

## Performance in Law School: What Matters in the End?

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In a previous article, I evaluated the performance of students entering George Mason University School of Law in the fall of 1999.<sup>1</sup> I emphasized student performance in a mandatory economics class during their first year (Concepts in Economic and Legal Analysis, hereafter simply Economics), and I looked at grades in a few traditional law courses. The article reported two findings. First, students who excelled in Economics had higher aptitude in mathematics as measured by their SAT math score and by a variable indicating that they had taken calculus or a similarly advanced math course in college. Second, overall performance at the start of law school seemed to depend on attributes that typically are unmeasured during the application and evaluation process. These attributes could be inferred from several measures of behavior in law school: choice of row in a ten-row lecture hall and number of lectures missed, both measured from my spring Economics class; an indicator (GRADY) that incoming students chose to take Torts from Dean Mark Grady, a nationally known torts expert who teaches from his own textbook, instead of with Assistant Professor John Hasnas; and the HASNAS SIGNAL, which denoted students who turned down his invitation to get a one-third grade point bonus in exchange for signing in “ready and prepared” in 25 out of 28 lectures.<sup>2</sup>

By now these students have completed law school. This note reports which variables mattered in the end and, in particular, whether some of the nontraditional measures of personal attributes still mattered in GPA. In short, they did. Performance after the first year is arguably the best index of success because it follows attrition of the poorer students. All the hidden attributes matter in these results. Two of the hidden attributes predict final performance, even though the population was truncated to include only those who made it to graduation. Specifically, students who choose to sit in the back of the classroom and occasionally skip class have a lower final grade point average. These two variables are as important in the final grade as 10 points in the LSAT score. The results also suggest that age plays some role in success in law school, and that SAT math and verbal scores add significant predictive power to the LSAT for final performance.

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1. Richard A. Ippolito, *The Sorting Function: Evidence from Law School*, 51 *J. Legal Educ.* 533 (2001).
2. The GRADY and HASNAS SIGNAL variables are described in *id.*

### A Few Changes in Sample Size and Data Measures

When I did the original empirical work, I included a total of 224 students who took Economics during the fall semester of 1999. Of these, 20 were either transfer students or master's students. To track the performance of the J.D. students to graduation, I limited the universe this time to the 204 J.D. students who completed their first semester of law school. It turned out that the empirical results for the J.D.-student-only population were almost identical to those I published for the slightly larger universe, and so I do not repeat them here. I also replaced the self-reported LSAT scores with official LSAT scores, but this change had no important implications for the results.<sup>3</sup>

### Performance in All First-Year Courses

Column 1 in Table 1 shows the results as of the end of the first year of law school. The dependent variable is the GPA earned by students after completing one year of law school. The LSAT score matters, but not overwhelmingly. All else equal, students with 10 additional LSAT points accumulate on average .27 incremental points in their first-year GPA. College SAT scores also matter. Holding constant the LSAT score, a student who scored an extra 100 points in both verbal and math parts of the SAT would gain about .15 grade points in law school GPA. The verbal score variable does not reach significance at the 90 percent level, but nevertheless is on the same order of magnitude as the math score. SAT scores appear to add valuable information to law school success, even after accounting for LSAT scores.

Perhaps the most interesting result is that all four measures of hidden student attributes matter importantly in first-year performance. Students who selected into Grady's Torts class enjoyed an increase in first-year GPA performance equal in magnitude to 10 points in LSAT score. One expects Hasnas's decliners to score .33 lower on their Torts exam, by construct of the bonus. What is fascinating is that the Hasnas decliners earned a .33 lower GPA, on average, in *all* of their first-year classes. Clearly, the GRADY and HASNAS variables convey information about student attributes that are correlated with success in law school; and yet these attributes are not fully captured by standard measures of performance such as LSAT and SAT scores. Together, the coefficients on the two Torts variables are twice as important as a 10-point advantage in LSAT score.

Moreover, even holding constant the Torts signals, absenteeism and row choice still enter into first-year grades in a significant way. All else equal, students who chose to miss three out of fourteen lectures in Economics II (spring semester, first year) earned .09 lower first-year GPAs in law school. Those who chose to sit in the rear of the Economics II class had another .11 reduction in first-year GPA. I presume that students' absenteeism and seat choice patterns in Economics reflect their behavior in other courses.

3. There was a small upward bias in students' self-reported scores. The coefficients on the official LSAT scores were higher and attained higher levels of significance but did not materially affect any of the other results. I also acquired official undergraduate GPA records, but I found that, like the self-reported undergraduate GPAs, they had no predictive power on performance in law school.

**Table 1: Determinants of First-Year and Final Grade Point Averages**

<i>Independent variables</i>	<i>All students completing first year</i>	<i>All students completing law school (on time)</i>	
	<i>First-year GPA (1)</i>	<i>First-year GPA (2)</i>	<i>Final law school GPA (3)</i>
Intercept	2.91 (22.75)	2.85 (22.62)	2.93 (22.33)
Evening student	0.05 (0.56)	-0.05 (0.57)	-0.01 (0.01)
Female	0.07 (1.23)	0.07 (1.27)	0.07 (1.20)
Age 26–30	0.11 (1.39)	0.06 (0.82)	.16* (1.85)
Age over 30	0.1 (1.00)	0.04 (0.43)	0.1 (1.06)
Work full time now	-0.06 (0.53)	0.12 (1.00)	0.06 (0.51)
Worked 3 or fewer years full time but not now	0.11 (1.27)	0.13 (1.51)	0.05 (0.55)
Worked more than 3 years full time but not now	-0.09 (0.74)	-0.01 (0.1)	0.01 (0.10)
Some economics in college (none omitted)	-0.06 (1.07)	-0.06 (1.09)	-0.1 -1.6
B.S. in economics or better	0.2 (1.53)	.23* (1.86)	0.19 (1.43)
Official LSAT (minus mean)	.027** (2.9)	.017** (2.6)	.024** (3.41)
SAT math (minus mean)	.0007* (1.82)	.0008** (2.24)	0.0005 (1.38)
SAT verbal (minus mean)	0.0006 (1.45)	.0009** (2.31)	.0009** (2.18)
College math (took calculus or higher in college)	0.05 (0.75)	0.01 (0.28)	-0.01 (0.19)
HASNAS SIGNAL	-.33** (4.22)	-.22** (2.66)	-0.04 (0.51)
GRADY	.25** (2.38)	.17* (1.70)	0.12 (1.13)
Absences in Economics II (out of 14 lectures)	-.03* (1.84)	-.03** (1.97)	-.06** (3.49)
Sat in back in Economics II	-.11* (1.75)	-0.09 (1.46)	-.12* (1.89)
Number of observations	200	173	173
$R^2$	0.41	0.43	0.34

Numbers in parenthesis are t-values. \*(\*\*) denotes that the coefficient is statistically different from zero at the 90 (95) percent level of significance (two-tail test).

Hidden attributes, which are unmeasured at the admissions stage, seem to matter more than LSAT scores in determining first-year performance. The kind of student who is willing to choose the dean for Torts, who accepts the possibility of being called upon during class, and who takes a seat in the front of the class and attends all the lectures earns .78 additional grade points on

average (compared to one who does none of these things).<sup>4</sup> A law school that could somehow measure these kinds of attributes in its applicant pool could presumably increase the success rate of its graduates dramatically without necessarily altering the LSAT composition of the class.

### **Attrition of Students Who Finish the First Year**

I next look at overall performance in law school at the time of graduation. Of course, not all law students who complete the first year end up graduating. Of 200 students who completed their first year, 27 did not make it to graduation on time. For the most part, those who left or did not complete the program in three years were relatively poor performers.<sup>5</sup> The natural question arises: do the variables that matter in first-year performance still matter for the truncated sample consisting entirely of successful students?

Column 2 of Table 1 shows the first-year GPA results for the 173 survivors. For the most part, the results overall are not much different from those for all 200 students who completed their first year. Some of the coefficients are lower. For example, the GRADY and HASNAS variables in column 2 have coefficients that are about two-thirds of their magnitudes reported in column 1. Similarly, the coefficient on LSAT scores falls from .027 to .017. The reduction in the magnitude of these coefficients for the final 173 suggests that hidden attributes help predict who will not successfully complete the program. Among survivors to graduation, these measures still help predict relative success, but not as importantly as before the truncation occurs.

It is worth noting that both math and verbal SAT scores remain important in explaining first-year GPA in the truncated sample. Holding constant LSAT score, the coefficients on both SAT variables are positive and significantly different from zero at the 95 percent level of significance. A student who gets 100 extra points on her verbal and math SAT expects to have a .17 higher GPA after one year in law school.<sup>6</sup> This effect is equal in magnitude to a 10-point difference in LSAT score. These results suggest that law schools ought to be interested in factoring both LSAT and SAT scores into their admissions process.

### **GPA at Graduation**

First-year GPA performance may be a better measure of the overall importance of the attributes than the final GPA, because all first-year students take

4. For this calculation, I assume that those who do not attend class every day miss three times out of 14.
5. Six students transferred to other law schools after their first year; these normally were good performers. Eight withdrew of their own volition, and eight were asked to leave. Nine were still enrolled at the time of their scheduled graduation. Some of the latter students failed their first year and simply started anew; others may have had to repeat some classes or take a leave of absence. Of the 204 J.D. students who completed their first year, 173 graduated on time—an 85 percent completion rate.
6. These coefficients are as large as those on math and verbal SAT scores when entered as determinants of undergraduate GPA. For example, see Julian Betts & Darlene Morell, *The Determinants of Undergraduate Grade Point Average: The Relative Importance of Family Background, High School Resources, and Peer Group Effects*, 34 *J. Human Resources* 268 (1999).

the same courses and they take most of them in large classes where a grading curve is strictly observed. Beyond the first year, course selection is a factor in determining the final GPA.

Some students seek out smaller classes (where it is harder to enforce a curve) and gravitate toward more lenient graders, while better students may tend to take the hard courses. At the same time, some students mature and learn how to perform better in a system that might have been foreign to them during their first year. So GPA scores at graduation reflect a mixture of ability, hard work, learning, maturing, and gaming. Column 3 in Table 1 gives the final GPA results for the 173 J.D. students who graduated on time from the entering class of fall 1999.

The coefficient on LSAT is .024 and is statistically different from zero at the 99 percent level of confidence. A 10-point swing in LSAT score is worth about one-quarter of a grade point in the final average. To put this number in perspective, consider that the average GPA upon graduation for this class is 3.07 with a standard deviation of .4. Thus, a 10-point swing in LSAT on average is worth 60 percent of a standard deviation in final outcome. SAT scores continue to make a contribution to final grade (though the math score drops below conventional levels of significance). An extra 100 points in both math and verbal SAT scores results in about .14 higher GPA or about 60 percent as much as 10 points in LSAT score.<sup>7</sup>

Interestingly, the coefficients on the GRADY and HASNAS SIGNAL variables are much smaller in the final tally. Students who shied away from the dean during their first semester, or who were reluctant to be called upon by Hasnas, either learned how to become better students or were better at gaming their grade point average in their second- and third-year classes. In contrast, the variable that captures the number of absences in Economics II is even more important than it was in determining first-year performance. Presumably, students prone to skip Economics also either skipped other classes or exhibited the same lack of enthusiasm for learning in other classes as they did in Economics. Students willing to skip four of fourteen Economics lectures during their first year had on average a .24 lower final GPA, precisely the contribution that 10 points in LSAT makes.

Additionally, holding constant absenteeism, LSAT scores, and all other things, students who sat in the back of their Economics II class during their first year, and who survived the first-year cut, were prone to graduate with a lower GPA. On average they had .12 lower GPAs than their counterparts who sat closer to the front of the class in Economics.

7. It is worth noting that while the LSAT scores are official, the SAT scores are self-reported. Since I also had self-reported LSAT scores, I could make some judgment about the importance of getting official scores. I found that when I used official scores, the coefficient and its level of significance increased quite significantly. Self-reported LSAT scores are a bit biased high, but also are noisier than the official numbers. These statistical manipulations suggest that official SAT scores might perform better in my regressions than is suggested by results based on self-reported SAT scores.

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The overall thrust of the results reported in this article and its predecessor is that while numbers matter, they may not matter that much in relation to personal attributes that determine success. The LSAT score consistently matters, but not in an overwhelmingly important way.<sup>8</sup> At George Mason 10 points in LSAT score translates to about a quarter of a grade point among those who make it to graduation (about an 85 percent completion rate). This is in comparison to a standard deviation of final GPA of .40. If law schools pay attention to numbers, my results suggest that they would do well to add SAT scores to their list of criteria for admission to law school. Holding constant LSAT score, math and verbal SAT scores consistently help predict law school success, and on balance are about as important as the LSAT itself.

Perhaps more interestingly, the results show that personal attributes can swamp the importance of LSAT in predicting success in law school. Presumably, this is the reason why many undergraduate programs and law schools look for some evidence of hard work and motivation in their application procedure. Students who choose to sit in the back of the lecture hall and are prone to skip class may signal these attributes by their behaviors during college. Are these the students who when in college failed to participate in extracurricular activities? Are they the ones who failed to work in summer jobs or the ones who worked? Are they the ones who held positions in their fraternities and sororities or are they the ones who did not join any group?

Holding constant standard measures of ability like the LSAT, the results suggest that law schools that could successfully identify nontraditional signals of superior performance might gain a dramatic advantage over the competition in terms of the success of their graduates. The key to identifying these traits is the collection of data upon entry, together with a careful tracking of performance in law school and beyond as a function of these variables. Few law schools, I suspect, are sufficiently disciplined to pursue this exercise diligently, but those that do may reap an impressively high return on their investment.

8. I could not find any influence of undergraduate GPA on performance at George Mason. It could well be that the GPA screen employed by the admissions department works to limit entry to those who otherwise exhibit some promise. But after admission undergraduate GPA does not affect law school performance, despite a great variance in the distribution of GPAs among admitted students.