramsey test.¹⁰ In all three models, the null hypothesis that there are no omitted variables can be rejected at the $p = 0.05$ level. As such, we strongly encourage additional research on this topic in order to identify additional variables and create a more specific model.

Table 3: Omitted Variable Tests

	Deadline _E	Deadline _P	Deadline _N
F	3.36	4.42	3.07
p-value	0.0223	0.0051	0.0295

VI. Discussion

Our results indicate that higher (lower) quality and law schools tend to set earlier (later) application deadlines. This can be explained by economic theory. First, Egli explains that non-uniform costs generate heterogeneous consumer types. In the context of law school admissions, the cost to students is represented by the inconvenience of having to apply early. Deadlines prior to March are particularly costly to law students because they remove the option to (re)take the

¹⁰ J.B. Ramsey, *Tests for Specification Errors in Classical Linear Least Squares Regression Analysis*. 31 J. Royal Statist. Soc. B. 350 (1969).

February LSAT. Certain students who are less (more) averse to the inconvenience of early deadlines are therefore expected to apply to higher (lower) quality schools. Second, Kitahara and Matsumura argue that cost heterogeneity among firms affects location patterns. The cost to the institution of setting an early application deadline is the decrease in the number of applications, which consequently decreases application fee revenues, the pool of potential candidates, and potentially the quality of accepted applicants. Therefore, higher (lower) quality schools that will lose relatively fewer (more) applicants by setting earlier deadlines choose (not) to do so. Because of this, application deadline serves as one generally reliable indicator of program quality to prospective students.

The expectation that better law schools set earlier deadlines creates the potential for excessive signaling and reverse-signaling as described by Feltovich, Harbaugh and To. Our analysis suggests that many medium-quality law schools set deadlines earlier than what would be expected and that many elite law schools set deadlines later than what would otherwise be expected. As such, we can identify three distinct strategies based on economic theory. The first, most common and most basic strategy is for a law school to set its deadlines in line with similar quality schools that represent its direct competition. The second strategy, which seems to be engaged in most frequently by medium-quality schools, is to set a deadline earlier than would be expected in order to signal superiority to one's immediate competition. The third strategy, which seems to be engaged in most frequently by elite schools, is to set a deadline later than would be expected in order to signal that one does not need to use an early deadline to communicate superiority to potential applicants.

We also find that some in-state tuition reciprocity agreements may significantly affect deadlines. Each agreement significantly modifies its institutions cost structures by incentivizing

local candidates to apply. However, a law student chooses a school based partly on the desirability of its geographic location. For this reason, schools in particularly undesirable geographic locations have the greatest incentive to engage in meaningful tuition reciprocity agreements. Our results can be interpreted to indicate that students prefer schools in certain geographic locations to others, and that this preference sometimes outweighs the incentive of obtaining in-state tuition. Myriad factors may influence the desirability of a location, from the job market within the state to the climate.

VII. Conclusion

Our analysis provides meaningful information to those responsible for setting law school admissions deadlines. Depending on a school's quality, it may benefit from one of the three strategies we have identified. Schools seeking to alter applicant quality and quantity may be able to do so by altering their deadlines. This practice is far less expensive and quicker than other measures used to alter these metrics (e.g. increasing financial aid, hiring prominent professors, specializing in a particular field of study, etc.).

Our analysis may also be helpful to prospective law students. While the publication of LSAT and GPA medians or percentiles is a prevalent if not universal practice, this is insufficient to help students determine their chances of being admitted – as evidenced by the relatively low rate of acceptance to law schools. An applicant seeking to encounter (quantitatively) less competition might wish to find a school that sets its deadline earlier than the general model we provide here would predict. He or she might also benefit from modifying his or her statement of purpose to appeal to such a program.

Additionally, we emphasize that the model presented here is a good starting point for future research. Specifically, we would encourage examining the significance of other variables

(e.g. application fees, tuition, cost of attendance, etc.), tracking changes over time, and incorporating more disciplines.