Buying the Verdict:
Firms' Strategic Response to Litigation*

Lauren H. Cohen

Harvard Business School and NBER

Umit G. Gurun

University of Texas at Dallas

November 23, 2020

***** We would like to thank Geoffrey Booth, Christine Jolls, Ben Jones, Andrew Karolyi, Steven Karolyi, Louis Kaplow, Daniel Klerman, Prasad Krishnamurthy, Christian Leuz, Maureen O'Hara, Panos Patatoukas, Will Powley, Raghu Rau, Steven Solomon, Jed Stiglitz, Eric Talley, Jonathan Zinman, and seminar participants at the 2019 NBER Law and Economics meetings, 2019 AFA meetings, ICD Herzliya conference, 2018 conference on Empirical Legal Studies, University of California at Berkeley Law School and Haas Business School, University of Chicago, Koc University, University of Surrey, Oxford University, Frankfurt University, University of Vienna, Svigers Bank, Stockholm University, Harvard Law School, Northwestern University (Law), University of Pittsburg, University of Wyoming, University of Houston, Case Western University, Michigan State University, Tsinghua University, University of Connecticut, Georgia Tech University, Cornell University and University of Texas at Dallas. We gratefully acknowledge funding from the National Science Foundation (SciSIP-1535813). All errors are ours. Please send comments to either author. Contact information: Lauren Cohen: Harvard Business School, Rock Center 321, Soldiers Field, Boston, MA 02163, USA. Tel: 617-495-3888; Email: lcohen@hbs.edu. Umit G. Gurun: University of Texas at Dallas, 800 W Campbell Rd. SM 41, Richardson, TX 75024, USA. Phone: 972-883-5917. Email: umit.gurun@utdallas.edu.

Buying the Verdict:
Firms' Strategic Response to Litigation

Abstract

We document evidence that firms systematically increase specialized, locally targeted advertising following the firm being taken to trial in that given location - precisely following initiation of the suit. In particular, we use legal actions brought against publicly traded firms over the 20-year sample period that progress to trial between 1995 and 2014. In terms of magnitude, the increase is sizable: targeted local advertising increases by 23% (t=4.37) following the suit. They focus their advertisement spikes specifically toward jury trials, and in fact specifically toward the most likely jury pool. In addition, along with advertising expenditures, firms significantly increase their charitable contributions targeted toward litigated locations following being sued there. Lastly, we document that these advertising spikes are associated with verdicts, increasing the probability of a favorable outcome.

JEL Classification: E22, D25, G10, M37

Key words: Strategic behavior, Litigation, Advertising

Firms are legally obliged to operate within the standards of their operating jurisdictions. Even so, and despite the fact that firms spend substantial capital in order to stay within this legal framework, infractions occur. While many of these infractions are settled privately, a large number do make it into the court system to be adjudicated. These tend to be larger stakes cases (from a value-weighted perspective) for the firms involved (Lederman 1999). Moreover, the U.S. legal system is founded upon the notion that a jury of one's peers can conduct an arms-length review of a case adjudicating the guilt (or lack of sufficient evidence for guilt) of the alleged legal infraction. However, the moment that a party is sued, it has a clear incentive to influence the jury in its favor. Much of this convincing take place inside the courtroom. However, one power that large, publicly facing, and well-funded organizations have at their disposal is to do so also outside of the courtroom. In this paper, we document strong evidence for one form of that influence – namely, we find that firms systematically increase specialized, local advertising when it is taken to a court-trial in a given location – specifically in the geographic location of the court deliberation, and precisely following initiation of the suit.

We test all legal actions taken against publicly traded firms in federal courthouses over the nearly 20-year sample period between 1995 and 2014. In particular, we focus on those that progressed to trial proceedings. We find that these are spread throughout the United States, across industries, and over time. However, they share a common response by the firms who are defendants. Upon being sued in a given location, firms significantly increase advertising in that location. In terms of magnitude, they increase advertising by 23% (t=4.37) following the suit. In contrast, we see no increase: i.) in the same city, by the firm, but *before* and leading up to suit (we find a sharp discontinuity directly following the suit); ii.) in any other similar city at the same time by the same firm (so it is not a firm-level or even firm-market type policy move); and iii.) in the exact same city where the firm is located by any other firm operating there. Moreover, firms are significantly more likely to initiate advertising in cities (in which it had previously advertised zero), directly following lawsuit – with the probability of advertising initiation increasing by 25% (t=4.45). This results in firms shifting their advertising share significantly to sued locations following suits; both relative to the firm's total advertising spend, and relative to the total amount spent in that DMA by all other firms.

To concretize this, assume we find that Walmart is sued in Akron, OH in 2001. We see a large spike in Walmart's advertising in Akron directly following the suit. We see no abnormal movement in Walmart's advertising policy or spending leading up to the suit. Additionally, Walmart does not increase advertising following the suit in Toledo, OH (a similar sized market with similar growth rates leading up to 2001). Moreover, Target shows no abnormal move in the same sued-location, Akron, OH, at the exact same time that Walmart is ramping up advertising (so it has nothing to do with a general location-time effect).

We establish the precision of our effect to the specific time, firm, and location of our shocks using a number of placebo-effect set-ups (e.g., redefining the "suit" year as years prior in the same location). Additionally, we do so through the inclusion of a number of fine fixed effects. In particular, we include firm-by-time (e.g., comparing all cities in which Walmart operates and advertises in a given year), as well as firm-by-city (e.g., comparing over time Walmart's advertising decisions and policies in solely Akron, OH). We find that the effect remains economically large and statistically significant in all of these specifications. Moreover, when we split our sample over time, we find that these effects are large and significant up through the present day.

As an example of our impact, take the case of Samsung. Samsung is the most sued firm in the Eastern District of Texas Federal District Court. This comes nearly entirely from patent infringement allegation cases and has been driven in recent decades by the rise in NPE activity (Cohen, Kominers, and Gurun 2016). Patent infringement litigation trials are unique in that nearly all are adjudicated with a jury (as opposed to bench trials (i.e., decided by the judge) – Lemley 2013). Moreover, the stakes of these cases have been large – in the tens to hundreds of millions of dollars of awarded damages against the firm, with many suits still ongoing (Klerman and Reilly 2016). How has Samsung responded to this spate of allegations? Beside spending large amounts to launch legal defenses against the infringement claims, we have seen it make a number of other deliberate decisions.

First, each year Marshall Texas holds a locally famous Winter Festival (the Marshall Winter Festival). Following generous Samsung sponsorship, that festival began with the Samsung Holiday Celebration Show (Figure 1). Secondly, Samsung paid for the construction of the Samsung Ice Skating Rink in Marshall, Texas. The Samsung Ice Skating Rink is not only

the sole outdoor ice-skating rink in all of Texas (for clear reasons), it is located directly outside the front of door of the District Courthouse (Figure 2), visible to all jurors who enter. Third, Samsung sponsored numerous High School Scholarships. For example:

1.) The Samsung General Scholarship;

2.) The Samsung Math and Science Scholarship; and even,

3.) The Samsung Football Scholarship.

A requirement to receive one of these scholarships (as seen in Figure 3) was attending high school in Marshall, Texas or one of the surrounding towns to Marshall. Samsung's spending pattern, its initiation solely following the firm's legal suits in Marshall, and its focus on the local community, make this an interesting example of a firm (by revealed preference) thinking it optimal to make these time-, and region-focused investments. Moreover, to book-end this example, the Supreme Court ruled in 2017 on *TC Heartland LLC v. Kraft Foods Group Brands LLC* that firms could no longer engage in "forum-shopping" for patent cases, which the cases being brought in Marshall, TX. In tandem, Samsung drastically retrenched on all of the charitable activities mentioned above in Marshall.

We find in this paper general evidence across time, location, and firms, of corporations engaging in this "influencing of the verdict," behavior. While we focus primarily on advertising, this could certainly take the form of other channels. To explore this further, we collect micro-level data on the charitable contributions of firms' charitable arms at the zip-code level. We find, analogous to advertising expenditures, that firms significantly increase their charitable contributions to a DMA directly following being sued there.

We test a number of other implications of influencing the verdict behavior by firms. Firstly, if firms really are attempting to maximize influence with their spikes in advertising, we might expect them to concentrate on markets where there are fewer other firms also advertising; so where their increase in advertising will take up a larger share of the market. Again, this is precisely what we see in the data. Firms concentrate significantly larger advertising spikes in locations where there are fewer other firms also advertising.

Secondly, if what we document truly does represent firms attempting to influence the verdict, we may expect these firms to concentrate on jury (as opposed to judge (bench)) adjudicated trials, as the average member of the jury pool is likely more influenceable than the judge. While many types of lawsuits have variation in the usage of jury vs. bench, one type of lawsuit that is nearly uniformly decided by jury – as mentioned above - are patent lawsuits. We thus segregate out patent lawsuits and test specifically on these. Consistent with this buying the verdict being more concentrated in jury trials, we find that the advertising spike is large and significant in the case of patent (jury) lawsuits, but small and statistically zero in the case of bench trials.

Third, we use the novel micro-level reporting of our data to further explore the mechanism. In particular, we have the amount spent in advertising by a given firm *specifically* on television advertising in a given location. Moreover, we have the amount of television watched within a given location, broken down finely into 5-year increments of the demographic (e.g., 15 to 19-year old, 20 to 24-year old, 25 to 29-year old, 30 to 34-year old, etc.). We use these data in two ways. First, if influencing the verdict really is driving firm behavior, we might expect firms to concentrate their television advertising efforts precisely where the audience eyes per advertising dollar are highest (e.g., a potential proxy for return on advertising investment). We find exactly this to be true – firms concentrate television advertising efforts precisely where audience per television advertising dollar are the highest. Second, using the fine demographic viewership data, we are able to separate viewers into the most likely jury pool (the average juror in our sample is aged 50), and those television viewers that couldn't possibly be jurors (minors - viewers under the age of 18). We find that television advertising dollars are strategically targeted exactly at the most likely jury pool. Alternatively, we see no spike in advertising in the same location to minors (who are ineligible to be jurors).

Taking a step back, we believe that the sum of our evidence points most plausibly to firms taking strategic, targeted actions in order to the influence the verdict of litigation against them outside - in addition to inside - the courtroom. However, there are other potential explanations. For instance, it might be that the firm is advertising more in places that it is being sued because it also faces brand backlash on the product-side precisely in those locations (e.g., Chipotle food-borne contaminant issues were spatially hitting different locations (and not

others); and the BP Oil spill along the Gulf Coast). You might then see advertising spike in these locations following an infraction not to convince jurors, but instead to simply convince customers (and the communities) that the firm's brand was committed to a certain level of product quality, or investment in the community. In order to test this, we test a number of its implications. First, as mentioned above we see the effect of this increase in advertising strong and concentrated in patent (jury) trials. This is despite the fact that patent infringement allegations are amongst the most esoteric and most difficult to both describe to (and describe direct damages toward) the average consumer, and so might be least likely to cause localized public harm or outrage. Second, consistent with the firm not simply protecting important local relationships, we see a large and significant 25% increase in initiations following a lawsuit in that location. These locations (by revealed preference) were not locations that the firm sufficiently valued the act of advertising in - so not strategically important enough to advertise ongoing stakeholder relationships with - until precisely after the lawsuit, only after which advertising was initiated. Third, following the advertising spike of firms after lawsuits, we find that firms advertising in those sued locations are back to baseline by 3 years following (when the suits have been adjudicated).

Next, we explore subsamples of firms that we might *ex ante* expect to not to respond to litigation events through advertising channel either because of incentive or legislation constraints. First, several legislation events since 1970 prevent firms in the tobacco industry from advertising in various media outlets. For example, the Public Health Cigarette Smoking Act in 1970 prevents firms in the tobacco industry from advertising on television and radio. Consistent with the intuition that these legislation constraints limit tobacco firms from responding to litigation events using advertising as a tool, we find no relation between advertising and litigation for firms in the tobacco industry. Second, we examine business-to-business firms (B2B). These firms – who sell goods only to other businesses, not to retail consumers – unsurprisingly, advertise significantly less, as their business models are on average based on longer-term supply relationships with other firms. However, when we run our exact same specification, we find that B2B significantly increase advertising precisely following lawsuits. In fact, they have a 50% larger probability of initiating advertising following suit (relative to retail facing firms), perhaps not surprisingly, largely due to their lower need for

advertising (and presence) *ex ante*. Third, we examine plaintiff firms' advertising responses, as well. Plaintiffs (the firms filing suit or damages against another party) have *not* been accused of any wrongdoing, and thus potentially have less of a need to repair any brand damage with consumers. However, they have an equivalent incentive to curry favor with juries in order to rule in their favor in order to win the lawsuit. We find that firms as plaintiffs – like defendants – significantly increase advertising precisely in those locations in which they bring lawsuits, and precisely at the time they bring the suit.

While the results we have found are consistent with firms' strategic use of advertising following being sued, one might be still be concerned that an unobserved firm-DMA-year level factor can drive the dynamics that we observe. In order for this to be the case, the unobserved firm-level variable to explain the pattern needs to change at the firm-DMA-year level at the precise time as the suit. Specifically, it must begin only after the suit is initiated in the solely the DMA being sued, terminate directly after the suit, and exist for both defendant and plaintiff firm cases. Moreover, this unobservable factor should have "turned on" only for trials when firms are either defendants or plaintiffs (but not both), only for jury trials, causes firms to only target 50-year olds with their advertising, etc.. The same unobserved factor should also increase for B2B firms but remain unchanged for firms whose ability to advertise is constrained by law. Stepping back, we thus believe that the totality of the results are most consistent with advertising being used as a strategic response by firms in the sued locations.

Taken together, our tests strongly indicate that firms strategically respond to litigation shocks using advertising as a tool to influence the outcomes. It is worth noting that the effects we document are robust across our sample period - even through present day. Thus, this does not appear to be a behavior that is an artifact of the past, but instead is a robust firm behavior through the present; making the need to understand it more acute.

Turning to the impact of this advertising on outcome of the trial, we do find suggestive evidence of "buying the verdict." We caveat this, as we do not observe settlements, or terms of settlements, and thus we can estimate only the trials that proceed to verdict for either the plaintiff or defendant. This being said, our results suggest that a $183,000 increase in advertising is associated with a roughly 21% increase in winning odds for the average firm, which is a sizable

effect compared to the median damages paid in most common litigation types observed in our sample.

Stepping back, the fact that this behavior is: i.) robust across time, firms, and locations, ii.) lines up across strategic dimensions of the behavior, and iii.) is strong and robust through present-day, suggests that it is worth examining more closely as litigation against firms continues to rise. The broader implication of this is that policy makers, given this increasing trend in behavior, should consider what impact it is having – and whether it is a desired impact – on the judicial process and its outcomes.

The remainder of the paper is organized as follows. Section I provides a brief background and literature review. Section II develops some of our predictions about the relationship between litigation and advertising for a financially constrained firm that operates in multiple regions. Section III describes the data we use, while Sections III presents the main results on influencing the verdict, and establishes its identification in firm-, time-, and location-specific space. Section IV explores the mechanism in more detail, establishing where buying the verdict behavior is more acute, and its increasing usage over time. Section VI refines the buying the verdict activity and estimates the economic impact of influencing the verdict, while Section VII concludes.

I. Background and Literature

Litigation is generally recognized as being costly, unpredictable and inefficient. Yet it is also a fact of life that any business activity inevitably involves litigation. Average percentage of litigation costs as a percentage of total revenues rose from 0.62% to 0.89% between 2000 and 2008. While the outside litigation costs doubled, (from $66 million to $115 million), the in-house litigation costs remained similar ($16 to $18 million).[1] Increasingly litigious corporate environment has been also documented in recent surveys involving smaller companies. The *2015 Litigation Trends Annual Survey*, compiled by Norton Rose Fulbright, found that 34% of the 803 corporate counsels responded to survey reported a litigation spending budgets of $1

[1] Litigation Cost Survey of Major Companies, 2010, Lawyers for Civil Justice, Civil Justice Reform Group, and the U.S. Chamber Institute for Legal Reform.

million to $5 million in 2014. The corresponding figure in 2013 was 26%. A significant portion of all commercial litigation settles short of trial.[2]

Our paper is primarily related to the literature on how persuasion affects different clienteles' opinions. Our evidence shows that advertising plays a role in persuading the public opinion on the company and potentially create a positive impression of the firm on potential jurors. In their survey paper DellaVigna and Gentzkow (2010) list four different clienteles through with persuasion changed the way these groups made their decision: consumers, investors, voters, and donors.[3]

The first clientele is consumers. Bagwell (2007) notes that firms spend considerable amounts of money for advertising primarily because they believe consumers respond to these advertising efforts. He puts forth various channels through which advertising can affect consumers' response to advertising. According to one channel, called as the information view, search costs may deter a consumer from learning of each product's existence, and advertising help consumers learn about advertised product's existence, price and quality. In this view, when a firm advertises, consumers receive low cost additional direct (prices, location) and/or indirect (the firm is willing to spend on advertising) information. Advertising can also influence consumers' tastes and creates spurious product differentiation and brand loyalty. If the demand for a firm's product is inelastic, advertising can help extract more rent from these consumers. Lastly, advertising may create no "real" value to consumers, but rather induces artificial product differentiation and this leads to a marketplace with high prices and profits. Examples of this

[2] Hope Viner Samborn, *The Vanishing Trial: More and More Cases Are Settled, Mediated or Arbitrated Without a Public Resolution*, 88 A.B.A.J. 24 (October 2002). The author discusses a widely cited study from Marc Galanter that found the number of cases resolved by trial in 2001 was only 2.2% of all cases filed in federal court. *See also* Beverly J. Hodgson, *Who's the Alternate Now?,* Conn. Law Tribune, March 8, 2004, at 2 ("a recent survey of federal district courts reveals that just 1.8% of civil cases go to trial." and "In the state courts, the estimate is that just under 5 percent of the civil cases filed are ever tried.").

[3] DellaVigna and Gentzkow (2010) categorizes models in modeling persuasion in two groups. In the first category, persuasion affects behavior because it changes receivers' beliefs. This includes models in which receivers are rational Bayesians, such as information (Stigler 1961, Telser 1964) and signaling (Nelson 1970, Nelson 1974) models of advertising, cheap-talk models (Crawford and Sobel 1982), and persuasion games (Milgrom and Roberts 1986), among others. In the second category, persuasion affects behavior independently of beliefs. This includes models such as those of Stigler and Becker (1977) and Becker and Murphy (1993) in which advertising enters the utility function directly, as well as older models of persuasive advertising (Braithwaite 1928).

view has been documented in financial markets in which homogeneous products are marketed to investors. For instance, Hastings, Hortacsu, and Syverson (2011) show that the use of advertising of private social security funds in Mexico is related to their pricing. Bertrand et al. (2010) use a field experiment to show that advertising increases demand for consumer loans. Gurun, Matvos and Seru (2016) shows mortgage providers are able to lend at higher rates in areas they advertising efforts are higher.

The second clientele persuasion is communication at is investors. For this purpose, firm use various channels such as corporate responsibility events, press releases, CEO interviews (Kim and Meschke 2012), conference calls (Cohen, Lou, and Malloy 2016), analyst reports (Womack 1998), advertising (Lou 2012), or media (Reuter and Zitzewitz 2006, Engelberg and Parsons 2012, Gurun and Butler 2012). A third clientele of persuasion is voters. Persuasion may come from politicians themselves, interested third parties (Gerber and Green 2000), or the news media (DellaVigna and Kaplan 2007, Gentzkow 2006). A fourth group is nonprofits or charities which solicit contributions with the objective of increasing donations. Examples of this work include Landry et al. (2006), and List and Lucking-Reiley (2002). Our evidence shows that advertising plays a role in persuading the public opinion on the company and potentially create a positive impression of the firm on potential jurors.

II. Conceptual Framework: Litigation Shock and Advertising Response

In this section we provide a simple model for a financially constrained firm which operates in multiple regions. The main result of this analysis is a proposition showing that when a financially constrained firm is subject to a litigation shock in one of the regions it operates, it responds to this shock with an investment in advertising to minimize the damage inflicted by the litigation, but at the same time decrease in advertising input in other regions. Our model is similar in spirit to Giroud and Mueller (2019) which studies how shocks in distant regions of a conglomerate can affect the other divisions. We test this prediction of the model in Section IV.

Consider a financially constrained firm which operates in multiple regions. Each regional firm unit produces positive publicity as a result of investment in advertising (A_i) with the following production function: $f_i(A_i) = \phi_i f(A_i)$, where ϕ_i is a region-specific publicity

productivity parameter. To transform advertising investment into output, each regional firm unit takes output prices p_i (advertising effectiveness parameter) and factor price of advertising w_i (advertising cost) as given. The higher the publicity in a given region $p_i \phi_i f(A_i)$, the lower the damage caused by the litigation. The firm has C_i cash in each region.

The firm solves:

$$\max_{L_i,\lambda} \delta \sum_i p_i \phi_i f(A_i) - \sum_i w_i A_i + \lambda \left[\sum_i C_i - \sum_i w_i A_i\right], \quad (1)$$

where λ denotes the Lagrangian multiplier associated with the budget constraint. The Kuhn-Tucker conditions for this budget constraint are:

$$\delta p_i \phi_i f'(A_i) = (1+\lambda)\, w_i, \quad (2)$$

$$\sum_i w_i A_i \leq \sum_i C_i, \quad (3)$$

$$\lambda \left[\sum_i C_i - \sum_i w_i A_i\right] = 0;\ \lambda \geq 0. \quad (4)$$

Now, consider the firm is litigated in region j, a positive shock ϕ_i in region j. If the firm is financially unconstrained, setting $\lambda = 0$ and differentiating (2) with respect to ϕ_j, we obtain

$$\delta p_j \left[f'(A_j) + \phi_j f''(A_j) \frac{dA_j}{d\phi_j}\right] = 0,$$

implying that:

$$\frac{dA_j}{d\phi_j} = \frac{-f'(A_j)}{\phi_j f''(A_j)} > 0.$$

In other words, following the litigation in region *j*, while advertising input in region j increases. Now, suppose next that the firm is financially constrained, so that the budget constraint (3) binds $(\lambda = 0)$. There are two effects at work. First, as in the financially unconstrained case, advertising input in region j increases. However, this reduces the scarce funds, which now cannot be used for advertising inputs in regions $i \neq j$ given that advertising input in these regions is below the first-best optimum. As a consequence, advertising input in regions $i \neq j$ *decreases*. Differentiating (2)-(3) with respect to ϕ_j and solving yields:

$$\frac{d\lambda}{d\phi_j} = \frac{\frac{w_j f'(A_j)}{\phi_j f''(A_j)}}{\sum_i \frac{w_i^2}{\delta p_i \phi_i f''(A_i)}} > 0,$$

$$\frac{dA_j}{d\phi_j} = \frac{w_j f'(A_j)}{\phi_j f''(A_j)} \left[\frac{-\sum_{i \neq j} \frac{w_i}{\delta p_i \phi_i f''(A_i)}}{\sum_i \frac{w_i^2}{\delta p_i \phi_i f''(A_i)}} \right] > 0, \text{ and}$$

$$\frac{dA_i}{d\phi_j} = \frac{w_j f'(A_j)}{\phi_j f''(A_j)} \frac{\frac{w_i}{\delta p_i \phi_i f''(A_i)}}{\sum_i \frac{w_i^2}{\delta p_i \phi_i f''(A_i)}} < 0 \ \forall i \neq j.$$

Thus, if the firm is financially constrained, a litigation in region j leads to an increase in advertising in region j but a decrease in advertising in regions $i \neq j$.

III. Data and Summary Statistics

We draw from a variety of data sources to construct the sample we use in this paper. To identify involvement in litigation events, we use the Audit Analytics Litigation database, which covers the period from 1995 to 2013 and reports information on litigation for Russell 1000 firms from legal disclosures filed with the SEC. Audit Analytics collects details related to specific

litigation, including the original dates of filing and locations of litigation; information on plaintiffs, defendants, and judges; and, if available, the original claim amounts and the settlement amounts.

To measure regional level advertising, we utilize Kantar Media Stradegy database. This database allows us to calculate firm level advertisement across Designated Market Areas (DMA) between 1995 and 2014. DMA regions define boundaries of targeted local advertising and direct marketing campaigns across multiple media. A DMA typically refers to a geographic region rather than a city or county, and may contain zip codes from neighboring states. Stradegy contains data from 105 of all 210 DMAs, which correspond to 92% of the population in the United States. Because our interest lies in local level advertising, in our tests we primarily use total advertising spending information in the following channels: spot TV, spot radio, outdoor (billboard) and local newspapers. Our unit of analysis is Firm x DMA x Year, i.e. amount of advertising spending by a given firm at a given DMA in a given year.

In some of our tests, we focus on a particular media channel, namely spot TV, to identify the relation between advertising and litigation. For these tests, we draw data from TV ratings information contained in the Nielsen Ratings database. This database allows us to estimate the number of TV exposure hours a given age group watches TV. This estimate combines information on duration and timing of the rating measurement period (Day time Monday - Friday 9 am - 4 pm vs. Primetime) and number of persons viewing TV estimates in a given demographics (age group and gender). Finally, we obtain monthly stock returns from the Center for Research in Security Prices (CRSP) and firms' book value of equity and earning per share from Compustat.

To construct our sample, we first match both the litigation and the advertising data to public firm identifiers. To match Audit Analytics to Compustat firms, we use the CIK identifier contained in the data. This identifier is a number given to an individual company by the SEC. To match AdSpender to Compustat, we use several pieces of information given on the advertiser. For a given advertisement, we can observe the brand, their advertiser (company), and the parent company of the advertiser. We hand match advertiser to Compustat firm names. In cases where we cannot match advertiser to a Compustat firm, we use the parent company information for matching process.

To link local advertisement to litigation, we hand match 90 of the federal district courthouses to DMAs. We match 65 of the federal district courthouses to a DMA for which we have local advertising data. These 65 federal courthouses handle 14,412 dockets, approximately 90% of all dockets filed in all federal district courthouses during the same time period.

To create our test sample, we join litigation and advertising databases only for those DMAs for which we have both advertising and litigation data. Moreover, if a firm is sued multiple times in a given DMA, we collapse these multiple litigation events to one observation. We define *Sued* as a dummy variable equal to 1 if a firm was litigated at least one time in a federal district courthouse in a given DMA in year *t*. We also define *Sued Patent* as a dummy variable which equals to 1 if a firm was litigated for a patent infringement reason. Similarly, we define *Sued Tort* as a dummy variable equal to 1 if the litigation event is related tort. Our dataset includes only the cases contained in the Audit Analytics database, we are not able to identify litigation if a firm is litigated in state court or if the defendant firm did not consider the litigation material and not reported to SEC, the primary data source of Audit Analytics. In Table II, we tabulate unique number of dockets reported in the Audit Analytics database by year. Because our advertising data covers period covers years between 1996 and 2014, we use dockets with filing years between 1995 and 2013. In Panel B, we tabulate the number of unique dockets filed in top 5 federal district courthouses. In Panel C, we tabulate the number of unique dockets by case type for the top 5 categories.

IV. Buying the Verdict: Empirical Results

Litigation represents a potentially large liability to firms; in the extreme negative realization, it can impact potential firm viability. The optimal response of firms is investing to maximize the chance of a positive outcome, which while including a large investment of legal expertise within the courtroom, also allows for investment outside of the courtroom itself. In particular, one power that large, publicly facing, and well-funded organizations have at their disposal is to use the channel of influence of local, specialized advertising. Namely, when a firm

is taken to trial in a specific geographic location, we test whether behavior with regard to this location changes in systematic ways.

Table III shows the first test examining the behavior of firms. In particular, it explores the advertising behavior of firms, and in particular, how this behavior may change around the times- and locations- of being sued. We examine all legal actions taken against publicly traded firms over the nearly 20-year sample period between 1995 and 2013. In particular, we focus on those that progressed to trial proceedings. Our unit of analysis is Firm x DMA x Year, i.e. amount of advertising spending by a given firm at a given Designated Market Area (DMA) in a given year. DMA regions define boundaries of targeted local advertising and direct marketing campaigns across multiple media.

Table III regresses the amount of *future* (year t+1) advertising spending by a given firm in a given Designated Market Area (DMA) in a given year on a number of determinants. The independent variable of interest is *Sued*: a dummy variable which equals to 1 if a firm was litigated at least one time in the federal courthouse in a given DMA in year *t*. We also include control variables of *DMA Market Size*: the sum of all local advertising expenses by all firms at a given DMA in year (*t*); and *Advertising Spending (t)*: advertising expenditure by the same firm, in the same location, in year (*t*). In these specifications, we also include fine fixed effects. Specifically, we include Firm x DMA fixed effects to control for firm-location invariant conditions that impact a given firm's strategy to advertise there (e.g., Walmart's advertising in Los Angeles vs. in Akron) and investigate the time series variation for a given firm in a given DMA. In addition, we include year fixed effects to control for systematic trends and shocks impacting all firms over time.

From Table III, we see strong and consistent evidence that upon being sued in a given location, firms significantly increase advertising in that specific location. Column 4 of Table III shows the full specification. In terms of magnitude, controlling for other determinants of firm advertising, firms increase advertising by 23.6% (t=4.37) following the suit.

Moreover, in Column 1, we run the same regression, but instead of level of advertising, we test for the impact of the suit on the probability of initiating advertising in a DMA that had zero beforehand. These show similar inferences. Namely, the coefficient on *Sued* in Column 1

implies that upon being sued, a firm is 25.4% (t=40.91) more likely to initiate advertising in that location had it not been advertising there beforehand. From a mean of 2.4%, this effect translates to a probability of 27.8% (= 25.4%+2.4%), over a ten times larger probability of advertising initiation directly following the suit being filed in that location.

One might worry that the increases in advertising that we document in Table III are simply artifacts of firm-level policies to expand the firms' footprints in those locations. Thus, we might simply be capturing a firm strategic policy shift – whereby the increasing footprint (or desire for a footprint) in a location causes both higher chances of suit and increase in advertising (but no direct causal relation between the latter two). It would then have nothing to do with lawsuits *causing* the increase in advertising.

In order to explore this in more detail, we explore the pre-trends, and parallel trends of fine comparison locations. These are in Exhibit 1. Panel A of Exhibit 1 compares, for the *same* firm over the *same* time period (so Firm x DMA fixed effects) – DMAs hit by a lawsuit at time 0 (left graph) compared to DMAs not hit by a suit at the same time. Exhibit 1 shows three broad patterns: First, there are no pre-trends in any DMA in advertising (either the DMAs that will eventually be sued (left) or those that will not (right). Second, advertising spikes directly after the suit, but *only* in those locations in which the suit is filed (not other locations for the same firm). Third, advertising gradually decreases in the sued location as the suit is resolved, and by three years post-suit (when the cases are usually resolved), advertising is back to baseline compared to both pre-suit, and to advertising in the same year (t=3) in other, non-sued locations.

In Panel B, we then explore a placebo timing of the litigation suits. In particular, we redefine the *Sued* dummy based on future litigation events, i.e. we assume *Sued*=1 if the firm is litigated in year t+4, rather than the actual litigation time t=0. Thus, we are taking the same exact locations where firms are sued but moving the timing of the litigation to a period when no litigation event occurred (t+4). The graph in Panel B shows no response in advertising -- the coefficient of Sued is statistically indistinguishable from zero in all years between -3 to +3 of the pseudo-event year.

In sum, Exhibit I and II suggest that there is no evidence of any change in advertising expenditures by the same firms, in the same locations, leading up to the suit; nor of the same firm at the same time in other locations. We only see the increase following the suit, only in the locations where the firm is sued, and only by the firms that are sued. This advertising then gradually drops as the suits complete. Table III and Exhibit 1 thus provide initial evidence of firms targeted advertising expenditures around the time – and spatial heterogeneous locations – of lawsuits.

In Table IV, we run a series of robustness analyses to observe how our baseline results vary across different variable definitions and alternative specifications. In the first column, we rerun our tests after excluding persistently sued firms from our sample. The idea here is that persistently sued firms (in a given DMA) should see no spike, as they are always advertising a lot because are always litigated in that particular DMA. We identify a persistently sued firm as those which have no variation in *Sued* variable in a given DMA and that the firm should have at least three observations within that DMA. Once we identify these firms (there are 110 of them in our sample), we remove all observations of these firms from the sample. We find that our results are unaffected by the inclusion of these observations. In fact, the coefficient of advertising is larger in point estimate, as might be expected given the exclusion of the persistently sued firms.

In Column 2, we use a sample that contains advertising information throughout the entire span of the litigation, rather than solely year *t+1*. With this specification, we are essentially comparing the advertising response following the litigation to all other time periods, including time periods that the firm does not advertise. We find that our results are unaffected by the inclusion of these observations.

In our baseline specification, we cluster the standard errors at the *Firm x Year* level to broadly account for any correlations that impact advertising in all DMAs for a given firm x year (e.g. Walmart's marketing campaign in all DMAs in a given year to a specifically increase nationwide visibility). In Column 3, we change the standard error clustering level from *Firm x Year* to *Firm x DMA* to account for correlation that impacts advertising across years for a given *Firm x DMA* (e.g. Walmart persistently invests and retains an advertising campaign in New York

over many years).[4] From the results reported, we conclude that our statistical inferences are not affected by the choice of standard error clustering level.

In Appendix Table I, we report results using a different set of fixed effects: Firm x Year, rather than Firm x DMA which we discussed in detail in Table III and IV. The benefit of using Firm x Year fixed effects is to control for any firm-time specific effect that could impact its advertising policy across DMAs in the same year, such as Apple's rollout of IPhone 12. In this table, we can see the strong and consistent evidence that upon being sued in a given location, firms significantly increase advertising in that specific location compared to other DMAs. The results in Tables III, IV and Appendix I tell a consistent story – irrespective of fixed effects included, standard error clustering choice, or advertising specification, the main results remain strong and significant: following suits in a given location, large, publicly traded firms strongly increase targeted local advertising in that geographic location (and only that location).

In Appendix Table II, we investigate to what extent including a lagged dependent variable as a regressor violates strict exogeneity, because the lagged dependent variable could be correlated with the idiosyncratic error. The concern here is that when the strict exogeneity assumption is violated, commonly used static panel data techniques such as fixed estimators could be inconsistent, i.e. the Nickell (1981) bias. For this purpose, we follow the Arellano–Bond method by defining the observations in two dimensions: Firm x DMA and year. The Arellano–Bond method first computes the first differences to eliminate the fixed effects, then, uses GMM with deeper lags of the dependent variables as instruments for differenced lags of the dependent variable. In Appendix Table II, we present the results of this procedure for both dependent variables we investigated in Table III, *Initiate* and *Future Advertising Spending*. These results suggest that our result remains strong, and consistent with the findings reported in baseline specifications.

Finally, rather than level of advertising, we investigate the market share in advertising markets and how it changes around litigation events. More specifically, we compute advertising share using two measures. The first measure maps the intuition of the model from Section II

[4] We also obtain statistically significant results for the coefficient of *Sued* when we cluster the errors by year (t= 3.21), or by DMA (t=4.10), or by firm (t= 3.83).

and tests its predicted dynamics. Specifically, advertising share is measured by a given firm's advertising in a particular DMA, scaled by the total advertisement of that firm in all DMAs (e.g. advertisement of Apple in Austin / total advertisement of Apple). As an alternate measure, we also calculate advertisement share at a DMA level. The idea of this measure is to capture the advertisement spike of the sued firm relative to its peers in the same industry advertising in the same DMA (e.g. advertisement of Apple in Austin / total advertisement of tech industry in Austin). The results in Table V show that using either of these measures, firms significantly increase the share they advertise in cities in which they are sued directly following the suit. For instance, the coefficient in the first specification implies that the relative advertising share in a DMA increases by 77% (t=11.13) following litigation there compared to the mean advertising share.

V. Mechanism Behind Buying the Verdict

In this section, we explore the mechanism behind the targeted advertising increases we document in Section IV in more depth. In particular, we explore *when*, *where*, and to *whom*, the targeted advertising spikes following suits are largest.

A. Alternative Mechanisms of Influence: Charitable Contributions

In Table VI, we focus on a different tool at firms' disposal that they can use to potentially impact the public's assessment of the firm at the local level. In particular, we collect micro-level data on charitable contributions made by firms' charitable arms at the zip-code level by year. Specifically, to identify the dollars spent by charitable arms of corporations, we utilize the Nonprofit Explorer dataset created by Propublica.[5] This database covers over three million tax returns (Form 990) filed by tax-exempt organizations. From these filings, we gather the following information: filer identifier (EIN), location information (zipcode), and total functional expenses (*totfuncexpns*) for the years between 2008 and 2014. We restrict the analysis to public firms (e.g. those for which we're able to match EIN identifiers to Compustat). We then use the analog to the specifications around advertising to explore whether firms also increase these

[5] https://projects.propublica.org/nonprofits/

charitable contributions in a mirrored fashion. The results are shown in Table VI Column 1. From Column 1 we find that firms do significantly ramp up charitable contributions in DMAs following being sued there. In particular, the coefficient implies that they increase charitable contributions by 25.5% (t=1.77) following suit.

B. Ability to Advertise

In Table VI, we also provide evidence from two special subsamples. In the first analysis, we investigate whether firms that are constrained in their ability to advertise also use advertising as a strategic tool around the litigation events. Several legislation events since 1970 prevented firms in the tobacco industry from advertising in various media outlets. For example, the Public Health Cigarette Smoking Act in 1970 prohibits firms in the tobacco industry from advertising on television and radio. Following this ban, most cigarette advertising took place in magazines, newspapers, and on billboards. In 1997, the Tobacco Master Settlement Agreement eliminated outdoor, billboard, and public transportation advertising of cigarettes in the U.S. Finally, in 2010, the Family Smoking Prevention and Tobacco Control Act prohibited the tobacco companies from sponsoring sports, music, and other cultural events. To identify firms in the production and distribution of tobacco, we use the following NAICS codes: 312230 (Tobacco Manufacturing), 424940 (Tobacco and Tobacco Product Merchant Wholesalers), 453991 (Tobacco Stores), 111910 (Tobacco Farming). The results in the second column of Table VI show that, unlike the baseline case, there is a negative but statistically insignificant relation between advertising and litigation for these special set of firms that cannot use advertising as a tool to create a positive image of the company after being litigated.

C. Recent Behavior: First Half vs. Second Half of Sample

In Table VII, we investigate whether our results have varied over time. In particular, as lawsuits have become more frequent – and the stakes larger - in the latter parts of the sample, we test to see whether the influencing the verdict behavior has changed, as well. We thus run our regressions separately for the most recent sample period i.e. 2005-2014, compared to earlier periods, i.e. 1995-2004. From Table VII, we conclude that the influencing the verdict behavior

of firms is strong, robust, and significant in both the *Earlier* and *Recent* periods. This underscores the need to understand this phenomenon more fully, as its use appears to be strong and persistent (in estimated magnitude) up through present day.

D. Litigation Type: Jury Trials vs. Bench Trials

If the empirical regularities that we have thus far documented in firm advertising responses really do represent firms' attempts to influence the verdict, we may expect these firms to concentrate on jury (as opposed to judge (bench)) adjudicated trials, as the average member of the jury pool is likely more influenceable than the judge. The average juror is roughly 50 years old, has lower than average education (i.e., high-school, but no bachelor's degree), and limited legal expertise – compared with the average sitting judge (Anwar, Bayer and Hjalmarsson 2014).

While many types of lawsuits have variation in the usage of jury vs. bench, a class of lawsuits that are nearly uniformly decided by jury are patent lawsuits. In contrast, a class of lawsuits in which the majority are adjudicated through a judge are tort lawsuits (Refo 2004). We thus segregate out both patent lawsuits and tort lawsuits in the data, and test specifically on these samples. The results are reported in Table VIII. Consistent with this buying the verdict being more concentrated when the jury pool can be more easily influenced, we find that the advertising spike is significantly higher in the case of patent (jury) lawsuits (over twice as large) as in tort lawsuits. The results in Table VIII also help to provide further evidence against an endogeneity story related to firms ramping up firm activities. In particular, the patent cases have nearly nothing to do with firm-specific strategic geographic location expansion. For example, Marshall, TX sees the plurality of patent infringement cases, and yet has a relatively small population with modest business presence.

E. Plaintiffs

We thus far focused on defendant's responses upon being accused of a legal infraction. Now, we examine plaintiff firms' advertising responses, as well. Plaintiffs (the firms filing suit

or damages against another party) have contrastingly *not* been accused of any wrongdoing, and thus potentially have less of a need to repair any brand damage with consumers. However, they do have an equivalent incentive to curry favor with juries in order to rule in their favor to win the lawsuit. We run these tests in the second column of Table VIII. We find that firms as plaintiffs – like defendants – significantly increase advertising precisely in those locations in which they bring lawsuits, and precisely at the time they bring the suit.

F. Targeted Advertising to Jury Pool

If firms have the goal of maximizing the impact on their potential jury pools, we might expect to see them target advertising expenditures specifically toward the pool of individuals most likely to be jury members. Given the granular nature of our data – in particular with regard to television advertising – we can test for exactly this. In order to do that we use the Nielsen Rating data which allows us to measure the amount of television watched within a given location, broken down into 5-year increments of the demographic viewership (e.g., 10-14 year olds, 15-19 year olds, 20-24 year olds, 25-29 year olds, 30-34 year olds, etc.). We use this data to create a measure of viewership in the prime-demographic of the average jury member (aged 45-54 years) – which we call *Prime Jury*. We compare this to those television viewers that couldn't possibly be jurors, using a variable we call Children Viewers (minors - viewers from age 2 to 5). Lastly, we now regressions solely focusing on the television advertising behavior of firms (as opposed to total advertising expenditures in a given location), such that the dependent variable measures the future television advertising expenditures following being sued in a given location.

The results are reported in Table IX. We find evidence that television advertising dollars are strategically targeted precisely at the likely jury pool. This is seen in the positive interaction term on *SuedxPrime Jury*. In contrast, we see no spike in advertising in locations where minors are a large share of the viewership population (who couldn't possibly be jurors).

If the advertising spikes we see following suits were aimed to maximize influence, we may expect to see firms concentrating their television advertising dollars in those markets where return on TV advertising investment were the highest. Table X provides suggestive evidence of firms doing this. In particular, following suits, firms concentrate television advertising efforts

especially where audience per television advertising dollar are the highest (as seen in the positive and marginally significant coefficient on the interaction term between *Audience Per Ad Dollar x Sued*).[6]

G. Placebo Tests

In addition to the diff-in-diff results reported in Exhibit I, panels A and B, we run a number of additional placebo tests. In Table XI, we include an additional dummy variable to capture litigation events of firms that operate in the same industry (Column 1) – *Industry*, in the same headquarter state (Column 2) *State*, and that operate in the same industry and have the same headquarter state (Column 3) *Industry x State*. These are meant to test for the possibility that the effects we capture with *Sued* are picking up a (potentially unobservable) broader industry or geographical location effect driving advertising expenses. From Table XI, the dummy variables do not load up significantly in any of the specifications (in an economic or statistical sense), indicating the firm's use of advertising is not responding to litigation events of competing firms in the product-space, or geographic proximity. However, being the direct target of litigation (*Sued – Own*) remains associated with a large and significant advertising response controlling for all of these.

VI. Discussion & Economic Impact of Buying the Verdict

Taking a step back, we believe that the sum of our evidence points most plausibly to firms taking strategic, targeted actions in order to the influence the verdict of litigation against them outside - in addition to inside - the courtroom. However, there are other potential explanations. For instance, it might be that the firm is advertising more in places that it is being sued because it also faces brand backlash on the product-side precisely in those locations (e.g., Chipotle food-borne contaminant issues were spatially hitting different locations (and not others); and the BP Oil spill along the Gulf Coast). You might then see advertising spike in

[6] In Appendix Tables III and IV, we repeat the analysis reported in Table VIII and IX using a different set of fixed effects (i.e. FirmxYear and DMA fixed effects, rather than FirmxDMA and Year fixed effects) and find similar results.

these locations following an infraction not to convince jurors, but instead to simply convince customers (and the communities) that the firm's brand was committed to a certain level of product quality, or investment in the community.

We explore this alternative explanation versus advertising more pointedly focused on juries following litigation. First, as mentioned above we see the effect of this increase in advertising strong and concentrated in patent (jury) trials. This is despite the fact that patent infringement allegations are amongst the most esoteric and most difficult to both describe to (and describe direct damages toward) the average consumer, and so might be least likely to cause localized public harm or outrage. Second, consistent with the firm not simply protecting important local relationships, we see a large and significant 25% increase in initiations following a lawsuit in that location. These locations (by revealed preference) were not locations that the firm sufficiently valued the act of advertising in - so not strategically important enough to advertise ongoing stakeholder relationships with - until precisely after the lawsuit, only after which advertising was initiated. Third, following the advertising spike of firms after lawsuits, we find that firms advertising in those sued locations are back to baseline by 3 years following (when the suits have been adjudicated). Fourth, we find that the advertising is focused directly on the demographic that is most likely to be jury pool members (and not spread across the entire demographic spectrum).

Lastly, we explore two sets of firms that we might *ex ante* expect to have less incentive to advertise absent the litigation. First, we examine business-to-business (B2B) firms. These firms – who sell goods only to other businesses, not to retail consumers – unsurprisingly, advertise significantly less, as their business models are on average based on longer-term supply relationships with other firms. We identify B2B industries by going through each industry 3 digit SIC code and classifying it into either a primarily B2B or retail facing firm. When we run our exact same specification, we find that B2B also significantly increase advertising precisely following lawsuits. This is shown in Table XII. In fact, from Table XII, comparing Columns 3 and 4 – B2B have a 50% larger probability of initiating advertising following suit (relative to

retail facing firms) – 31% vs. 21%; perhaps not surprisingly, largely due to their lower need for advertising (and presence) *ex ante*.[7]

Turning to the impact of this advertising on outcome of the trial, we do find suggestive evidence that the increased advertising of firms succeeds – to some extent - in "buying the verdict." These results are shown in Table XIII. In this table, we regress the defendant win rate, a dummy variable that takes a value of one if a defendant wins the case, on its advertising expenditure spent following the litigation initiation. We caveat this test as we do not observe settlements, or terms of settlements, and thus we can estimate for (and include in the test) only the trials that proceed to a verdict for either the plaintiff or defendant. In order to code in which party's favor the case was decided, we use the *2014 Federal Court Cases: Integrated Data Base* disseminated by ICPSR.

In Table XIII, we see that advertising is positively and significantly related to win rates. From Columns 1-3, this is true for both defendants and plaintiffs, i.e. the spending of defendants and plaintiffs on advertising have opposite effects on the win rate probabilities of defendant firms. More specifically, the coefficient on defendant advertising in Column 3 of 0.018 (t=5.47) implies that median advertising spending of $183,000 increases the chance of winning the suit by roughly 21% (where the median win rate of defendants is 51%).

Using this estimate, we can calculate a rough, back-of-the-envelope estimate regarding the return on investment (ROI) from this particular type of targeted advertising post-litigation.[8] In order to do so, we use the median damages or settlements paid in a number of our most frequent litigation types observed in our sample – intellectual property and securities class action suits. The median damages award in intellectual property cases between 2013 and 2017 is $6.0 million while an analogous figure (settlement) for securities class action suits is $5.0 million in

[7] In Appendix V, we repeat the same analysis using a different set of fixed effects (i.e. FirmxYear and DMA fixed effects, rather than FirmxDMA and Year fixed effects) and find similar results.

[8] Calculating ROI for this advertising is made even more complex as much depends on how we measure the full impacts and costs of advertising. Figuring out what portion of the win rate is attributable to a directed advertising campaign is difficult to predict; as opposed to, for instance, other correlated, contemporaneous investments (observable and unobservable) that are being undertaken by the firm.

2017. [9] [10] Using these figures, the implied ROI to advertising is quite high – implying a 5X return (183,000 investment translates into roughly $1M of expected value). However, as hinted by Table VI regarding charitable contributions, advertising is likely only one element of a broader strategy firms take regarding the litigation event, and ultimately influencing the end result.

VII. Conclusion

In this paper, we document systematic evidence that firms engage in specialized, locally targeted advertising when taken to a court-trial in a given location. In particular, using legal actions brought against publicly traded firms over the nearly 20 year sample period that progress to trial from 1995-2014 we show that these large, publicly facing, and well-funded organizations have at their disposal a channel outside of the courtroom – which they utilize – to influence the verdict of cases. When faced with a suit in a given location, firms significantly increase advertising in that location. In terms of magnitude, they increase advertising by 23% (t=4.37) following the suit. In contrast, we see no increase: i.) in the same city, by the firm, but *before* and leading up to suit (we find a sharp discontinuity directly following the suit); ii.) in any other similar city at the same time by the same firm (so it is not a firm-level or even firm-market type policy move); and iii.) in the exact same city where the firm is located by any other firm operating there.

Further, firms appear to use these advertising spikes in a strategic manner. First, they focus the advertising efforts in those particular locations where the effect is expected to be largest – in terms of both the number of jurors they can sway, and in terms of the highest return on advertising dollar. Moreover, they focus their television advertising dollar spikes specifically on the potential jury pool (e.g., 45-55 year olds), and not on those who cannot serve on juries (e.g., 2-5 year olds). In addition, these spikes are concentrated in jury adjudicated cases, as opposed to bench (judge-adjudicated) trials. Lastly, we document that these advertising spikes are associated with verdicts, increasing the probability of a favorable outcome.

[9] https://www.pwc.com/us/en/forensic-services/publications/assets/2018-pwc-patent-litigation-study.pdf
[10] http://securities.stanford.edu/research-reports/1996-2017/Settlements-Through-12-2017-Review.pdf

Stepping back, the sum of our results implies that firms are having a subtle, potentially important, impact on case outcomes through their strategically-targeted actions outside of the courtroom. The fact that this behavior is: i.) robust across time, firms, and locations, ii) lines up across strategic dimensions of the behavior, and iii.) is strong and robust through present-day, suggests that it is worth examining more closely as litigation against firms continues to rise. Given our results, policy makers should contemplate this mode and channel of influence, and whether it should play a role in the legal process.

References

Anwar, S., Bayer, P. and Hjalmarsson, R., 2014. The role of age in jury selection and trial outcomes. The Journal of Law and Economics, 57(4), pp.1001-1030.

Bagwell K. 2007. The economic analysis of advertising. In Handbook of Industrial Organization, Vol. 3, ed. M Armstrong, R Porter, pp. 1701–844. Amsterdam: North-Holland

Becker GS, Murphy KM. 1993. A simple theory of advertising as a good or bad. Q. J. Econ. 108: 941–64

Bertrand M, Karlan DS, Mullainathan S, Shafir E, Zinman J. 2010. What's advertising content worth? Evidence from a consumer credit marketing field experiment. Q. J. Econ. 125:263–305

Braithwaite D. 1928. The economic effects of advertisement. Econ. J. 38:16–37

Cohen, L., Gurun, U.G. and Kominers, S.D., 2016. The growing problem of patent trolling. Science, 352(6285), pp.521-522.

Cohen, L., Lou, D. and Malloy, C.J., 2020. Casting conference calls. Management Science.

Crawford, V.P. and Sobel, J., 1982. Strategic information transmission. Econometrica: Journal of the Econometric Society, pp.1431-1451.

DellaVigna, Stefano, 2009, Psychology and economics: Evidence from the field, Journal of Economic Literature 47, 315–372.

DellaVigna, Stefano, and Matthew Gentzkow, 2010, Persuasion: Empirical evidence, Annual Review of Economics 2, 643–669.

DellaVigna S and Kaplan E., 2007. The Fox News effect: media bias and voting. Q. J. Econ. 122(3): 1187–234

Engelberg J, Parsons C. 2012. The causal impact of media in financial markets. Journal of Finance.

Gentzkow MA. 2006. Television and voter turnout. Q. J. Econ. 121(3):931–72

Gerber AS and Green DP. 2000. The effects of canvassing, telephone calls, and direct mail on voter turnout: a field experiment. Am. Polit. Sci. Rev. 94(3):653–63

Giroud, X. and Mueller, H. 2019. Firms' Internal Networks and Local Economic Shocks. American Economic Review, 109(10), 3617-49.

Gurun, Umit G. and Alexander W. Butler, 2012, Don't believe the hype: Local media slant, local advertising, and firm value, The Journal of Finance 67, 561–597.

Gurun, Umit G., Matvos, Gregor and Seru, Amit, 2016. Advertising expensive mortgages. The Journal of Finance, 71(5), pp.2371-2416.

Hortacsu, Ali, and Chad Syverson, 2004, Product differentiation, search costs, and competition the mutual fund industry: A case study of S&P 500 index funds, Quarterly Journal of Economics 119, 403–456.

Hastings, Justine, Ali Hortacsu, and Chad Syverson, 2011, Advertising and competition in privatized social security: The case of Mexico, Working paper, University of Chicago.

Iyengar S, Simon AF. 2000. New perspectives and evidence on political communication and campaign effects. Annu. Rev. Psychol. 51:149–69

Kim, Y.H. and Meschke, F., 2011, August. CEO interviews on CNBC. In Fifth Singapore International Conference on Finance.

Klerman, Daniel and Greg Reilly, 2016, Forum Selling, University of Southern California Law Review 89, 241-316.

List, J.A. and Lucking-Reiley, D., 2002. The effects of seed money and refunds on charitable giving: Experimental evidence from a university capital campaign. Journal of political Economy, 110(1), pp.215-233.

Milgrom, P. and Roberts, J., 1986. Price and advertising signals of product quality. Journal of political economy, 94(4), pp.796-821.

Nickell, S., 1981. Biases in dynamic models with fixed effects. Econometrica, pp.1417-1426.

Lederman, Leandra, 1999, "Which Cases Go to Trial: An Empirical Study of Predictors of Failure to Settle," Case Western Law Review, Volume 49-2.

Lemley, M.A., 2013. Why Do Juries Decide If Patents Are Valid. Va. L. Rev., 99, p.1673.

Lou, Dong, 2014, Attracting investor attention through advertising, Review of Financial Studies 27, 1797–1829.

Nelson, P., 1970. Information and consumer behavior. Journal of political economy, 78(2), pp.311-329.

Nelson, Phillip, 1974, Advertising as information, Journal of Political Economy 82, 729–754.

Refo, P.L., 2004. Opening statement: The vanishing trial. Litigation, 30(2), pp.1-58.

Reuter, Jonathan, and Eric Zitzewitz, 2006, Advertising and bias in the financial media,

Quarterly Journal of Economics 121, 197–227.

Stigler, G.J., 1961. The economics of information. Journal of political economy, 69(3), pp.213-225.

Stigler, G.J. and Becker, G.S., 1977. De gustibus non est disputandum. The American Economic Review, 67(2), pp.76-90

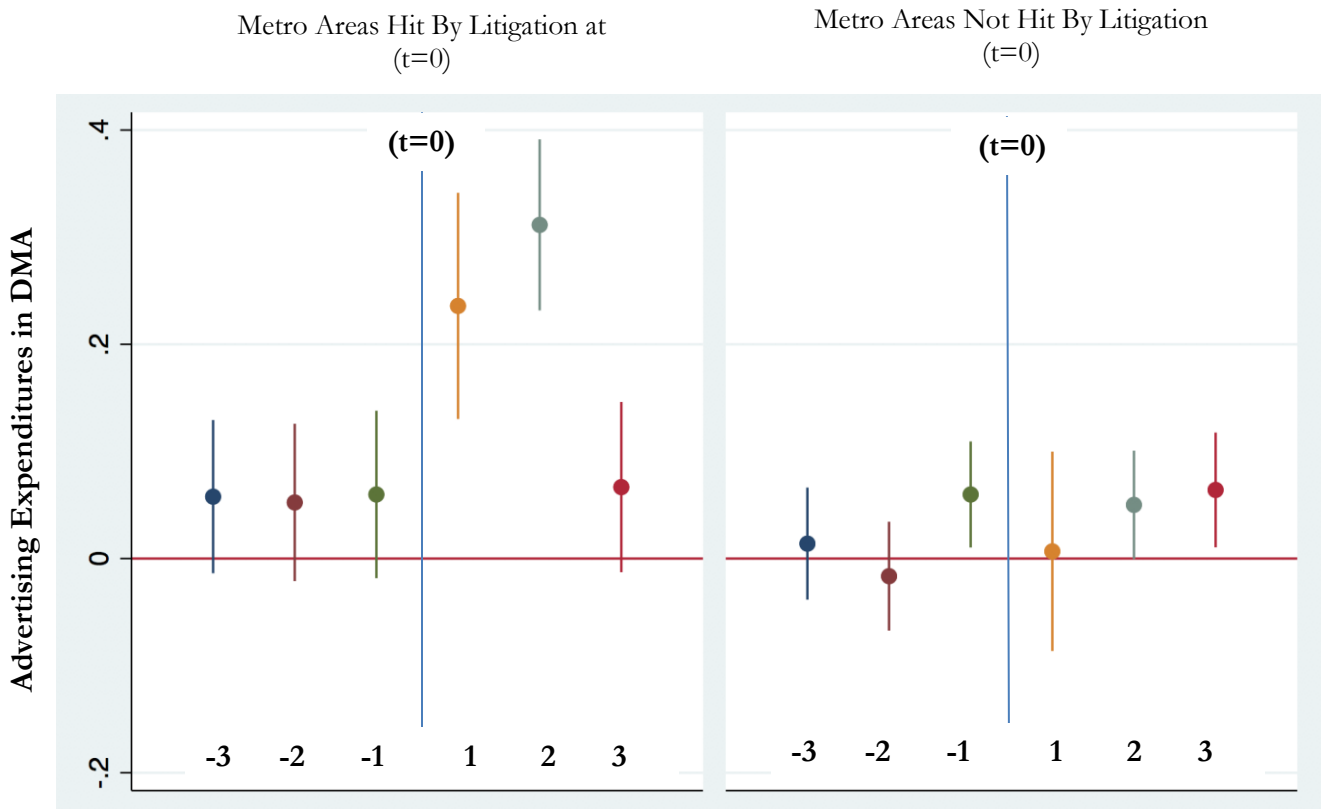
Telser, L.G., 1964. Advertising and competition. Journal of political Economy, 72(6), pp.537-562.

Womack, K.L., 1996. Do brokerage analysts' recommendations have investment value?. The journal of finance, 51(1), pp.137-167.

Exhibit 1
Panel A. Advertising Diff-in-Diff and Pre-trends surrounding Litigation

In Panel A of this exhibit, we plot the coefficient on *Sued* of the full regression specification in Table III Column 4, i.e. Advertising (t+x) = b1* Sued + b2* Advertising (t+x-1) + *Z*, where x=-3 in the first bar, x=-2 in the second bar, x=-1 in the third bar, x=1 in the fourth bar, x=2 in the fifth bar, x=3 in the sixth bar. The right chart shows response to litigation in DMA (y,t), when the firm is litigated in DMA(x, 0), where DMA(y) is closest to DMA(x) in terms of advertising spending in year 0 (i.e. the DMAs right above and right below DMA(x) when sorted by advertising expenditure). Panel B shows the response to a placebo test in timing within a litigated Metro Area. In particular, Panel B (Right Panel) shows the impact pseudo litigation in DMA(*x*,*t*), four years *before* the firm is litigated in that Metro Area, compared to the actual event (Left Panel).

Panel A. Advertising by firms hit vs. not hit by a lawsuit at (t=0)



Panel B. Pseudo Timing Suit Analysis: Advertising by firms hit by a lawsuit at (t=0) vs. (t=-4)

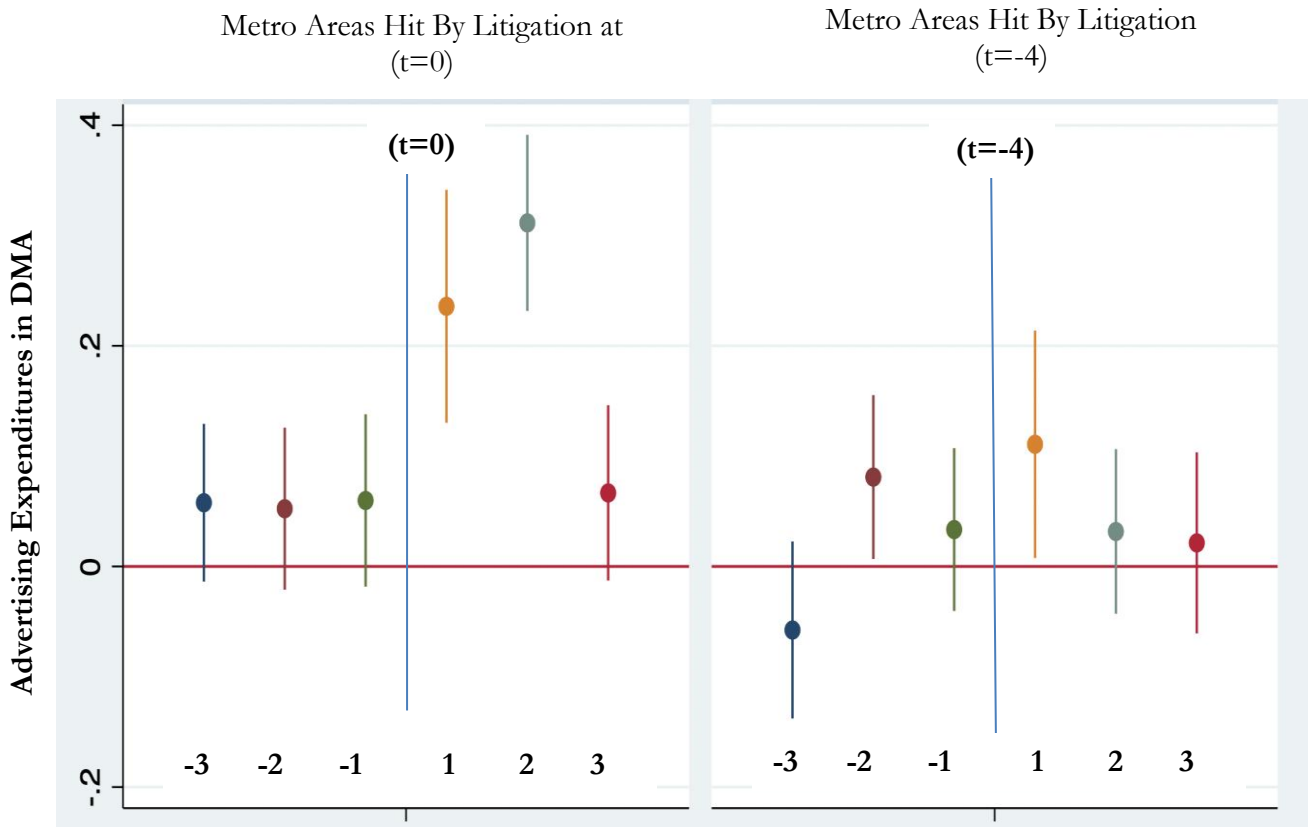


Table I – Summary statistics

This table presents summary statistics on the dataset used in the tests. Unit of observation is Firm x DMA x Year, i.e. amount of advertising spending by a given firm at a given Designated Market Area (DMA) in a given year. DMA regions define boundaries of targeted local advertising and direct marketing campaigns across multiple media. A DMA typically refers to a geographic region rather than a city or county, and may contain zip codes from neighboring states. The data vendor, Kantar Media, collects data from 102 of all 206 DMAs, which correspond to 92% of the population in the United States. *Advertising Expense* refers to total local advertising in local media outlets, i.e. spot TV, spot Radio, outdoor (billboard) and local newspapers. *Future Advertising Spending (log)*, our main variable of interest, is the log of total local advertising in year *t+1*. Initiate is a dummy variable that takes a value of one if the firm didn't advertise in the corresponding DMA in year t, but advertises in year t+1. *DMA Market Size* is sum of all local advertising expenses by all firms at a given DMA in a given year. *Sued* is a dummy variable equal to 1 if a firm was litigated at least one time in a federal district courthouse in a given DMA in year *t*. Our dataset includes only the cases contained in the Audit Analytics database. *Sued Patent* is a dummy variable equal to 1 if a firm was litigated for patent infringement reason. *Sued Tort* is a dummy variable equal to 1 if the litigation is related tort. Audit Analytics reports information on litigation for Russell 1000 firms from legal disclosures filed with the SEC. Audit Analytics collects details related to specific litigation, including the original dates of filing and locations of litigation; information on plaintiffs, defendants, and judges. We match 65 of the federal district courthouses to a DMA for which we have local advertising data. Our sample contains 13,301 dockets with a filing year between 1995 and 2013. This corresponds to 90% of all dockets filed in all federal district courthouses.

Summary Statistics on Local Advertising and Litigation Actions

	Advertising Expense (Raw)	Future Adv. Spending (log)	DMA Market Size	Initiate	Sued	Sued Patent	Sued Tort
Mean	964,613	8.501	0.387	0.013	0.019	0.008	0.004
Median	21,894	9.994	0.141	0.000	0.000	0.000	0.000
STD	6,310,581	5.182	0.638	0.112	0.135	0.087	0.062
p5	0	0.000	0.023	0.000	0.000	0.000	0.000
p95	3,505,976	15.070	1.706	0.000	0.000	0.000	0.000
N	498,386	498,386	498,386	498,386	498,386	498,386	498,386

Table II – Summary statistics on litigation events

In Panel A, we tabulate unique number of dockets used in our analysis. Information on these dockets come from Audit Analytics database. Audit Analytics reports information on litigation for Russell 1000 firms from legal disclosures filed with the SEC. Audit Analytics collects details related to specific litigation, including the original dates of filing and locations of litigation; information on plaintiffs, defendants, and judges. We restrict our analysis to dockets in which either defendant or plaintiff (or both) is a public firm and the court of the docket is covered by one of the DMAs in our advertising database. Our advertising data covers period covers years between 1996 and 2014 and we use dockets with filing years between 1995 and 2013. In Panel B, we tabulate the number of unique dockets filed in top 5 federal district courthouses. In Panel C, we tabulate the number of unique dockets by case type for the top 5 categories.

Panel A. Breakdown of Dockets over Years

Year	Number of Cases
1995	46
1996	82
1997	160
1998	223
1999	295
2000	429
2001	594
2002	842
2003	720
2004	867
2005	1,168
2006	1,192
2007	1,186
2008	1,054
2009	829
2010	838
2011	827
2012	808
2013	627
2014	290
Total	13,077

Panel B. Breakdown of Dockets across Top 5 DMAs

	DMA Name	Number of Cases
1	New York	2086
2	Philadelphia	1726
3	San Francisco	1375
4	Los Angeles	994
5	Shreveport	660

Panel C. Breakdown of Dockets across Top 5 case types

	Case Type	Number of Cases
1	Securities	4037
2	Patent	3425
3	Contract	2283
4	Tort	1453
5	Labor	668

Table III – Buying the Verdict: Main Effect

In this table, we use a fixed effect OLS model. The unit of observation is Firm x DMA x Year, i.e. amount of advertising spending by a given firm at a given Designated Market Area (DMA) in a given year. Initiate is a dummy variable that takes a value of one if the firm didn't advertise in the corresponding DMA in year t, but advertises in year t+1. The dependent variable in the last three columns, *Future Advertising Spending (log)*, our main variable of interest, is the log of total local advertising in year *t+1*. *Advertising Spending (t)* refers to contemporaneous advertising expense, i.e. the log of total local advertising in year *t*. *Sued* is a dummy variable equal to 1 if a firm was a defendant at least one time in the federal courthouse in a given DMA in year *t* for the case types recorded in the Audit Analytics database. Standard errors, clustered by FirmxYear, are reported in parentheses. ***, **, and * denote statistical significance at the 1, 5, and 10 percent levels.

	Initiate	Future Advertising Spending	Future Advertising Spending	Future Advertising Spending
Sued	0.254***	0.170***	0.236***	0.236***
	(0.006)	(0.062)	(0.054)	(0.054)
Advertising Spending (t)			0.539***	0.539***
			(0.010)	(0.010)
DMA Market Size				-0.008
				(0.053)
Fixed Effect - Year	YES	YES	YES	YES
Fixed Effect - Firm x DMA	YES	YES	YES	YES
Observations	485,704	478,840	485,704	485,704
R-squared	0.824	0.575	0.618	0.618

Table IV – Robustness: Alternative Specifications

In this table, we use a fixed effect OLS model. Unit of observation is Firm x DMA x Year, i.e. amount of advertising spending by a given firm at a given Designated Market Area (DMA) in a given year. In the first column, we exclude the persistently sued firms from the sample. We identify a persistently sued firm as those which have no variation in *Sued* variable in a given DMA and that the firm should have at least three observations within that DMA. In Column 2, we use a sample that contains advertising information throughout the entire span of the litigation, rather than solely year *t+1*. In Column 3, we change clustering of standard errors from *Firm x Year* to *Firm x DMA*. In Standard errors in the first two columns are clustered by FirmxYear, and are reported in parentheses. ***, **, and * denote statistical significance at the 1, 5, and 10 percent levels.

	Exclude Persistently Sued Future Advertising Spending	Future Advertising Spending	Future Advertising Spending
Sued	0.304***	0.143***	0.236***
	(0.058)	(0.046)	(0.054)
Advertising Spending (t)	0.542***	0.548***	0.539***
	(0.010)	(0.009)	(0.010)
DMA Market Size	-0.000	-0.038	-0.008
	(0.000)	(0.046)	(0.053)
Fixed Effect - Year	YES	YES	YES
Fixed Effect - Firm x DMA	YES	YES	YES
Observations	481,236	524,999	485,704
R-squared	0.615	0.687	0.618

Table V. Advertising Share Analysis

In this table we regress various market share variables on a dummy variable, *Sued*, which equals to 1 if a firm was a defendant at least one time in the federal courthouse in a given DMA in year *t* for the case types recorded in the Audit Analytics database. We compute two advertising share variables: (1) Advertisement of a given firm in a given DMA scaled by total advertisement of that firm in all DMAs (e.g. advertisement of Apple in Austin / total advertisement of Apple) and (2) Advertisement of a given firm in a given DMA scaled by total advertisement in that DMA in the industry of that firm (e.g. advertising of Apple in Austin / total advertising of tech industry in Austin). Standard errors, clustered by FirmxYear, are reported in parentheses. ***, **, and * denote statistical significance at the 1, 5, and 10 percent levels.

	Change in Advertising Share	Change in Advertising Share
Sued (x100)	2.763***	2.885***
	(0.248)	(0.360)
Advertising Spending (t)	-0.005***	0.005
	(0.002)	(0.004
Fixed Effect – Year	YES	YES
Fixed Effect - Firm x DMA	YES	YES
Observations	485,704	485,704
R-squared	0.246	0.223

Table VI – Evidence from Special Subsamples

In this table, we use a fixed effect OLS model. In the first column, we focus on charitable contributions of firms as reported in Form 990s of nonprofit organizations. The unit of observation is Firm x DMA x Year. In the second column, we only use the firms in production and distribution of tobacco, firms with NAICS codes: 312230 (Tobacco Manufacturing), 424940 (Tobacco and Tobacco Product Merchant Wholesalers), 453991 (Tobacco Stores), 111910 (Tobacco Farming). Standard errors in all columns are clustered by FirmxYear and are reported in parentheses. ***, **, and * denote statistical significance at the 1, 5, and 10 percent levels.

	Charitable Contributions Future Advertising Spending	Tobacco Industry Future Advertising Spending
Sued	0.255*	-0.216
	(0.144)	(0.623)
Advertising Spending (t)	0.021*	0.350***
	(0.013)	(0.108)
DMA Market Size	-0.048	1.164
	(0.143)	(0.778)
Fixed Effect - Year	YES	YES
Fixed Effect - Firm x DMA	YES	YES
Observations	3,876	1,976
R-squared	0.902	0.636

Table VII – Sample Split by Time

In this table, we use a fixed effect OLS model to estimate the baseline model reported in Table III for two subsamples, 1995-2004 (Early) and 2005-2014 (Recent). Unit of observation is Firm x DMA x Year, i.e. amount of advertising spending by a given firm at a given Designated Market Area (DMA) in a given year. The dependent variable, *Future Advertising Spending (log)*, our main variable of interest, is the log of total local advertising in year *t+1*. *DMA Market Size* is sum of all local advertising expenses by all firms at a given DMA in a given year. *Advertising Spending (t)* refers to contemporaneous advertising expense, i.e. the log of total local advertising in year *t*. *Sued* is a dummy variable equal to 1 if a firm was litigated at least one time in the federal courthouse in a given DMA in year *t* for the case types recorded in the Audit Analytics database. Standard errors, clustered by FirmxYear, are reported in parentheses. ***, **, and * denote statistical significance at the 1, 5, and 10 percent levels.

	Future Advertising Spending
Sued x Early	0.206***
	(0.070)
Sued x Recent	0.392***
	(0.066)
DMA Market Size	-0.012
	(0.053)
Advertising Spending (t)	0.540***
	(0.010)
Fixed Effect - Year	YES
Fixed Effect - Firm x DMA	YES
Observations	485,704
R-squared	0.618

Table VIII – Jury vs. Bench Trials and Litigation by Plaintiff

In the first two columns of this table, we use a fixed effect OLS model to estimate the baseline model reported in Table III to estimate the relation between litigation types (i.e. patent, tort) and advertising. Unit of observation is Firm x DMA x Year, i.e. amount of advertising spending by a given firm at a given Designated Market Area (DMA) in a given year. The dependent variable, *Future Advertising Spending (log)*, our main variable of interest, is the log of total local advertising in year *t+1*. *DMA Market Size* is sum of all local advertising expenses by all firms at a given DMA in a given year. *Advertising Spending (t)* refers to contemporaneous advertising expense, i.e. the log of total local advertising in year *t*. *Sued Patent* is a dummy variable equal to 1 if a firm was litigated for a patent infringement reason. *Sued Tort* is a dummy variable equal to 1 if the litigation is related to tort. *Sued - Plaintiff* is a dummy variable equal to 1 if a public firm was a plaintiff at least one time in the federal courthouse in a given DMA in year *t* for the case types recorded in the Audit Analytics database. Standard errors, clustered by FirmxYear, are reported in parentheses. ***, **, and * denote statistical significance at the 1, 5, and 10 percent levels.

	Future Advertising Spending	Future Advertising Spending
Sued Patent	0.285***	
	(0.080)	
Sued Tort	0.076	
	(0.085)	
Sued Plaintiff		0.316***
		(0.077)
DMA Market Size	-0.002	-0.003
	(0.053)	(0.053)
Advertising Spending (t)	0.538***	0.538***
	(0.010)	(0.010)
		YES
Fixed Effect - Year	YES	
Fixed Effect - Firm x DMA	YES	YES
Observations	485,704	485,704
R-squared	0.618	0.618

Table IX – Targeting Jury Pool

In this table, we use a fixed effect OLS model to estimate the baseline model reported in Table III to estimate the relation between the local TV advertising spending and the viewership base. Unit of observation is Firm x DMA x Year. The dependent variable, *Future Advertising Spending _TV (log)* is the log of total local spot TV advertising in year *t+1*. *DMA Market Size* is sum of all local advertising expenses by all firms at a given DMA in a given year. *Advertising Spending -TV* refers to contemporaneous TV advertising expense, i.e. the log of total local TV advertising in year *t*. *Sued* is a dummy variable equal to 1 if a firm was litigated at least one time in the federal courthouse in a given DMA in year *t*. Prime Jury is the estimated total number of hours male and female between ages 45 and 54 in the watch TV in a given DMA in a given year (average age of a juror = 50). Children Viewers is the estimated total number of hours minors between ages 2 and 5 in the watch TV in a given DMA in a given year. We use Nielsen Ratings database to estimate the number of TV exposure hours a given age group watches TV. This estimate combines information on duration and timing of the rating measurement period (Day Time M-F 9a-4p vs. Primetime) and number of persons viewing TV estimates in a given demographics (age group and gender). Standard errors, clustered by FirmxYear, are reported in parentheses. ***, **, and * denote statistical significance at the 1, 5, and 10 percent levels.

	Future Advertising Spending	Future Advertising Spending
Advertising Spending - TV	0.333***	0.333***
	(0.018)	(0.018)
DMA Market Size	-0.258**	-0.276**
	(0.111)	(0.119)
Sued	0.130	0.095
	(0.104)	(0.105)
Prime Jury	4.449***	3.506***
	(1.029)	(1.333)
Sued x Prime Jury	0.940***	4.707**
	(0.341)	(1.924)
Children Viewers		1.760
		(1.593)
Sued x Children Viewers		-4.569**
		(2.301)
Fixed Effect - Year	YES	YES
Fixed Effect - Firm x DMA	YES	YES
Observations	214,015	214,015
R-squared	0.729	0.729

Table X – Targeting Highest ROI TV Advertising

In this table, we use a fixed effect OLS model to estimate the baseline model reported in Table III to estimate the relation between the local TV advertising spending and the viewership base. Unit of observation is Firm x DMA x Year. The dependent variable, *Future Advertising Spending -TV* is the log of total local spot TV advertising in year *t+1*. *Advertising Spending - TV* refers to contemporaneous TV advertising expense, i.e. the log of total local TV advertising in year *t*. *DMA Market Size* is sum of all local advertising expenses by all firms at a given DMA in a given year. *Sued* is a dummy variable equal to 1 if a firm was litigated at least one time in the federal courthouse in a given DMA in year *t*. *Audience Per Ad Dollar* is the log of ratio of total number of potential viewers to total TV advertising expenditure. Standard errors, clustered by Firm x Year, are reported in parentheses. ***, **, and * denote statistical significance at the 1, 5, and 10 percent levels.

	Future Advertising Spending _ TV
Advertising Spending - TV	0.333***
	(0.018)
Sued	10.474***
	(3.163)
Audience Per Ad Dollar	0.056
	(0.139)
Audience Per Ad Dollar x Sued	0.797***
	(0.247)
DMA Market Size	-0.866***
	(0.170)
Fixed Effect - DMA	YES
Fixed Effect - Firm x Year	YES
Observations	214,015
R-squared	0.729

Table XI – Additional Placebo Tests

In this table, we use a fixed effect OLS model used in baseline model to investigate the impact of competitors' litigation events. In Columns 1 to 3, we include an additional dummy variable to our baseline specification to capture litigation events of firms that operate in the same industry (Column 1), in the same headquarter state (Column 2), and that operate in the same industry and have the same headquarter state (Column 3). Standard errors, clustered by FirmxYear, are reported in parentheses. ***, **, and * denote statistical significance at the 1, 5, and 10 percent levels.

	Future Advertising Spending	Future Advertising Spending	Future Advertising Spending
Sued - Own	0.254***	0.259***	0.237***
	(0.058)	(0.058)	(0.058)
DMA Market Size	-0.002	-0.003	-0.001
	(0.055)	(0.055)	(0.055)
Advertising Spending (t)	0.541***	0.541***	0.541***
	(0.010)	(0.010)	(0.010)
Sued - Industry	0.053		
	(0.078)		
Sued - State		0.012	
		(0.165)	
Sued – Industry x State			0.063
			(0.060)
Fixed Effect - Year	YES	YES	YES
Fixed Effect - Firm x DMA	YES	YES	YES
Observations	477,708	477,708	477,708
R-squared	0.612	0.612	0.612

Table XII. B2B Results

In this table, we estimate our baseline model reported in Table III for two sets of firms, firms in B2B industries and firms in non B2B industries. We identify B2B industries by going through each industry 3 digit SIC code and classifying it into either a primarily B2B or retail facing firm. Initiate is a dummy variable that takes a value of one if the firm didn't advertise in the corresponding DMA in year t, but advertises in year t+1. *Future Advertising Spending (log)* is the log of total local advertising in year *t+1*. *Advertising Spending (t)* refers to contemporaneous advertising expense, i.e. the log of total local advertising in year *t*. *Sued* is a dummy variable equal to 1 if a firm was a defendant at least one time in the federal courthouse in a given DMA in year *t* for the case types recorded in the Audit Analytics database. Standard errors, clustered by FirmxYear, are reported in parentheses. ***, **, and * denote statistical significance at the 1, 5, and 10 percent levels.

	B2B Industry	Non B2B Industry	B2B Industry	Non B2B Industry
	Future Advertising Spending	Future Advertising Spending	Initiate	Initiate
Sued	0.259**	0.226***	0.309***	0.211***
	(0.111)	(0.068)	(0.011)	(0.007)
DMA Market Size	0.164	-0.055	-0.004**	-0.002**
	(0.108)	(0.066)	(0.002)	(0.001)
Advertising Spending (t)	0.523***	0.547***	-0.011***	-0.008***
	(0.018)	(0.013)	(0.000)	(0.000)
Fixed Effect - Year	YES	YES	YES	YES
Fixed Effect - Firm x DMA	YES	YES	YES	YES
Observations	121,065	337,631	121,065	337,631
R-squared	0.649	0.707	0.817	0.782

Table XIII. Buying the Verdict

In this table we regress defendant win rate, a dummy variable that takes a value of one if a defendant wins the case, on its advertising expenditure spent following the litigation year. To identify the litigation outcomes, we rely on 2014 Federal Court Cases: Integrated Data Base disseminated by ICPSR. This database contains information to identify whether the final judgment of the case is in favor of defendant or plaintiff. The database also allows us to identify the manner in which the cases disposed. For example, we can identify the cases were transferred or remanded, disposed because of dismissal (lack of jurisdiction, voluntary dismissal, settlement). In our specification, we exclude cases that were disposed because of dismissal or transfer, and focus on cases that were disposed with a judgement. Standard errors are clustered by year. ***, **, and * denote statistical significance at the 1, 5, and 10 percent levels.

	Defendant Win Rate	Defendant Win Rate	Defendant Win Rate
Defendant Ad Spending	0.019***	0.017***	0.018***
	(0.005)	(0.006)	(0.003)
Plaintiff Ad Spending			-0.038***
			(0.003)
Fixed Effect - Year	YES	YES	YES
Fixed Effect - DMA		YES	YES
Observations	608	605	526
R-squared	0.073	0.126	0.096

Appendix Table I – Buying the Verdict: Main Effect

In this table, we use a fixed effect OLS model. The unit of observation is Firm x DMA x Year, i.e. amount of advertising spending by a given firm at a given Designated Market Area (DMA) in a given year. The dependent variable in the first column, Initiate, is a dummy variable that takes a value of one if the firm didn't advertise in the corresponding DMA in year t, but advertises in year t+1. The dependent variable in the remaining columns, *Future Advertising Spending (log)*, our main variable of interest, is the log of total local advertising in year *t+1*. *Advertising Spending (t)* refers to contemporaneous advertising expense, i.e. the log of total local advertising in year *t*. *Sued* is a dummy variable equal to 1 if a firm was a defendant at least one time in the federal courthouse in a given DMA in year *t* for the case types recorded in the Audit Analytics database. Standard errors, clustered by FirmxYear, are reported in parentheses. ***, **, and * denote statistical significance at the 1, 5, and 10 percent levels.

	Initiate	Future Advertising Spending	Future Advertising Spending	Future Advertising Spending
Sued	0.320***	0.917***	0.997***	0.999***
	(0.007)	(0.061)	(0.048)	(0.048)
Advertising Spending (t)			0.821***	0.821***
			(0.006)	(0.006)
DMA Market Size				-0.028
				(0.044)
Fixed Effect - DMA	YES	YES	YES	YES
Fixed Effect - Firm x Year	YES	YES	YES	YES
Observations	498,386	491,391	498,386	498,386
R-squared	0.769	0.603	0.694	0.694

Appendix Table II. Buying the Verdict – Dynamic Panel Estimation

In this table, we investigate to what extent including a lagged dependent variable as a regressor violates strict exogeneity, because the lagged dependent variable is could be correlated with the idiosyncratic error. Initiate is a dummy variable that takes a value of one if the firm didn't advertise in the corresponding DMA in year t, but advertises in year t+1. *Sued* is a dummy variable equal to 1 if a firm was a defendant at least one time in the federal courthouse in a given DMA in year *t* for the case types recorded in the Audit Analytics database. We follow the Arellano–Bond method by defining the observations in two dimensions *Firm x DMA*, and year. ***, **, and * denote statistical significance at the 1, 5, and 10 percent levels.

	Initiate	Future Advertising Spending	Future Advertising Spending
Sued	0.078***	1.350***	0.420***
	(0.005)	(0.172)	(0.077)
Fixed Effects (Year, Permno x DMA)			Included
Control variables (lagged DV, Market Size)	Included	Included	Included
Observations	299,340	299,340	299,340
Number of lagged dep't variable included	1	1	1

Appendix Table III – Jury vs. Bench Trials and Litigation by Plaintiff

In the first two columns of this table, we use a fixed effect OLS model to estimate the baseline model reported in Table III to estimate the relation between litigation types (i.e. patent, tort) and advertising. Unit of observation is Firm x DMA x Year, i.e. amount of advertising spending by a given firm at a given Designated Market Area (DMA) in a given year. The dependent variable, *Future Advertising Spending (log)*, our main variable of interest, is the log of total local advertising in year *t+1*. *DMA Market Size* is sum of all local advertising expenses by all firms at a given DMA in a given year. *Advertising Spending (t)* refers to contemporaneous advertising expense, i.e. the log of total local advertising in year *t*. *Sued Patent* is a dummy variable equal to 1 if a firm was litigated for patent infringement reason. *Sued Tort* is a dummy variable equal to 1 if the litigation is related to tort. *Sued_Plaintiff* is a dummy variable equal to 1 if a firm was a plaintiff at least one time in the federal courthouse in a given DMA in year *t* for the case types recorded in the Audit Analytics database. Standard errors, clustered by FirmxYear, are reported in parentheses. ***, **, and * denote statistical significance at the 1, 5, and 10 percent levels.

	Future Advertising Spending	Future Advertising Spending
Sued Patent	0.994***	
	(0.069)	
Sued Tort	0.556***	
	(0.077)	
Sued Plaintiff		0.779***
		(0.086)
DMA Market Size	-0.007	-0.004
	(0.044)	(0.044)
Advertising Spending (t)	0.816***	0.814***
	(0.006)	(0.006)
Fixed Effect - DMA	YES	YES
Fixed Effect - Firm x Year	YES	YES
Observations	498,386	498,386
R-squared	0.694	0.694

Appendix Table IV – Targeting Jury Pool

In this table, we use a fixed effect OLS model to estimate the baseline model reported in Table III to estimate the relation between the local TV advertising spending and the viewership base. Unit of observation is Firm x DMA x Year. The dependent variable, *Future Advertising Spending _TV (log)* is the log of total local spot TV advertising in year *t+1*. *DMA Market Size* is sum of all local advertising expenses by all firms at a given DMA in a given year. *Advertising Spending -TV* refers to contemporaneous TV advertising expense, i.e. the log of total local TV advertising in year *t*. *Sued* is a dummy variable equal to 1 if a firm was litigated at least one time in the federal courthouse in a given DMA in year *t*. Prime Jury is the estimated total number of hours male and female between ages 45 and 54 in the watch TV in a given DMA in a given year (average age of a juror = 50). Children Viewers is the estimated total number of hours minors between ages 2 and 5 in the watch TV in a given DMA in a given year. We use Nielsen Ratings database to estimate the number of TV exposure hours a given age group watches TV. This estimate combines information on duration and timing of the rating measurement period (Day Time M-F 9a-4p vs. Primetime) and number of persons viewing TV estimates in a given demographics (age group and gender). Standard errors, clustered by FirmxYear, are reported in parentheses. ***, **, and * denote statistical significance at the 1, 5, and 10 percent levels.

	Future Advertising Spending _ TV	Future Advertising Spending _ TV
Advertising Spending - TV	0.659***	0.659***
	(0.012)	(0.012)
DMA Market Size	-0.060	-0.109
	(0.123)	(0.133)
Sued	1.634***	1.597***
	(0.093)	(0.095)
Prime Jury	3.751***	2.026
	(1.111)	(1.481)
Sued x Prime Jury	0.063	4.032**
	(0.273)	(1.594)
Children Viewers		3.226**
		(1.624)
Sued x Children Viewers		-4.786**
		(1.875)
Fixed Effect - DMA	YES	YES
Fixed Effect - Firm x Year	YES	YES
Observations	224,755	224,755
R-squared	0.698	0.698

Appendix Table V. B2B Results

In this table, we estimate our baseline model reported in Table III for two sets of firms, firms in B2B industries and firms in non B2B industries. We identify B2B industries by going through each industry 3 digit SIC code and classifying it into either a primarily B2B or retail facing firm. Initiate is a dummy variable that takes a value of one if the firm didn't advertise in the corresponding DMA in year t, but advertises in year t+1. *Future Advertising Spending (log)* is the log of total local advertising in year *t+1*. *Advertising Spending (t)* refers to contemporaneous advertising expense, i.e. the log of total local advertising in year *t*. *Sued* is a dummy variable equal to 1 if a firm was a defendant at least one time in the federal courthouse in a given DMA in year *t* for the case types recorded in the Audit Analytics database. Standard errors, clustered by FirmxYear, are reported in parentheses. ***, **, and * denote statistical significance at the 1, 5, and 10 percent levels.

	B2B Industry Future Advertising Spending	Non B2B Industry Future Advertising Spending	B2B Industry Initiate	Non B2B Industry Initiate
Sued	1.234***	0.871***	0.397***	0.264***
	(0.097)	(0.058)	(0.012)	(0.007)
DMA Market Size	0.105	-0.048	-0.010***	-0.007***
	(0.086)	(0.055)	(0.002)	(0.001)
Advertising Spending (t)	0.728***	0.837***	-0.011***	-0.008***
	(0.011)	(0.008)	(0.000)	(0.000)
Fixed Effect - DMA	YES	YES	YES	YES
Fixed Effect - Firm x Year	YES	YES	YES	YES
Observations	121,065	337,631	121,065	337,631
R-squared	0.649	0.707	0.817	0.782

Figure 1 – Samsung example

27th Annual Wonderland of Lights Festival Begins With Samsung Holiday Celebration Show

Historical Harrison County Courthouse is the center stage event for 27th Annual Wonderland of Lights Festival that begins November 27

Source: Marshall News Messenger - Marshall, TX

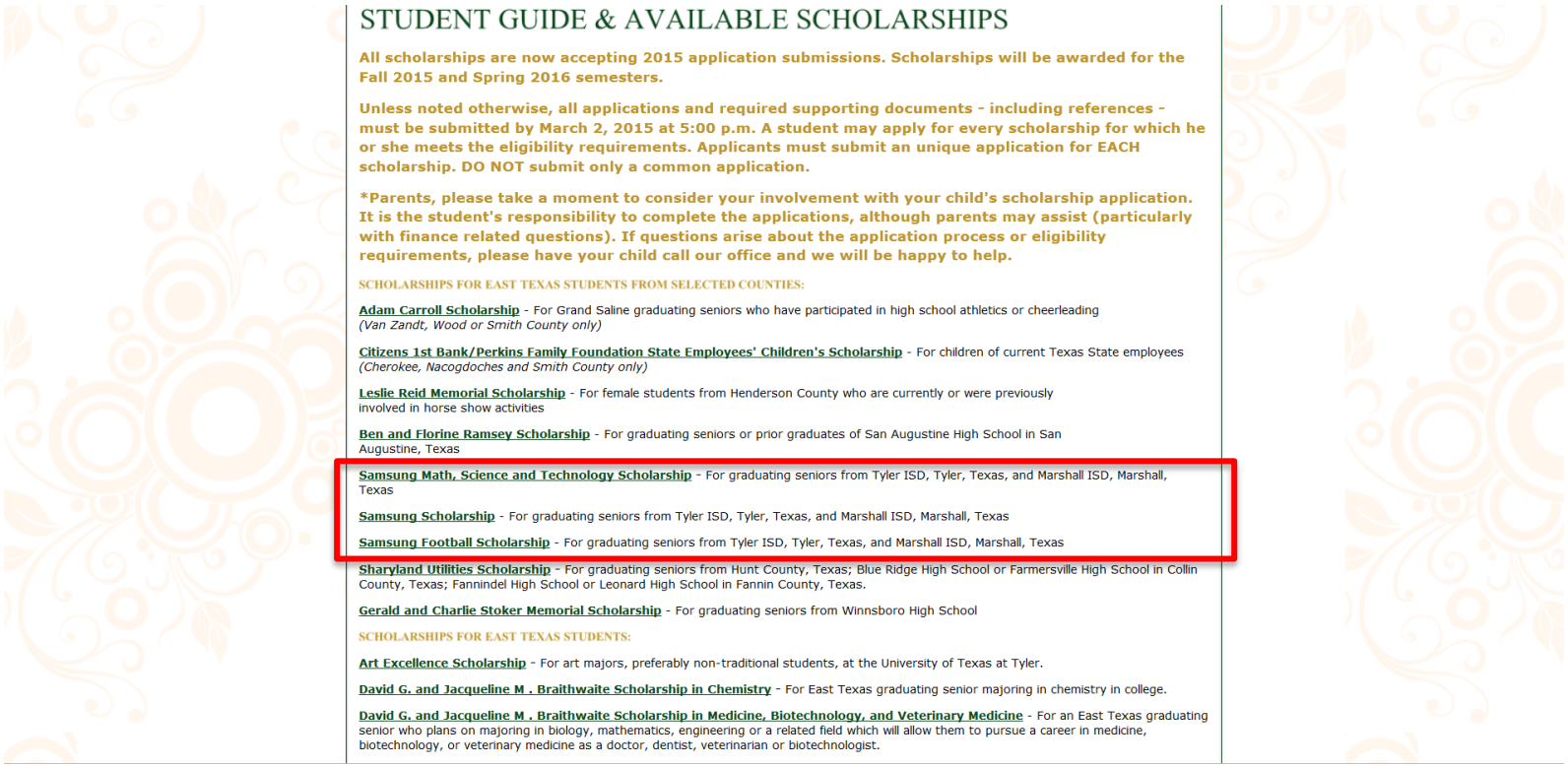
Figure 2 – Samsung example

Samsung Ice Skating Rink

Winter ice rink in Marshall, Texas. The historic county courthouse is in the background.

Source: Marshall News Messenger - Marshall, TX

Figure 3 – Samsung example



STUDENT GUIDE & AVAILABLE SCHOLARSHIPS

All scholarships are now accepting 2015 application submissions. Scholarships will be awarded for the Fall 2015 and Spring 2016 semesters.

Unless noted otherwise, all applications and required supporting documents - including references - must be submitted by March 2, 2015 at 5:00 p.m. A student may apply for every scholarship for which he or she meets the eligibility requirements. Applicants must submit an unique application for EACH scholarship. DO NOT submit only a common application.

***Parents, please take a moment to consider your involvement with your child's scholarship application. It is the student's responsibility to complete the applications, although parents may assist (particularly with finance related questions). If questions arise about the application process or eligibility requirements, please have your child call our office and we will be happy to help.**

SCHOLARSHIPS FOR EAST TEXAS STUDENTS FROM SELECTED COUNTIES:

Adam Carroll Scholarship - For Grand Saline graduating seniors who have participated in high school athletics or cheerleading *(Van Zandt, Wood or Smith County only)*

Citizens 1st Bank/Perkins Family Foundation State Employees' Children's Scholarship - For children of current Texas State employees *(Cherokee, Nacogdoches and Smith County only)*

Leslie Reid Memorial Scholarship - For female students from Henderson County who are currently or were previously involved in horse show activities

Ben and Florine Ramsey Scholarship - For graduating seniors or prior graduates of San Augustine High School in San Augustine, Texas

Samsung Math, Science and Technology Scholarship - For graduating seniors from Tyler ISD, Tyler, Texas, and Marshall ISD, Marshall, Texas

Samsung Scholarship - For graduating seniors from Tyler ISD, Tyler, Texas, and Marshall ISD, Marshall, Texas

Samsung Football Scholarship - For graduating seniors from Tyler ISD, Tyler, Texas, and Marshall ISD, Marshall, Texas

Sharyland Utilities Scholarship - For graduating seniors from Hunt County, Texas; Blue Ridge High School or Farmersville High School in Collin County, Texas; Fannindel High School or Leonard High School in Fannin County, Texas.

Gerald and Charlie Stoker Memorial Scholarship - For graduating seniors from Winnsboro High School

SCHOLARSHIPS FOR EAST TEXAS STUDENTS:

Art Excellence Scholarship - For art majors, preferably non-traditional students, at the University of Texas at Tyler.

David G. and Jacqueline M . Braithwaite Scholarship in Chemistry - For East Texas graduating senior majoring in chemistry in college.

David G. and Jacqueline M . Braithwaite Scholarship in Medicine, Biotechnology, and Veterinary Medicine - For an East Texas graduating senior who plans on majoring in biology, mathematics, engineering or a related field which will allow them to pursue a career in medicine, biotechnology, or veterinary medicine as a doctor, dentist, veterinarian or biotechnologist.

Source: Marshall News Messenger - Marshall, TX