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Abstract

In recent years, there have been a number of high profile scandals on college campuses, ranging from cheating to hazing to rape. With so much information regarding a college's academic and non-academic attributes available to students, how do these scandals affect their applications? To investigate, we construct a dataset of scandals at the top 100 U.S. universities between 2001 and 2013. Scandals with a high level of media coverage significantly reduce applications. For example, a scandal covered in a long-form news article leads to a ten percent drop in applications the following year. This is roughly the same as the impact on applications of dropping ten spots in the *U.S. News and World Report* college rankings. Moreover, colleges react to scandals – the probability of another incident in the subsequent years falls – but this effect dissipates within five years. Combined, these results suggest important demand side and supply side responses to incidents with negative media coverage.

[1] The findings of this are our own and do not reflect the views of our respective organizations. All remaining errors are our own.
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1. Introduction

In 2012, *Rolling Stone* published an article titled "Confessions of an Ivy League Frat Boy: Inside Dartmouth's Hazing Abuses" (Reitman, 2012), an 8,000 word article documenting the story of a student who had been hazed and abused during the process of pledging a fraternity at Dartmouth College. The article was extremely graphic, including twenty uses of the word "vomit" and its derivatives, and the article expanded to include other stories of – and follow up articles about – the hazing culture at Dartmouth.

Should we expect this article to affect future applicants to Dartmouth College? Although the article chronicled Dartmouth's culture, many colleges likely have strong hazing cultures. Drinking and abuse are problems that all colleges think about, and it is not clear that Dartmouth's case is any better or worse – it is simply the one that became most public. Moreover, if Dartmouth responds to this coverage by cracking down on campus, Dartmouth may actually be *less* likely than other colleges to have hazing incidents in the years after this article. Lastly, while this story is very concerning, it represents one data point out of a wide swath of information that students have access to when choosing a college. Given all of this, the responses we should expect are a priori unclear.

To explore this empirical question, we construct a novel dataset of college-related scandals that garnered negative media attention. We find that the Dartmouth story is in no way unique. Between 2001 and 2013, our search identified 124 different public scandals at the top 100 colleges in the United States. Scandals covered by the media affected over 75 percent of the colleges in our study.

Using these data, we implement a difference-in-differences approach to estimate the impact of scandals on student applications. While the overall impact of scandals seems to be small, we find that there is a large effect of scandals with extensive media coverage, as measured by *New York Times* and long form magazine articles. Scandals with more than five mentions in the *New York Times* lead to a 9 percent drop in applications at the college the following year. Colleges with scandals covered by long-form magazine articles receive 10 percent fewer applications the following year. To put this into context, a long form article decreases a college's number of applications roughly as much as falling 10 places in the *U.S. News and World Report* college rankings (Luca and Smith, 2013).

These results add to the literature on the role of information in college applications. Generally speaking, students do not have full information on colleges and recent research suggests that their application strategies are sub-optimal, in part because they rely on rules of thumb and simplifying heuristics.[5] However, when information comes to them, students are often responsive, be it rankings (Monks and Ehrenberg, 1999; Alter and Reback, 2014; Luca and Smith, 2013), online informational systems (Hurwitz and Smith, 2016), or direct outreach through mailings (e.g. Hoxby and Turner, 2013). While rankings and outreach are directly aimed at influencing applicant behavior, coverage of scandals provides information that is not directly designed to aid in the decision-process.

Our paper also adds to the emerging literature on scandals. Knittel and Stango (2013) show that the Tiger Woods sex scandal led to a drop in the stock price of his corporate sponsors. Chung et al. (2013) show that the same scandal resulted in decreased sales of golf balls from Nike, one of Woods's main sponsors. Azoulay et al. (2015) show that disclosures of scientific

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[5] See Page and Scott-Clayton (2015) for an overview of research on the college application and enrollment processes.

retractions impact the career outcomes of scientists, especially those who are highly esteemed in the field. Our work provides evidence on the role of media in reactions to scandals, developing an average treatment effect of the types of incidents that periodically occur in higher education. This literature is different from the earlier work on the impact of media, which argued that even negative attention was good for a company. For example, Berger, Sorenson, and Rasmussen (2010) show that even unfavorable reviews of a book lead to higher sales – presumably by increasing the attention paid by customers. In contrast, our findings suggest that, at least in our context, unfavorable press tends to lessen demand.

Our work is also unique in its ability to explore responses both from the demand side (i.e., applicants) and supply side (i.e., colleges). We find that colleges respond to scandals, but the response is short-lived. For example, a college is fifty percent less likely to have a second scandal the year after a scandal, relative to five years later. This is consistent with the role of media outlets as accountability systems (Zyglidopoulos et al., 2012; Islam and Deegan, 2010; Brown and Deegan, 1998).

2. Background and Empirical Context

Our dataset consists of the top 100 national universities as measured by the *U.S. News and World Report* for 2015.[6] We focus on this sample because these colleges tend to be more selective draw from a national pool of applicants who often consider college attributes beyond cost and location, and tend to receive a lot of student and media attention. For each of these colleges, we collect data on application behavior and scandals (defined below) that have been covered by the media.

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[6] See Appendix Table 1 for a list of the sample schools in rank order. Due to multiple ranks at the #99 place, the sample contains 102 colleges.

2.1. IPEDS and Common Application Data

For number of applications and other college-specific data, we used the U.S. Department of Education's Integrated Postsecondary Education Data System (IPEDS) database, which contains information for all U.S. higher education institutions participating in federal student aid programs. The database includes data on both institutional characteristics (such as tuition) and student characteristics (such as mean SAT scores) for each year.

For each college-year observation, we use the college's total number of freshman applications from the year in which it made admissions decisions.[7] We also use IPEDS time-varying data for instate and out-of-state tuition costs and institutional SAT percentile scores. For missing values in our sample, we called college admissions offices for official statistics, and if the data were still unavailable, we imputed values based on the previous and following year. If the imputed year fell at the ends of our time period (admission years 2001 or 2013), we imputed values based on percent changes in values from the prior/subsequent two years.[8] We combine these data with an indicator for whether the college is a member of the Common Application.

Table 1 shows the summary statistics for these variables. On average, the 1,192 college-year observations in this sample receive almost 20 thousand applications, half of which come from females. The 25th and 75th percentile verbal SAT scores are slightly lower than those on the math SAT. Also, since many of the top institutions are private, the in-state tuition is relatively high, at over $20,000, which is about $6,000 less than out-of-state tuition. About half the colleges accept the Common Application during this period of great expansion for the organization.

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[7] Thus, the applications received during the fall of 2000 would be marked as admission year 2001. Most colleges mark their number of applications in IPEDS in this manner, and using admission year as the time reference has the added methodological benefit of matching the *U.S. News and World Report* timing conventions.

[8] After obtaining a final count of official application numbers by year via conversations with admissions offices and cross-checking data from Alter and Reback (2014), IPEDS data for 34 of 1327 year-school entries were imputed.

2.2. Scandals

We gathered our scandal data via Google searches of media content published online from 2001-2013.[9] Our search terms were "(full college name) (scandal type)". We divided the scandals into four categories: sexual assaults, murders, cheating scandals, and hazing scandals. An example search term would be "Harvard University sexual assault". Within the first ten pages of the search results, we identified unique scandals.[10] Scandals are only counted when they occurred on the college campus or in immediately adjacent student housing. Scandals occurring solely within universities' graduate programs (e.g., cheating at a law school) are not included, since our primary outcome variable is the number of applications to undergraduate programs. Hazing incidents accompanied by a Greek organization chapter closure were counted only if the offending incident was covered as a separate event from the closure announcement. For murders, we included professor deaths and student deaths in off-campus housing. We excluded suicides from the count of murders; if the suicide was linked to hazing or sexual assault, the event was labeled with one of these scandal categories instead. The month, day, and year of the breaking media story were also recorded in our data.

Table 1 shows that 9 percent of the college-year observations had a scandal unearthed in our search process. However, this statistic masks the distribution by college, which can be found in **Figure 1**. No college in the sample witnessed more than four scandals during the sample period. The majority of colleges in this sample (around 76 percent) experienced at least one scandal during the time period studied. The breakdown of scandals by type can be found in

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[9] Google's PageRank search algorithm ranks pages in search results via the amount and influence of webpages linked to the resultant page. The economics and management literature has previously used Google searches as a rich time series data set to proxy for individual economic activity in various settings such as the housing market (Wu and Brynjolfsson, 2015) and the labor market (Baker and Fradkin, 2015).

[10] In some instances, there were less than ten pages of search results, in which case we chose relevant links from the available number of results pages.

Figure 2. There are 124 unique scandals in the sample. Five of these scandals were sexual assaults followed by murders, which we count as both sexual assaults and murders for the purpose of our analysis. Murders account for the largest category of scandals (42 percent of events), followed by sexual assaults, hazing, and cheating scandals. The relative frequency of murders in our data does not necessarily mean that there were more murders relative to other types of scandals, only that there were more murders covered by the media as measured by Google search results.[11]

2.3. Media Coverage of Scandals

2.3.1. Scandal Size

After collecting the list of scandals from the sample colleges, we determined the number of citations for each scandal on *The New York Times* online archive. The number of *New York Times* citations serves as a proxy for size of national media coverage in our analysis, following established conventions in the literature. *The New York Times* has been described in management research as "the elite U.S. newspaper" and the "benchmark" for studying media attention (Zyglidopoulos et al., 2012). To gain a measure of a scandal's media coverage, we recorded the number of unique articles mentioning the scandal in the month following the breaking news date. In order to categorize coverage intensity, we assign covered scandals to two coverage buckets: one in which the scandal has between one and five *New York Times* citations in the month following a scandal and one in which the scandal has more than five *New York Times* citations in the month following a scandal.

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[11] The opposite point can be made about sexual assaults, which have been shown to be generally underreported by colleges and, by extension, get less media attention. Yung (2015) reveals that universities generally underreport the number of sexual assaults on campus by auditing colleges' sexual assault policies. During the audit period examined in the paper, universities reported an average of 44 percent more sexual assaults; after the audit, the number of reported sexual assaults dropped to a value indistinguishable from the pre-period.

Figure 3 shows the breakdown of scandals by media coverage, with "No coverage" representing scandals with no citations in *The New York Times* online archive. The figure shows that only a minority of on-campus scandals achieve nationwide salience in the media. Of the 124 scandals, 28 had one to five articles in *The New York Times* in the month after breaking news of the scandal, and 13 had more than five articles in *The New York Times* in the month after breaking news. The majority of scandals (83) were not covered by *The New York Times*; these events were usually reported by a smaller outlet, such as a local broadcast channel or newspaper.

2.3.2. Long-Form Articles

From our initial search, we noted whether or not scandals were covered in a long-form article. We had two qualifications for a scandal publication to be considered long-form coverage: first, the article in question must be longer than two pages, and second, the outlet in which the article appears must have nationwide circulation. Media coverage of 9 of 124 scandals met these criteria. The outlets for the long-form articles were *Rolling Stone*, *National Catholic Register*, *The New Yorker*, *New York Magazine*, *The New York Times*, *Sports Illustrated, People Magazine*, and *Vanity Fair.* Within our sample there is significant overlap between a scandal having a long-form article and the same scandal being covered in *The New York Times* – with coverage in *The Times* coming after the long-form article or local news outlet that breaks the story. Out of the nine scandals with long-form articles, only one scandal was not covered by *The New York Times* in the month following the scandal.[12] Three articles were covered with between one and five *New York Times* stories, and five of the long-form articles were covered with more than five unique *New York Times* articles in the month post-breaking coverage. This supports our interpretation of long-form journalism as a form of extensive coverage of a scandal.

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[12] This event is the 2010 Elizabeth Seeberg sexual assault and suicide at The University of Notre Dame, which was covered in a long-form article in the *National Catholic Register*.

3. Empirical Analysis

In this section, we formalize the estimating equations for both of our questions. First, how does media coverage of on-campus scandals impact the number of applications a college receives? Second, after a scandal occurs, do we observe a decrease in the probability of a future scandal? In other words, does a scandal and media coverage deter future scandals? In examining the results of these tests in the following sections, we use both graphical and regression evidence, which can be found in the figures and tables at the end of the paper. All regressions are estimated with OLS.

3.1. Empirical Specifications

3.1.1. The Impact of Scandals on Applications

To determine the impact of media coverage on the number of applications that a college receives, we use the following specification:

$$log(Total\ Applicants_{it}) = \alpha_0 + \alpha_1*(Scandal_{it}) + \beta(X_{it}) + \mu_1(Year_t) + \mu_2(College_i) + \eta_{it}$$

The dependent variable is the natural logarithm of applications (*log(Total Applicants)*) for college *i* in year *t*. *Scandal* equals one if there was at least one scandal for that college in that year.[13] The vector *X* includes institutional SAT percentile variables *(SAT Math—25th Percentile*, *SAT Math—75th Percentile, SAT Verbal—25th Percentile, SAT Verbal—75th Percentile)*, *Instate Tuition* and *Out-of-State Tuition*, *Common App*, and *USNWR Rank*.[14] Time fixed effects (*Year*)

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[13] Under this metric, multiple incidents can occur in the same year. Six college-year observations had more than one incident. In an alternative specification not reported in this paper, we regressed the number of incidents per year on number of applications and found no effect.

[14] Changes in the ranking display in the early part of the panel necessitated the later inclusion of a variable, *Rank Dummy*, which equals 1 if the ranking for a college in a certain year is absent from the *U.S. News and World Report* rankings and 0 otherwise.

and college fixed effects (*College*) are included. Finally, η is an independent and identically distributed error term.

To capture variation in the intensity of media coverage of scandals among various outlets, we use indicators for *Between 1 and 5 NYT Cites*, *Greater than 5 NYT Cites,* and *Long-Form Article.* These take the value one when a scandal has the associated media coverage profile and zero otherwise.

3.1.2. The Deterrent Effect of Scandals

Scandals – especially those with extensive media coverage – have the potential to deter future scandals from occurring by creating an accountability system for colleges. To test this hypothesis, we examine the impact of having an initial scandal on the probability of having another scandal using the following specification:

$$Scandal_{it} = \alpha_0 + \alpha_1 *(Scandal_{i,t-1}) + \alpha_2 *(Scandal_{i,t-2}) + \alpha_3 *(Scandal_{i,t-3}) + \alpha_4 *(Scandal_{i,t-4}) + \alpha_5 *(Scandal_{i,t-5})$$
$$+ \beta(X_{it}) + \mu_1(Year_t) + \mu_2(College_i) + \eta_{it}$$

In this specification, we use five lags of the scandal variable, where $Scandal_{i,t-s}$ is the dummy for whether there was an scandal at college i in year t-s, for $s = 1,2,...5$. The vector X of controls, fixed effects, and error term are as defined above in Section 3.1.1. Because the lag variables are being compared to a year in which there was a scandal, all of the coefficients will be negative (due to reversion to the mean). Hence, to isolate the causal impact of scandals, we compare the likelihood of a second scandal in the year after the initial scandal to the likelihood five years out (and check for robustness to other choices of years). If the coefficient were simply

resulting from reversion to the mean, these two coefficients should be the same. The difference between these two coefficients can then be attributed to the treatment effect of the scandal.

3.2. The Impact of Scandals on Applications

Table 2 presents the main results from a regression of the logarithm of the number of applications on different measures of scandals and media coverage. The first column shows that in the year following a scandal, colleges receive 2 percent fewer applications, but this is not statistically different than zero. However, the next few columns consider scandals with relatively larger amounts of media coverage. A scandal that receives at least one mention in *The New York Times* receives almost 5 percent fewer applications. A scandal generating more than five *New York Times* pieces in the month following breaking news leads to an 8.8 percent drop in applications. Long-form coverage of a scandal leads to 10.4 percent fewer applications. Column (5) considers the impact of the scandal with any relatively large amount of media coverage (*Greater than 1 NYT Cites* and/or *Long-Form Article*), which corresponds to a 5 percent drop in applicants. Overall, the results suggest that the impact of a scandal depends on the amount of media coverage the scandal receives.

3.3. The Deterrent Effect of Scandals

Figure 4 graphically shows the potential deterrent effect of scandals. The graph shows negative probability differentials that drift upward towards zero over time. The negative values in this graph show that the probability of another scandal is lower in the five years following the initial scandal than the average unconditional probability of a sample college having a scandal in any year of the panel.

Table 3 reports these results in regression form. The first column shows a gradual increase in the absolute value of the probability differential until two years after an initial

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scandal. At this point, the probability differential drifts towards zero, suggesting that the probability of a second scandal converges to the base average probability of a scandal after a few years. Relative to five years after a scandal, there is a 13 percentage point lower likelihood of having a second scandal one year after a scandal.[15] This is consistent with colleges responding to scandals, leading to lower likelihood of a second scandal in the years immediately following a scandal, not simply a reverting back to the mean of low-likelihood of having a scandal. The second column shows a similar result but uses whether there was a scandal with relatively large amounts of media coverage (corresponding to Column 5 in **Table 2**). Again, there is a sharp decline in another scandal occurring again but the relationship dissipates over time.

4. Discussion

Scandals on college campuses – especially those with extensive media coverage – lead to decreases in the number of applications a college receives. The effect is large relative to other responses observed in the college choice setting. For example, a negative long form article has roughly the same effect as dropping ten rankings in the popular *U.S. News and World Report* college rankings (based on the point estimate in Luca and Smith (2013)).

Overall, our results have implications for applicants, for colleges, and for the media. Applicants should consider the multiple effects of a scandal. Scandals provide information about a school, but also serve as a deterrent – and colleges are unlikely to have a second scandal in the following years (an effect that cannot be explained simply by reversion to the mean). This suggests that after a scandal, the campus actually may be less risky. Applicants should also understand that schools will receive fewer applications in the wake of a scandal, potentially making it easier to get in. This demand response is consistent with other research literature

[15] Regression output of the logit model can be found in **Appendix Table 2**.

highlighting the fact that student applications respond to small changes in costs or informational environment (e.g. Luca and Smith, 2013; Pallais, 2015; Smith, Hurwitz, and Howell, 2015).

These results, which are net of any effort to mitigate the unfortunate circumstances, also have implications for colleges. Clearly college administrators do not wish harm on students, staff, or faculty, regardless of the downstream implications. However, our work suggests demand responses that will increase the cost of scandals that occur on campus. Having fewer applicants can impact rankings and prestige but may also make it difficult to craft the ideal class, whether it be falling short in enrollment and tuition revenue or enrolling relatively less desirable students.

Finally, the results have implications for the media. Our estimates do show that scandals with more media coverage have the larger impacts on applications. Not only are they providing information to potential applicants, but our finding suggests that media is serving the purpose of holding colleges accountable by deterring future scandals.

References

Abrams, T. August 20, 2012. "Emory University Acknowledges Incorrect Admissions Data." *New York Times.*

Alter, M. and R. Reback. 2014. "True for Your School? How Changing Reputations Alter Demand for Selective U.S. Colleges". *Educational Evaluation and Policy Analysis* 36, no. 3: 346-370.

Azoulay, P., A. Bonatti, and J. Krieger. 2015. "The Career Effects of Incident: Evidence from Scientific Retractions". *NBER Working Paper No. 21146.*

Baker, S. and A. Fradkin. 2015. "The Impact of Unemployment Insurance on Job Search: Evidence from Google Search Data." *Working paper*.

Berger, J., A. Sorenson, and S. Rasmussen. 2010. "Positive Effects of Negative Publicity: When Negative Reviews Increase Sales." *Marketing Science* 29, no. 5: 815-827.

Bowman, N. and M. Bastedo. 2009. "Getting on the front page: Organizational reputation, status signals, and the impact of U.S. News and World Report on student decisions." *Research in Higher Education* 50: 415-436.

Brown, N. and C. Deegan. 1998. "The public disclosure of environmental performance information—a dual test of media agenda setting theory and legitimacy theory." *Accounting and Business Research* 29, no. 1: 21-41.

Chung, D. 2013. "The Dynamic Advertising Effect of Collegiate Athletics." *Marketing Science* 32, no. 5: 679-698

Chung, K., T. Derdenger, and K. Srinivasan. 2013. "Economic Value of Endorsements: Tiger Woods' Impact on Sales of Nike Golf Balls." *Marketing Science* 32, no. 2: 271-293.

Conlin, M., S. Dickert-Conlin, and G. Chapman. 2013. "Voluntary Disclosure and the Strategic Behavior of Colleges." *Journal of Economic Behavior and Organization* 96: 48-64.

Deegan, C. and M. Islam. 2010. "Media pressures and corporate disclosure of social responsibility performance information: A study of two global clothing and sports retail companies." *Accounting and Business Research* 40, no. 2: 131-148.

Freedman, S. December 5, 2007. "Putting a Curious Eye on a High School Ranking System." *New York Times*.

Griffith, A. and K. Rask. 2007. "The influence of the U.S. News and World Report collegiate rankings on the matriculation decisions of high-ability students: 1995-2004". *Economics of Education Review* 26: 244-255.

Hoxby, C. and S. Turner (2013). Expanding College Opportunities for High-Achieving, Low Income Students. Discussion Paper 12-014. Stanford Institute for Economic Policy Research.

Hurwitz, M. and J. Smith, 2016. "Student Responsiveness to Earnings Data in the College Scorecard," Working paper.

Knittel, C. and V. Stango. 2013. "Celebrity Endorsements, Firm Value, and Reputation Risk: Evidence from the Tiger Woods Scandal." *Management Science* 60, no. 1: 21-37.

Liu, A.Y., R. Ehrenberg, and J. Mrdjenovic. 2007. "Diffusion of Common Application Membership and Admissions Outcomes at American Colleges and Universities." *NBER Working Paper No. 13175*.

Luca, M. and J. Smith. 2015. "Strategic Disclosure: The Case of Business School Rankings." *Journal of Economic Behavior & Organization* 112: 117-125.

Luca, M. and J. Smith. 2013. "Salience in Quality Disclosure: Evidence from U.S. News college rankings." *Journal of Economics and Management Strategy* 22: 58-77.

Meredith, M. 2004. "Why do Universities Compete in the Ratings Game? An Empirical Analysis of the Effects of the U.S. News and World Report College Rankings." *Research in Higher Education* 45, no. 5: 443-461.

Monks, J. and R. Ehrenberg. 1999. "The impact of U.S. News and World Report college rankings on admissions outcomes and pricing policies at selective private institutions." *NBER Working Paper No. 7227*.

Page, L. and J. Scott-Clayton. 2015. "Improving College Access in the United States: Barriers and Policy Responses," NBER Working Paper #21781.

Pallais, A. (2015). "Small Differences that Matter: Mistakes in Applying to College," *Journal of Labor Economics*, 33(2): 493-520.

Pope, D. and J. Pope. 2009. "The Impact of College Sports Success on the Quantity and Quality of Student Applications." *Southern Economic Journal* 75, no. 3: 750-780.

Reitman, J. March 28, 2012. "Confessions of an Ivy League Frat Boy: Inside Dartmouth's Hazing Abuses." *Rolling Stone*.

Rothstein, R. August 28, 2002. "Sums versus Summarizing: SAT's Math-Verbal Gap." *New York Times*.

Slotnik, D. and R. Perez-Pena. January 30, 2012. "College Says It Exaggerated SAT Figures for Ratings." *New York Times*.

Smith, J., M. Hurwitz, and J. Howell, 2015. "Screening Mechanisms and Student Responses in the College Market," *Economics of Education Review*. 44:17-28.

"Voluntary Support of Education: 2015." *Council for Aid to Education* New York, NY.

Wu, L. and E. Brynjolfsson. 2015. "The Future of Prediction: How Google Searches Foreshadow Housing Prices and Sales." In *Economic Analysis of the Digital Economy*, NBER, eds. A. Goldfarb, S. Greenstein, and C. Tucker.

Yung, C. 2015. "Concealing campus sexual assault: An empirical examination." *Psychology, Public Policy, and Law* 21, no. 1: 1-9.

Zyglidopolous, Stelios, Andreas Georgiadis, Craig Carroll, and Donald Siegel. 2012. "Does media attention drive corporate social responsibility?" *Journal of Business Research* 65, 1622-1627.

Tables

Table 1: Summary Statistics

Variable:	OBS	MEAN	STD DEV	MIN	MAX	MED
Total Applicants	1192	20525.64	11528.1	764	80522	19062
Female Applicants	1192	10794.5	6347.6	323	42922	10022
Scandal	1192	0.096	0.29	0	1	0
Sexual Assault	1192	0.030	0.17	0	1	0
Murder	1192	0.045	0.21	0	1	0
Cheating Scandal	1192	0.013	0.12	0	1	0
Hazing Scandal	1192	0.015	0.12	0	1	0
Long-Form Article	1192	0.009	0.10	0	1	0
At Least 1 NYT Cite	1192	0.032	0.18	0	1	0
Greater Than 5 NYT Cites	1192	0.010	0.10	0	1	0
Scandal with Major Coverage	1192	0.034	0.18	0	1	0
Controls:						
SAT Verbal – 25th Percentile	1187	576.8	57.9	420	720	560
SAT Verbal – 75th Percentile	1187	680.3	50.9	580	800	670
SAT Math – 25th Percentile	1187	604.1	57.9	462	780	600
SAT Math – 75th Percentile	1187	703.9	49.6	600	800	700
Instate Tuition	1192	20797.4	14389.1	0	47055	22856.5
Out-of-State Tuition	1192	27403.9	9248.4	3150	47055	27581
Common App	1192	0.483	0.5	0	1	0
USNWR T-100 Nat'l Univ. Rank*	1192	44.1	31.6	0	123	41

Source: *U.S. News and World Report* college rankings 2001-2013, Authors' Proprietary Scandal Data
* Of 1326 total rank-admission year observations, there were 165 rank-application year observations not reported in *U.S. News and World Report*. We controlled for missing ranks by creating a binary variable that took on the value 1 if rank was missing and 0 otherwise.

Table 2: The Impact of Scandals on Applications

	(1)	(2)	(3)	(4)	(5)
Dependent Variable: log(Total Applicants):					
Scandal	-0.020				
	(0.013)				
At Least 1 NYT Cite		-0.049*			
		(0.025)			
Greater Than 5 NYT Cites			-0.088**		
			(0.038)		
Long-Form Article				-0.104**	
				(0.040)	
Scandal with Major Coverage					-0.052**
					(0.025)
Constant	9.068***	9.112***	9.116***	9.111***	9.111***
	(0.583)	(0.573)	(0.580)	(0.577)	(0.573)
Controls	X	X	X	X	X
Observations	1,192	1,192	1,192	1,192	1,192
R-squared	0.748	0.749	0.749	0.749	0.749
Number of Colleges in Sample	102	102	102	102	102

Robust standard errors are in parentheses, clustered at the college level. All regressions have college and admission year fixed effects. Each regression includes the following control variables: institutional SAT percentile variables *(SAT Math—25th Percentile, SAT Math—75th Percentile, SAT Verbal—25th Percentile, SAT Verbal—75th Percentile)*, *Instate Tuition*, *Out-of-State Tuition*, *Common App*, and *USNWR Rank*.

*** p<0.01, ** p<0.05, * p<0.1

Table 3: The Deterrent Effect of Scandals

Dependent Variable = 1 if scandal occurred in admission year	(1)	(2)
Lag Scandal	-0.232***	
	(0.035)	
Lag 2 Scandal	-0.292***	
	(0.044)	
Lag 3 Scandal	-0.216***	
	(0.055)	
Lag 4 Scandal	-0.184***	
	(0.056)	
Lag 5 Scandal	-0.105*	
	(0.062)	
Lag Scandal with Major Coverage		-0.180***
		(0.067)
Lag 2 Scandal with Major Coverage		-0.232***
		(0.059)
Lag 3 Scandal with Major Coverage		-0.084
		(0.097)
Lag 4 Scandal with Major Coverage		0.039
		(0.107)
Lag 5 Scandal with Major Coverage		-0.097
		(0.131)
Constant	-1.460	-0.604
	(1.229)	(1.165)
Observations	806	806
R-squared	0.135	0.061
Number of Colleges in Sample	102	102

Each column fits an OLS regression model. Robust standard errors are in parentheses, clustered at the college level. All regressions have college and admission year fixed effects. Each regression includes the following control variables: institutional SAT percentile variables *(SAT Math—25th Percentile, SAT Math—75th Percentile, SAT Verbal—25th Percentile, SAT Verbal—75th Percentile), Instate Tuition, Out-of-State Tuition, Common App*, and *USNWR Rank*.

*** p < 0.01, ** p < 0.05, * p < .10

Figures

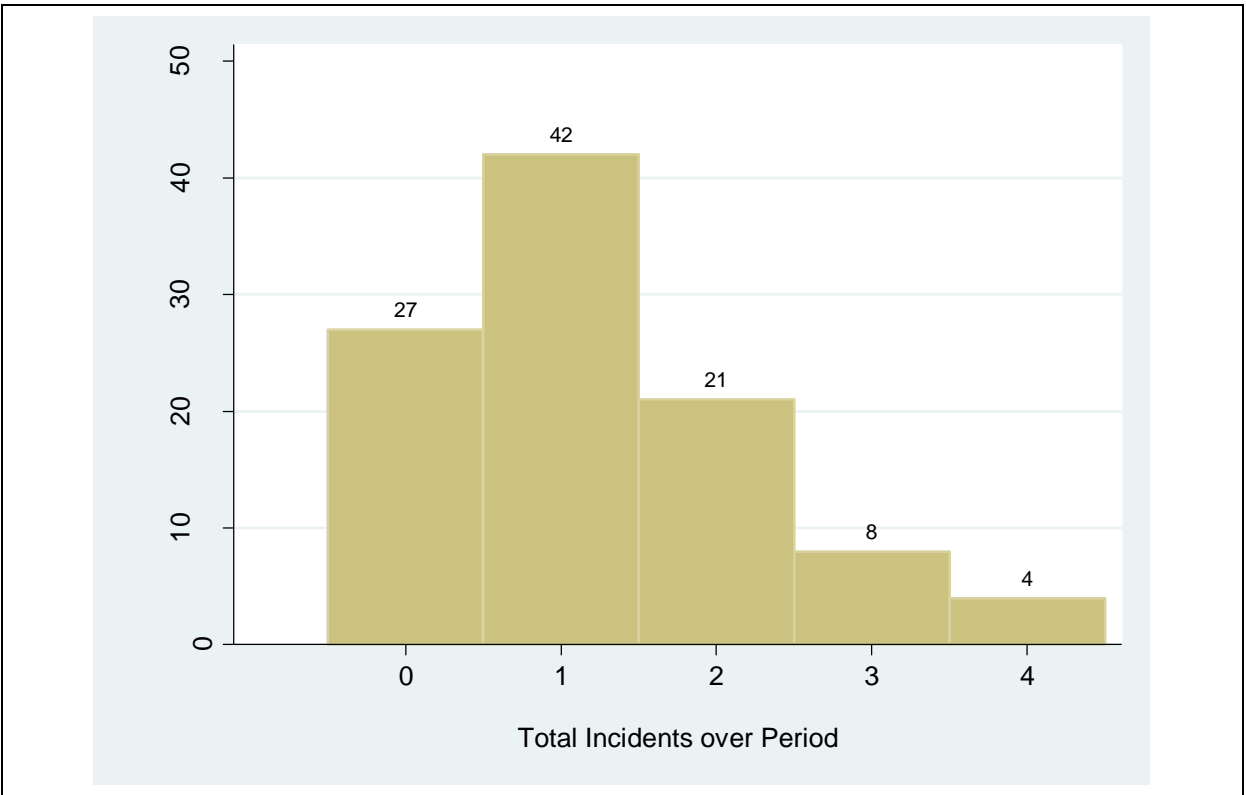## Figure 1: Number of Scandals by College (2001-2013)

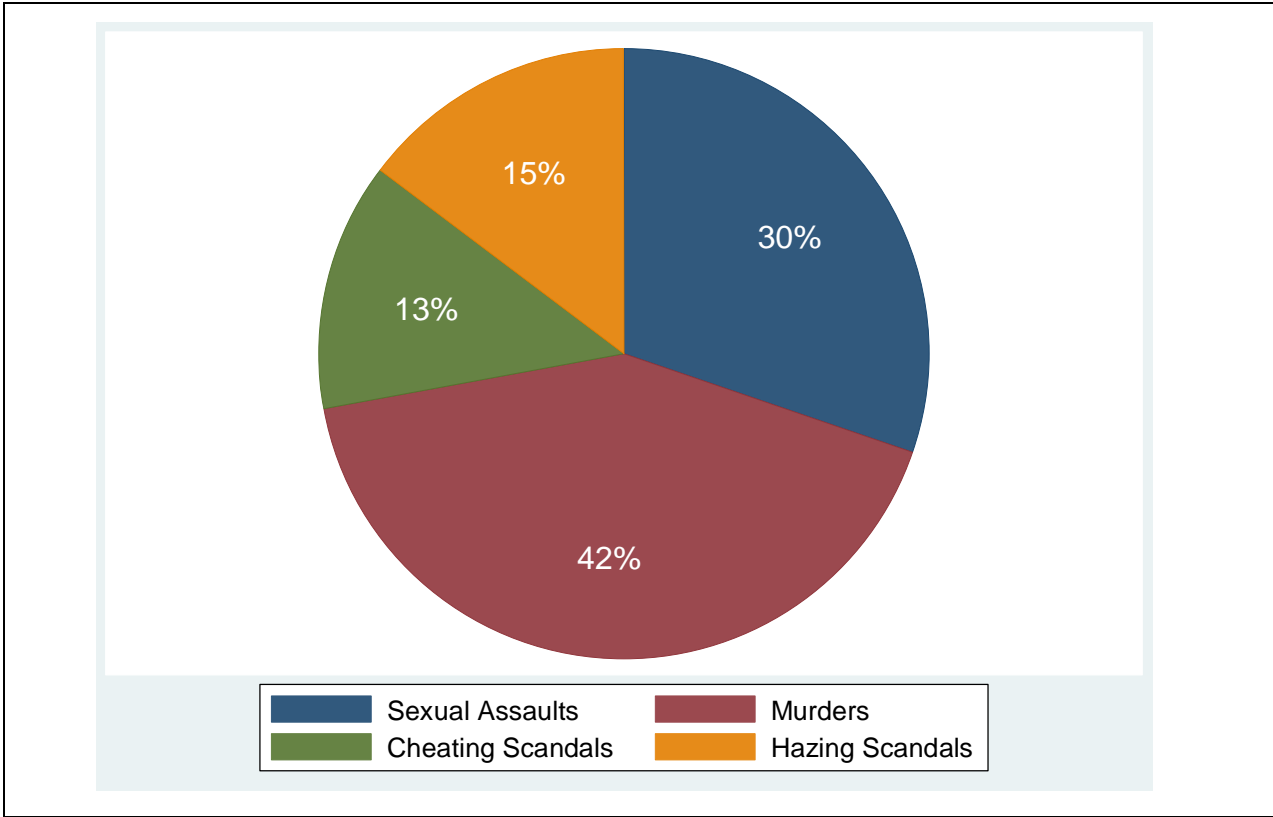**Figure 2: Types of scandals covered by the media (2001-2013)**
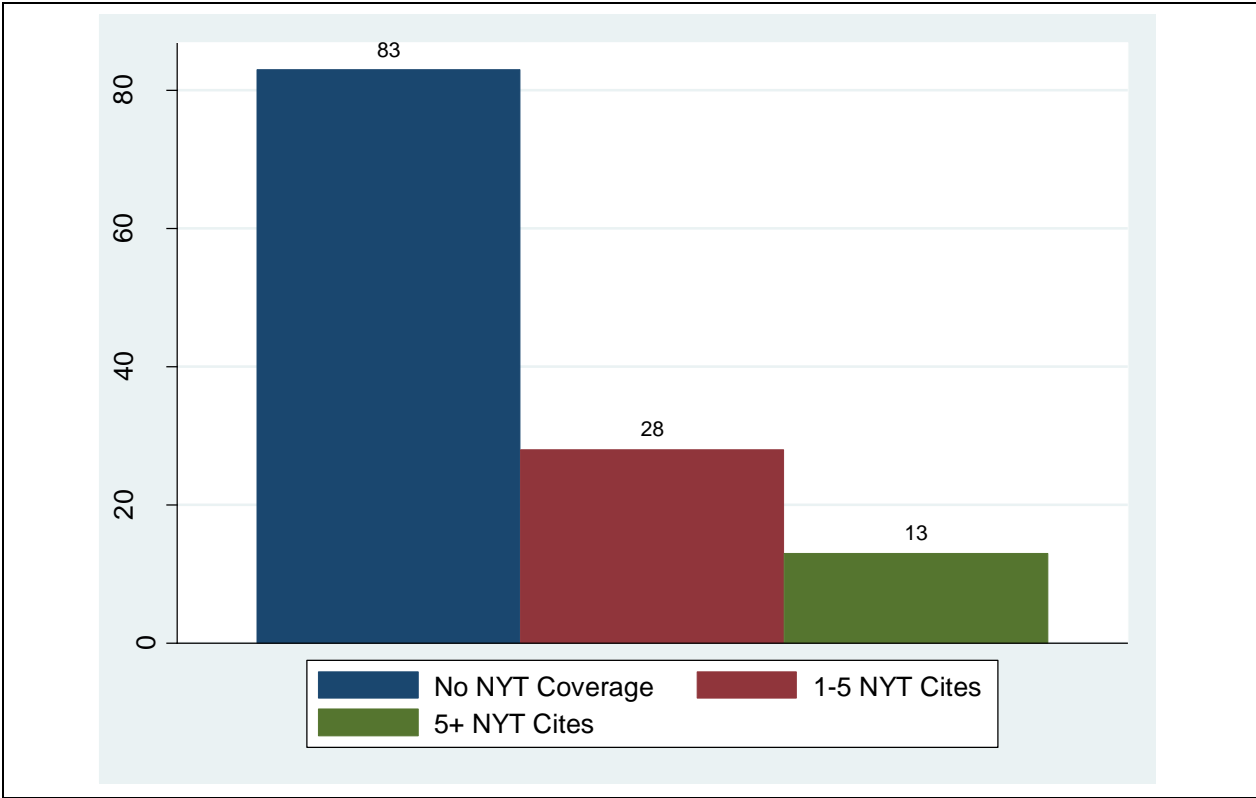
Figure 3: Extent of Media Coverage of Scandals (2001-2013)

Figure 4: Do Administrators React? Probabilities of Future Scandals given Prior Scandals

Appendix Tables

Appendix Table 1: U.S. News and World Report *"Best Colleges 2015"* Top 100 National Universities, Listed in Rank Order

COLLEGE NAME	COLLEGE NAME
Princeton University	Yeshiva University
Harvard University	University of Texas - Austin
Yale University	George Washington University
Columbia University	Ohio State University - Columbus
Stanford University	Pepperdine University
University of Chicago	Tulane University
Massachusetts Institute of Technology	Fordham University
Duke University	Southern Methodist University
University of Pennsylvania	Syracuse University
California Institute of Technology	University of Connecticut
Dartmouth College	Brigham Young University - Provo
Johns Hopkins University	Clemson University
Northwestern University	Purdue University - West Lafayette
Washington University in Saint Louis	University of Georgia
Cornell University	University of Maryland - College Park
Brown University	University of Pittsburgh
University of Notre Dame	Texas A&M University - College Station
Vanderbilt University	Worcester Polytechnic Institute
Rice University	Rutgers University - New Brunswick
University of California - Berkeley	American University
Emory University	Baylor University
Georgetown University	University of Iowa
University of California - Los Angeles	University of Minnesota - Twin Cities
University of Virginia	Virginia Tech
Carnegie Mellon University	Clark University
University of Southern California	Indiana University - Bloomington
Tufts University	Marquette University
Wake Forest University	Miami University - Oxford
University of Michigan - Ann Arbor	Stevens Institute of Technology
University of North Carolina - Chapel Hill	SUNY College of Environmental Science and Forestry
Boston College	Texas Christian University
New York University	University of Delaware
College of William and Mary	University of Massachusetts - Amherst
University of Rochester	Michigan State University
Brandeis University	University of California - Santa Cruz
Georgia Institute of Technology	University of Vermont
University of California - San Diego	Binghamton University - SUNY
Case Western Reserve University	Colorado School of Mines
University of California - Davis	Stony Brook University - SUNY
Lehigh University	University of Alabama
University of California - Santa Barbara	University of Colorado - Boulder
Boston University	University of Denver
Northeastern University	University of Tulsa
Rensselaer Polytechnic University	Drexel University
University of California - Irvine	Florida State University
University of Illinois - Urbana-Champaign	North Carolina State University - Raleigh
University of Wisconsin - Madison	University of San Diego
Pennsylvania State University - University Park	Saint Louis University
University of Florida	University of Missouri
University of Miami	University of Nebraska - Lincoln
University of Washington	University of New Hampshire

Appendix Table 2: Do Administrators React? Probabilities of Future Scandals Given Prior Scandals

Dependent Variable = 1 if scandal occurred in admission year	(1)	(2)
Lag Scandal	-2.985***	
	(0.554)	
Lag 2 Scandal	-3.662***	
	(0.659)	
Lag 3 Scandal	-3.136***	
	(0.597)	
Lag 4 Scandal	-2.898***	
	(0.625)	
Lag 5 Scandal	-2.398***	
	(0.676)	
Lag Scandal with Major Coverage		-1.386**
		(0.600)
Lag 2 Scandal with Major Coverage		-2.031***
		(0.755)
Lag 3 Scandal with Major Coverage		-1.195*
		(0.641)
Lag 4 Scandal with Major Coverage		-0.452
		(0.749)
Lag 5 Scandal with Major Coverage		-1.564
		(1.049)
Controls	X	X
Observations	535	535
Number of Groups in Sample	67	67

Each column fits a logit regression model. Standard errors in parentheses, clustered at the college level. All regressions have college and admission year fixed effects. Each regression includes the following control variables: institutional SAT percentile variables *(SAT Math—25th Percentile, SAT Math—75th Percentile, SAT Verbal—25th Percentile, SAT Verbal—75th Percentile), Instate Tuition, Out-of-State Tuition, Common App*, and *USNWR Rank*.

*** $p<0.01$, ** $p<0.05$, * $p<0.1$