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# Small business response to regulation: incorporating a behavioral perspective

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The use of behavioral economics in policy-making and public administration has neglected the heuristics that affect those who must comply with regulations. These heuristics affect the decision to comply with a regulation, and therefore they affect the effectiveness of regulations, and more generally the attitude of the regulated community toward government. In a survey and in interviews, small business owners described their compliance activities and their attitudes toward government. The business owners demonstrated the availability heuristic in their hatred of paperwork requirements, the bandwagon effect in seeking out reinforcement of negative reactions toward regulation, the anchoring of attitudes in particularly unpleasant interactions with government, and the impact of their economic well-being on their reaction to regulation. They also demonstrated the ineffectiveness of some information disclosure requirements. Incorporation of these behaviors and heuristics into the evaluation and enforcement of regulation may improve compliance and business relations with regulatory agencies.

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## Introduction

Behavioral economics has reshaped how we look at questions of public policy. This has been particularly important where the question of how individuals will respond to incentives created by policy initiatives often determines the success or failure of these efforts. Consequently, on both sides of the Atlantic, and at various levels of government, there have been efforts to incorporate findings of behavioral economics into policy decisions. Much focus though is on the beneficiaries of public policy; how can we get people to save more money or make “smarter” consumption choices? Other work in the field of behavioral public administration has examined how government regulators behave in response to the incentives they face.

One group, crucial to the effectiveness of many public policies, has thus far received comparatively less attention from the behavioral revolution. Those who must comply with the regulations, often businesses (but also potentially schools, hospitals, and other levels of government) have been neglected. What heuristics shape reactions to regulation and how do these heuristics lead to biased perceptions of regulation and government generally?

This omission is particularly glaring given the debate over regulations here in the United States. The anti-regulation rhetoric has reached a feverish pitch over the past few years with charges of “job-killing regulations” becoming increasingly common (Livermore and Schwartz, 2014). The 2016 U.S. presidential election turned on the ballots cast in Midwestern states where the winning candidate’s campaign repeatedly emphasized the burden of regulation. As the United States’ Midwest has been significantly affected by manufacturing job loss, it is likely that the issue of regulatory burden resonated and may have made a difference in the election.

This paper explores how businesses perceive regulation and how that perception affects their broader attitudes toward government. We conducted a survey of 322 randomly chosen small manufacturing business owners in the Midwestern United States and conducted detailed interviews and site visits with eight of them. The survey and the interviews, revealed that businesses reacted to regulation in ways that reflected certain findings in the behavioral economics literature. And these reactions likely informed both their political preferences and their sentiments and actions in response to regulation. The observations from our fieldwork of how businesses perceive regulations may help clarify debates over regulatory policy and turn some of the heated rhetoric over regulations into fruitful dialog.

We saw numerous heuristics at play in the way our respondents understood regulation. Business owners regard paperwork requirements as burdensome and out of proportion to the actual burden imposed by reporting and recordkeeping obligations. This is likely due to the ever-present nature of paperwork requirements. The perceptions of business owners regarding regulation are influenced by one bad experience (or by hearing about one bad experience). They anchor their views in this experience. There was also evidence of the bandwagon effect where business owners have their anti-regulatory preferences reinforced by the easy availability of criticisms of regulation.

While this paper does not test hypotheses regarding these behavioral tendencies, the acknowledgment of the role of these heuristics can potentially improve the development, evaluation, and enforcement of regulations. It is our hope that by casting a light upon the way that small business owners react to regulation, we will prompt experts in the field of behavioral economics to do broader studies on the heuristics employed by the regulated community. We believe that doing so can make regulation more effective and perhaps reduce the intense polarization that surrounds it.

This paper proceeds as follows. We begin with the following section which contains a discussion of why it is important to study business reaction to regulations. This is followed by a description of the methodology for this work. Heuristics and biases from the behavioral economics literature are then mapped on to the findings from the survey and interviews. In the concluding section, there is a discussion of the need for more research into the behavioral responses of regulated communities and the implications for public policy-making.

## The reaction to regulation

Why should we care about how businesses perceive regulation? Traditional economics would argue that what businesses *do* in response to regulation is more important than what they *think* about regulation (Bernheim and Rangel, 2009). Do they comply or not comply, and what is their level of compliance? What investments do they make to ensure compliance? What investments are foregone to comply with regulations? All these questions are doubtlessly important.

But there are two important reasons to also focus on the perceptions of the regulated community. First, the perceptions of the regulated entity may affect their decision about whether to comply with a regulation and whether to take steps above and beyond compliance (Rinfret and Pautz, 2018). If the regulated party fears enforcement or public embarrassment, they may “overcomply” with regulations (Bozeman and Anderson, 2016) increasing the cost of regulation. If a regulation (or enforcement of that regulation) is perceived as unfair or poorly designed, compliance may be uneven (Adams, 1963; Makkai and Braithwaite, 1996). If firms do not comply, then the intended benefits of the regulation will not be achieved.

Second, perceptions about regulation are a subset of perceptions about government generally. Perceptions and compliance are the last step in a long chain of events preceded by the identification of the need for a regulation, regulatory development (which includes business lobbying), and the final promulgation of the regulation. For a business owner or a manager of any entity regulated by the government, regulation (along with tax payment) is arguably the primary way that they interact with the state. In the United States, perceptions about government have become increasingly polarized over recent decades (Cramer, 2016). Everyone, including business owners, now has many more sources of information affecting their perceptions. The interaction of these sources of information with the experience of business owners likely shapes their perception of regulation (which in turn affects their sentiments about government).

Our current understanding of how businesses perceive regulation largely comes from examinations of the firm’s decision to comply with regulation. The political rhetoric that surrounds regulation implicitly relies on the assumption that business can be made to comply (Parker and Nielsen, 2011). The largest factor shaping business’ response to regulation is the regulations themselves and their enforcement. Stricter regulations and more rigorous enforcement can combine to impose a larger burden on business. Certainly, that logic is what lies behind much of the debate on regulation. Regulations that are perceived as overly strict or costly are likely to increase the opposition to regulation (Mendeloff, 1988).

And indeed, that argument accurately summarizes what has been characterized as the “rational actor” model of regulatory compliance. This argument is that the degree to which firms comply with regulations is based upon stringency of regulations, the likelihood of a sanction, and the magnitude of a sanction (Kagan et al., 2003). In this framework, businesses are “amoral

calculators” deciding whether it is more financially advantageous for them to comply with regulations or to skirt them (Kagan and Scholz, 1984).

But much work has been done on other factors that determine whether a business decides to comply. Presumably these factors also affect regulatory perceptions. Among these factors are the complexity and volume of regulations (Mandel and Carew, 2013), the enforcement style of inspectors (Bardach and Kagan, 1982), the “fairness” of regulations (Makkai and Braithwaite, 1996), knowledge of regulatory requirements (Kagan et al., 2003) (which may in turn depend on the size and capacity of the firm (Axelrad and Kagan, 2000)), and the structure (Howard-Grenville et al., 2008) and culture of an organization (Howard-Grenville, 2006). The culture of a community regarding regulation may also have important impacts (Axelrad and Kagan, 2000).

### Heuristics and reactions to regulation

In their seminal work, Tversky and Kahneman (1974) said “people rely on a limited number of heuristic principles by which they reduce the complex tasks of assessing likelihoods and predicting values to simpler judgmental operations. In general, these heuristics are quite useful but sometimes they lead to systematic errors”. Heuristics in turn lead to cognitive biases. In the world of public policy, these heuristics and biases have given rise to a burgeoning literature (see e.g. Thaler, 2015; Shafir, 2013).

This work has had a clear impact on public policy. In the United States, Cass Sunstein, one of the leading avatars of behavioral economics served as President Obama’s “regulatory czar”, the Administrator of the Office of Information and Regulatory Affairs. In that position he advocated for policies that utilize heuristics and biases to steer people toward outcomes that enhance their welfare (Sunstein, 2013). Similarly, in Great Britain, the government of David Cameron established the “Behavioral Insights Team” to utilize observations from behavioral economics to improve public welfare.<sup>1</sup>

Many of the policy outcomes springing from these initiatives are intended to help individuals better optimize their own welfare. Examples include using social norms to increase electricity conservation (by letting people know how much energy their neighbors were saving), using tax data to automatically fill out college financial aid forms, and reminding Department of Defense employees to save money for retirement.<sup>2</sup>

More recently, scholars have used behavioral economics to analyze the decisions of government employees. Government employees are subject to the same behavioral biases as the public. Some have argued that because they are not disciplined by the market, public servants are more likely to make errors due to heuristics and biases (Viscusi and Gayer, 2015; Cooper and Kovacic, 2012). There have been calls to better incorporate psychology into the study of public administration (Grimmelikhuijsen et al., 2017).

The revolution wrought by behavioral economics has paid much less attention to those who must comply with regulations, not to improve their own welfare, but to improve the welfare of others. This leaves, “an opening for theory to develop; the empirical evidence that people behave contrary to administrative expectations demands a reconciliatory response” (Kasdan, 2018, p. 4). The most prominent group of regulatees is businesses who must comply with regulations to preserve the environment, safeguard their workers, protect consumers and comply with a myriad of other requirements. Businesses may be the largest community that must comply with regulations but are not the only one. Hospitals, schools, and other levels of government are also subject to government regulation. Indeed, in depth attention to the regulated community has long been lacking (Pautz, 2009).

What have we learned from behavioral economics that can help us understand how those charged with compliance react to regulations?

We note that considerable dispute exists within the behavioral economics community and between behavioral economists and proponents of classical economics. Our observation that business owners may be subject to heuristics and biases will not settle these disputes. It is possible that it is “ecologically rational” for these owners to navigate the complex world of regulations using heuristics (Dhami et al., 2018). Regardless of any normative judgment on their behavior however, we feel that it is an important observation that these heuristics play a role in regulatory perception and acknowledging them can only help in improving the development and implementation of regulations.

Alemanno and Spina (2014) note that “the question arises about how to turn the plentiful empirical findings about human behavior into operational regulatory tools”. When it comes to applying these insights to the regulated community, we may still have a long way to go. Rather than review the behavioral economics literature (a task too large for this endeavor in any case), below, the relevant heuristics and biases that we observed as affecting regulated businesses are outlined. Before proceeding to that discussion, there is a brief discussion of the survey and interview methodology.

### Methodology

The survey focused on the manufacturing sector in seven Midwestern states—where the discussions about the regulatory impact on business have had the greatest political relevance. The declining manufacturing base in the Midwest has made it particularly fertile ground for these debates about government regulation. The study was conducted in two phases: a randomly conducted survey of 322 businesses followed by in-depth interviews with eight businesses recruited through the survey. The sample was stratified by the proportion of small and large businesses in the seven states; only small businesses were recruited for the survey portion of the study, after the initial wave in Indiana. To ensure businesses in all states surveyed, quotas were set by set to ensure a minimum number of observations collected.

The target population was narrowed to small manufacturing businesses after attempts to reach business leaders in large-sized businesses proved difficult. We did not see this as a problem as it allowed us to focus on small businesses which are at the center of much rhetoric surrounding regulation (Dennis Jr., 2011). That said, the results may not be generalizable to larger businesses. Small businesses are different in that the business owner is involved first hand in regulatory compliance. In large businesses, there are specialists who are charged with this function and only major issues rise to higher management. This is likely to have a major effect on the way business owners perceive regulation (Rinfret and Pautz, 2018).<sup>3</sup>

Business executives including managers, directors, owners and partners were randomly recruited. Only primary manufacturing sector firms were recruited as identified by entities’ Standard Industrial Code (SIC). Fielding was conducted by phone between July and September 2017, except for limited email recruitment in Indiana and Pennsylvania which was discontinued due to a low cooperation rate in this mode. The study was conducted in seven contiguous states, primarily located in the Midwest including Indiana, Illinois, Michigan, Minnesota, Ohio, Pennsylvania and Wisconsin. Details on the survey methodology as well as how survey respondents were selected for interviews are shown in Appendix A and the text of the survey itself is shown in Appendix B.

The survey analysis pointed to behavioral factors potentially lying behind small business perceptions of and reaction to

regulation. While we had always intended to do in-person interviews (there was a question at the end of the survey asking if respondents would be willing to have detailed follow-up conversations) these behavioral factors highlighted the need for more detailed conversations. Eight respondents were willing to speak with us in person (any individual that agreed to be contacted, about 10% of respondents, was called five times to attempt to set up an interview). Five of the interviews were in person and included visits to the manufacturing site; three were conducted by phone at the preference of the interview subjects. The business owners were promised confidentiality (standard practice in qualitative research (Rubin and Rubin, 2011)).

Interview subjects were asked a standard set of questions (see Appendix C for interview script) with follow-up questions asked if necessary. The interviews generally focused on giving context to the survey responses and filling in gaps. Questions were designed to get at complex and open-ended issues not surveyed, such as the nature of who managed compliance, history of interactions with the government, and where beliefs about regulation came from. The interviews generally lasted between 45 min and one hour and were transcribed contemporaneously. Interview scripts were then searched for common themes which are discussed in next section along with the survey results.

The purpose of this work is not to test specific hypotheses. Indeed, it was originally conceived as a project aimed to achieve a better understanding of small business owner behavior and attitudes. As with any good qualitative research, this work was intended to generate hypotheses regarding the reaction of small business owners to regulation. Once immersed in the data-gathering process, it became clear to us that the behavioral economics literature spoke to a great deal of what we were seeing in the survey and it informed our interviews. We now turn to explaining this connection and the possible implications for regulatory policy.

**The heuristics and resulting biases of business owners**

As discussed, the “rational actor” model of regulation assumes that regulated parties calculate the likely benefits and costs of compliance and behave accordingly (Kagan et al., 2003). While some have described other factors that determine regulatory compliance, there has been little connection to behavioral literature in explaining the behaviors and attitudes of regulated entities. The work of Kahneman (2011) and others presents a litany of such possible explanations.

The survey and interviews revealed business owners exhibiting a series of heuristics and biases. While researchers have identified hundreds of such biases and heuristics (many of which overlap),<sup>4</sup> four were prominent in our survey and particularly our interview data.

- The availability heuristic: Because the ability to recall information is affected by a variety of factors unrelated to frequency, individuals are unduly influenced by easy to recall (available) events (Tversky and Kahneman, 1974).
- The bandwagon effect: Many people seek evidence that is compatible with beliefs. It is intellectually easier to do so than to challenge initial beliefs. Exposure to others who believe similarly to you reinforces your initial belief (Sunstein, 2006).
- Anchoring: We tend to anchor our views on a small number of incidents in forming our opinions about something. A dramatic incident has more staying power in our minds than a mundane one (Tversky and Kahneman, 1974).
- Self-serving bias: There is a tendency to ascribe positive behaviors and actions to oneself while faulting other parties for negative outcomes (Pronin and Schmidt, 2013).

We make no claim that this list of heuristics is an exhaustive compilation of the behavioral response to regulation of businesses. As we will note below, the demonstration of the presence of these heuristics argues for more systematic work examining how behavioral economics can better explain polarization about regulatory issues. All of these heuristics and the biases that result from them and their impact on perceptions regarding regulation are discussed below.

**The availability heuristic and the problem of paperwork.** The ability of individuals to mentally retrieve an instance of something affects their assessment of the probability of that occurrence. This “availability heuristic” involves our reliance on the ease of memory search to answer a question which in turn produces a predictable bias in judgment (Kahneman, 2011). Among the most significant contributors to availability is how recently one has been exposed to information or a task.

One of the most regular regulatory compliance activities that a small business owner must engage in is keeping records and completing paperwork for the government. In both the survey and interviews, the subject of reporting and recordkeeping came up repeatedly. Among those surveyed, approximately half reported their company spent more than an hour per week filling out government compliance forms which may serve as a constant reminder of the impact of regulations.

Survey respondents were asked about specific types of regulations and whether they had a significant impact on the business. The ranked results appear in Table 1.

Environmental and worker safety regulations are often the poster children for regulatory burden. Yet responses that they were a problem were not as common as those that cited recordkeeping/reporting requirements or the overall volume of regulation (which likely includes recordkeeping and reporting requirements).

Interview subjects demonstrated this phenomenon even more clearly. One of the interview subjects had prepared a visual aid for me. On one side of the desk was one binder. On the other was a pile of eight binders. Before the interview started, he pointed to the one binder and said, “this is how we make {our product}”, then he pointed to the pile of binders and said, “these are the records we have to keep because of regulations”.

In contrast, changing your operating process because of a regulation quickly becomes invisible to you. This is an instance of what Kahneman (2011, p. 78) describes as the establishment of norms. “Very little repetition is needed for a new experience to feel normal”. These regulations are generally accepted by businesses that have already complied with them. They also often understand the purpose of such regulations and accept the burden associated with it. One respondent said, “We’ve gotten over the hump. If you’d interviewed me five years ago it would

**Table 1 Types of regulations having a significant impact on your business (n = 288).**

Type of regulation	Yes (%) <sup>a</sup>
The overall volume of regulations	47
Recordkeeping/reporting	43
Employee benefits	42
Environment	32
Worker safety	29
Licensing	25

<sup>a</sup>Percentages add to more than 100 percent because respondents could select more than one answer.

have been different. Once you get your head around it and you know what to do it becomes part of your routine operation". Another said, "We are an established business, so we have been operating a long time and we dovetail regulations into what we do". These regulatory requirements quickly become less available in the mind of those who comply with them.

One might think that completing paperwork would fall in this category but every time one fills out a form, one must find new information. In so doing, one is reminded of all the frustrations associated with doing so. One respondent said, "All the government crap that is duplicate of each other. You take the same numbers fill it out in five different directions, city, county, state, federal, another federal agency".

Reporting and recordkeeping requirements also irritated our interview subjects because they did not understand the purpose of many of them. One respondent said, "My first reaction was "does this apply to me" trying to figure out why anyone would care about these tiny bottles we sell, 200 grams". Another said, "I don't understand why it can't be a lot simpler". This is in line with literature on red tape. Tasks that are both burdensome and serve an unclear purpose produce a negative emotional response from those forced to undertake them in part by imposing a sense of powerlessness (Hattke et al., 2018) or a loss of autonomy (Moynihan et al., 2015). For this reason, regulated entities care as much about the process by which they interact with government as they do about the outcomes (Moynihan et al., 2015). If the outcomes are invisible and the process burdensome, there is a recipe for a negative perception by regulatees.

Business owners feel that many of the records they keep are never seen by anyone. One said, "{there are} never ending requests for information and you never have any idea where it goes, who reads it, what are the results". Many of the reports businesses submit are required for reasons that are never explained to business owners. Another interviewee said, "I have yet to figure out what state registrations are for. Each of our two plants have only been visited twice in 30 years". This increases their dissatisfaction with paperwork requirements. When the requirements are (or seem) duplicative this dissatisfaction is multiplied. For these reasons, the business owners felt much more strongly about requirements for reporting and recordkeeping than about regulations that may impose a greater financial burden but that are not as available in their minds.

### **The availability heuristic reinforced by the bandwagon effect.**

While paperwork requirements are clearly an important determinant of regulatory attitudes, they are not the only determinant. To better understand regulatory resentment, the survey included five questions about attitudes toward regulations (see question 8 in Appendix B). The answers to these five questions made up the primary measure of regulatory perceptions/attitudes. Respondents were asked to choose between five sets of two statements that came closest to their own views. These pairs of statements were also asked in an earlier survey study of regulatory policy (Shapiro and Borie-Holtz, 2014).<sup>5</sup> The responses to these questions are displayed in Table 2.

Interestingly, the amount of hours spent filling out paperwork had a statistically significant correlation with only two of these responses (the questions on the number of regulations and on small business competitiveness). So while it is clear that recordkeeping and reporting requirements have a disproportionate weight in affecting business perceptions, there is more at work here. One variable that jumped out as also important was party affiliation. Table 3 shows the percentage of Democrats,

Independents, and Republicans (and those with no party affiliation) that agreed with the regulatory attitude statements we gave them. The differences between those who identified with the varied parties is statistically significant for three of the five questions.

Party identification also had significant relationships with the following responses to survey questions:

- Have regulations impacted layoff decisions?
- Are the total number of regulations a burden and are recordkeeping requirements a burden?

While the causal relationship between party affiliation and regulatory attitudes could run either way (people could become Republicans because of regulatory experience or could hate regulations because they hear anti-regulatory rhetoric from their party's leaders), the interviews pointed at a relationship that flows both ways. Kaufmann and Tummers (2017) find that political conservatism exacerbates dissatisfaction with red tape. This may play a role here as well. Social cascade (bandwagon) effects and group polarization, play an important role in amplifying extreme views (Sunstein, 2006). The Internet and social media have made it much easier for people to seek out like minded individuals who will reinforce their views on a particular subject (which were perhaps shaped by the availability heuristic). This process favors "uncritical acceptance of suggestions and exaggeration of the likelihood of extreme and improbable events" (such as a government inspection for a business owner (Kahneman, 2011)). Even when exposed to balanced information, people pick out the portions that are more in line with their pre-existing preferences (Taber and Lodge, 2006).

Several interview subjects discussed stories they had seen on the Internet about government or about regulations. One also noted, "We all listen to the same talk radio show and share the same experiences", and described how he and his fellow business owners collectively viewed business regulations as unfair.<sup>6</sup> Some of the interpretations of these stories (or perhaps the stories themselves) were clearly false. President Obama was blamed for the Great Recession, which began before his presidency, and the health care initiatives pursued by Presidents Clinton and Obama were described as government provided socialized medicine. One interview subject discussed a book he had read, "Three Felonies a Day" (Silverglate, 2011), which makes the case that the government can always find something a law which a business owner is breaking. Clearly this book had reinforced his negative views toward regulation.

The survey also contained a question about how business owners found out about new regulations with which they would need to comply. Table 4 displays these sources.

Just three out of 10 respondents got their information straight from a government agency. The plurality of respondents relied on information from trade associations (31%), and local chambers of commerce (17%). In other words, many people are hearing about their obligations from sources unlikely to view those requirements favorably.

The Internet or talk radio may have been the original source of these business owners' views on regulation. But it seems at least as likely that initial impressions that were created by the availability or anchoring heuristics<sup>7</sup> (or the actual burden of regulations) and were then reinforced by repeated exposure to arguments that regulation is unreasonable, burdensome, and kills businesses or jobs. The next time one of these business owners fills out a form, their negative reaction to doing so will be shaped by the negative reinforcement they have been exposed to since the last time they interacted with the government.

**Table 2 Regulatory attitudinal questions.**

Question	Anti-regulation answer (%)	Pro-regulation answer (%)	N
Small businesses: Regulations help level the playing field with more established businesses with greater resources	77	23	267
International competition: Regulations are not a significant factor in competing with businesses outside the United States	70	30	249
Environmental regulations: Compliance with many environmental regulations provide businesses with an opportunity to build a positive brand awareness among consumers and the public	60	40	260
Public interest: Government regulation of business is needed to protect the public interest.	57	43	271
Number of regulations: The number of regulations is not the biggest factor impacting my business.	53	47	275

**Table 3 Paired statements presenting regulations as more positive.**

Positive Paired Statement	Democrats (%)	Independents (%)	Republicans (%)	No party affiliation (%)
Public interest***	71	43	28	44
Number of regulations***	64	52	29	52
Environmental regulations	52	40	32	52
Small businesses	34	17	19	30
International competition***	62	27	19	32

\*\*\*p < 0.001 (that answer of this question is independent of party affiliation).

**Table 4 Sources of information for new regulatory policies (n = 320).**

Sources of information	Percent <sup>a</sup>
Straight from the government agency	34
Trade association or affiliated groups	31
Word of mouth	20
Other sources	19
Local chamber of commerce or other similar organizations	17

<sup>a</sup>Totals do not sum to 100% since respondents could select more than one source.

**The anchoring heuristic and the power of bad incident.** We are prone to collect *too few* observations before rendering a judgment (Kahneman, 2011). Indeed, one dramatic incident can overcome the impression of a larger number of routine ones. Other researchers have found that people are influenced by anchors irrespective of whether the anchor is relevant, and that people are generally unaware of the impact of anchoring (Wilson et al., 1996). This pattern evinced itself in our interviews. Two interview subjects mentioned negative interactions (unprompted by the interviewer) they had with government enforcement personnel while numerous others described ones they had heard about from neighbors or competitors.

One interviewee told us about a fine he had received during a safety inspection. The log for inspecting the fire extinguisher had one date not filled in, and the regulatory agency fined him \$750. He clearly thought the fine was unreasonable and there was no question from his tone and his subsequent comments that the incident had a disproportionate effect on his attitude toward regulators and regulations.

Another small business owner told us a similar story. Forty years ago he had been sued by a worker he had fired. The worker

claimed that he had been fired because he had been hurt on the job (a claim vigorously denied by my interview subject). The court gave an award to the worker. The business owner that was able to recount the details of the case 40 years later and it shaped his attitudes toward government. He was probably the most anti-regulatory of our eight interview subjects.

Incidents did not have to happen to the business itself for it to affect owners. At least two other interview subjects (again unprompted) described incidents that they had heard about from competitors or neighbors where there was treatment by the government that was perceived to be unfair. These incidents were part of what formed their attitudes toward government regulation and government enforcement of that regulation. This is consistent with blame-assignment in other contexts (Davis and Pink-Harper, 2016).

Obviously, some of the actions by government may not have been unfair. There is no way to judge the case of the 40-year-old workers compensation claim, and the incidents in neighboring businesses are even murkier since they were filtered through two retellings. And it is indeed possible (perhaps probable) that these owners were already disposed to be opposed to government regulation before the incident happened or they heard about it. But this type of “anchoring” is a well-recognized phenomenon in the behavioral economics literature (Wilson et al., 1996). It was clear from our interviews that this phenomenon is prevalent in the regulatory arena. We also saw interview subjects compare their current regulatory environment, with a perhaps mythical past, “There were no regulations. You could ship anything anywhere. We were shipping anything”.

It is also possible to see this type of anchoring interacting with the bandwagon effect described above. In the Internet era, when anyone is upset about unfair treatment, the first thing they do is go on the Internet looking for advice or sympathy. This will likely result in finding support for anti-regulatory attitudes and other examples of purported governmental overreach. One will also

**Table 5 Correlation between economic and regulatory perceptions.**

Regulatory attitude question	Significance of correlation coefficient with perception of state economy (two-tailed p value)	Sample size
Public interest***	0.001	265
Number of regulations***	0.009	269
Environmental regulations	0.383	255
Small businesses***	0.008	261
International competition*	0.017	244

\*\*\*Significant at 99% confidence.  
\*Significant at 95% confidence.

listen with more sympathy when political figures decry over-regulation if you perceive yourself to have been the victim of such phenomena. Combining these phenomena and you get the sentiment described by one subject, “As a business owner, I lose sleep over (regulations). You know that noncompliance penalties can be unbelievably severe, so you worry about that constantly. You may be very successful and you can get blindsided by a regulation of some sort”.

**Self-serving bias and attitudes toward regulations.** Business owners had varying perceptions of the state of the economy in 2017. In the survey, 57% of respondents saw the economy as “excellent” or “good” and 43% of respondents saw the economy as “fair” or “poor”. Responses to the question on the state of the economy correlated strongly with the main questions designed to measure perceptions about regulations. Perception of the economy was correlated with responses to four of the five questions on regulatory attitudes at the 95% level of statistical significance and for three of the five it was at the 99% level of statistical significance (see Table 5).

Business owners’ attitudes toward regulation is clearly part of an overall mood that they have regarding their economic well-being. Mood effects are prominent in both the behavioral economics literature and the organizational behavior literature (Wright and Bower, 1992). If a business owner or manager believes the economy is bad (or is just concerned about the future of their business) it is likely to impact their attitude toward anything that has a negative impact on their financial welfare, including regulations.

Regulations may be a particularly attractive target due to what the psychological literature calls “self-serving bias”. Work from the field of negotiation has identified “self-serving bias”, the tendency to ascribe positive behaviors and actions to oneself while faulting other parties for obstinacy or other factors leading to the failure of negotiations (Babcock et al., 1995). Similarly, research in organizational behavior has shown that individuals with negative work experiences tend to blame organizational red tape (Davis and Pink-Harper, 2016). A similar behavior may explain negative attitudes toward government regulation. When a business fails (or does poorly) the owner of the business must ascribe the failure or poor performance to some cause or combination of causes. Research on self-serving biases point toward business owners finding external causes for their misfortune (Pronin and Schmidt, 2013).

Of course, external causes may be at fault for a business failure. A poor economy could be to blame as could the opening of a competitive business with a new technology or particularly desirable product. Or it could be government regulation that is at

fault. What the literature on self-serving bias points to though is that in apportioning blame for failure, the business owner will overemphasize external factors and underemphasize her own role. One interview subject also minimized the benefits of the regulation to others, “Twelve people die in NYC, we are talking Darwinian selection here, the amount of money we are spending for the benefits to be obtained. [is way out of proportion]”. When mood bias is producing a negative feeling about the state of one’s business, the conditions may be particularly rife for self-serving bias.

The bandwagon effect described above makes regulation an even more attractive external source of blame. While the businesses interviewed had records of success and there were no questions specifically asking about the causes of setbacks, at least one business owner blamed the government (particularly Democrats) for the tough times during the Great Recession. Bombarded by rhetoric about government regulation, anyone searching for people to blame for poor outcomes in their business has an easy target.

**An aside: does nudging work? behavioral responses to disclosure requirements.** The chief policy implication of behavioral economics to date has been a preference for “nudges”, low impact government interventions that nudge individuals toward better choices. A prominent tool in the nudger’s arsenal is disclosure requirements, requirements that business disclose hazards (or positive things) to customers or workers, which will allow these individuals to exercise caution or make better choices (Sunstein, 2011).

Some of the interviewees demonstrated that disclosure requirements often fail to take into account human nature. The owner with the binders on his desk was not the only one with a visual aid. Two other owners pointed out their “disclosure walls” to me. These walls were filled with mandatory notices to their workers about worker safety, worker rights, and other required disclosures. The owners did not need to say anything to make their points. Seeing these walls for the first time, I barely had any inclination to read what they said. If you pass such a wall every day, you are even less likely to pay attention to what is on it or to notice any new disclosures (if one sees such disclosures as intended to solely inform union representatives of their rights, then their applicability to the average worker may be less important.). Several businesses also cited new OSHA regulations on the disclosure of chemical hazards.<sup>8</sup> They described the relabeling as burdensome but more importantly questioned the benefits of such a regulation. One owner described them as “pictograms that no one understands”, while another called them “pictograms which no one looks at”. It is entirely possible that workers at these facilities would have a different perspective on the use of these pictograms but the owners did not seem to think that their employees paid much attention to them.

This is not to demean all disclosure requirements (Sunstein, 2011, p. 1369) has argued that disclosures should be, “concrete, straightforward, simple, meaningful, timely, and salient”. He also argues (p. 1411) that design of disclosures “require(s) careful attention to how people process and use information”. That is a lot of requirements for a disclosure to meet. And our research suggests that the list is good but incomplete. More attention should be paid to how disclosure requirements are implemented, how multiple disclosures targeted at the same audience interact with each other, and whether the effect of disclosures diminish over time. The disclosures at the workplaces of interview subjects may not meet the basic criteria for success of an information disclosure that the beneficiaries should receive and understand the information (Carrigan and Coglianese, 2018) because of a failure to incorporate these additional factors.

## Conclusions

Behavioral economics has become a considerable focus in public policy over the past decade. Spurred on by Nobel Prize winners Daniel Kahneman and Richard Thaler and such proponents as Cass Sunstein, it has prompted significant changes in policy on both sides of the Atlantic. This is particularly true in regulatory policy. One area of regulation that behavioralists have neglected is the response to regulations of those charged with complying with them, not to benefit themselves but to benefit others.

With billions of dollars of regulatory costs and benefits at stake, this is a potentially critical area for further research. Furthermore, the behavioral response to regulation shapes attitudes toward government more generally. In a time of increasing political polarization, how businesses interpret regulatory requirements both impacts their political attitudes and is in turn impacted by them. A vicious cycle ensues where bad experiences with regulation are reinforced by anti-regulatory jeremiads on the Internet which then shape how future experiences with regulation are perceived.

More research is needed on mapping the existing lists of heuristics and biases on to behaviors by business owners. There are many possible hypotheses that could follow from this work. The difference between small and large businesses is likely to be important as the one representative of a large business had very different reactions to regulation (see Rinfret and Pautz (2018) for broader examples of this phenomenon). Do heuristics affect the regulatory behavior and attitudes of small businesses more than large businesses? Do the heuristics play out differently in non-manufacturing sectors than in manufacturing where the mood effect may be particularly prominent? Do these heuristics operate differently in non-business regulated communities?

In the shorter run, this study provides support for reforms that others have argued for. Thaler (2015) suggests using government policy to reduce the risk associated with starting a small business. This would have the twin advantages of dealing with loss aversion of small business owners,<sup>9</sup> and giving small businesses a positive interaction with government on which to anchor their sentiments about the state.

In addition, Viscusi and Gayer (2015) suggest applying behavioral insights to regulators. They cite many of the same biases discussed here as playing out in the behavior of regulators. While their context is largely the choice federal agencies face in crafting rules, our findings indicate that their arguments also apply to the enforcement of those rules. Training of street level enforcers of regulations to combat the biases that lead to citations for small offenses and inculcating a culture of fear of the government in the regulated community could make a significant difference both in compliance and in the attitude of the regulated. While violations that clearly causes harm should be strictly prosecuted, incidents like a missing line on a form should be handled with care. A business punished for a paperwork violation will remember it for a long time.

Literature in the public administration sphere emphasizes the difference between “red tape” and “green tape” in organizational rules. Our finding that business owners were frustrated by a lack of understanding regarding the purpose of regulation points out that this distinction could also be applied to rules imposed on the private sector. Among the relevant qualities of “green tape” that regulating agencies should strive for are ensuring the regulated community understands the purpose of requirements, that requirements are set at the optimal level of control, and that the rules are clearly connected to the goals of regulation (DeHart-Davis, 2008).

The interviews also point to the value of compliance assistance and explaining the purposes of regulation. De Fine Licht (2014) describes this as “transparency in rationale” and argues that it may be one of the effective forms of transparent government. This is one of the few reforms that could make a difference both

to the actual burden experienced by businesses and to their perception of regulations. Compliance assistance is already practiced by federal and state regulatory agencies, but our experience indicates that there is a considerable demand for more (as long as such assistance does not come with the threat of enforcement) from businesses. A greater presence of government as a genuine partner in the effort to improve workplace safety, public health, and general welfare would go a long way to changing perceptions of regulation.

Finally, retrospective review of regulations has been a very prominent part of regulatory debates in recent years. This generally involves selecting regulations that have been in place for a number of years and determining whether they are fulfilling their purpose, and estimating the burdens they are imposing. Initiatives for retrospective review should explicitly focus on reporting and record-keeping requirements as they impose continual costs on businesses. They could even be incorporated in a revised Paperwork Reduction Act that focuses on the cumulative burden of reporting and recordkeeping requirements (Shapiro, 2019).

“Policies based on bad intuitive psychology are less likely to succeed and can often prove hurtful. Thus, well intentioned interventions can fail because of the way they are construed by the targeted group (Shafir, 2013, p. 2). Debates over regulation have become deeply polarized over the past decade. As a result, many of the debates in regulatory policy involve the two sides talking past each other which in turn amplifies the polarization. A better understanding of why businesses react to regulation the way they do may hold the promise of turning down the temperature on these debates and perhaps even allowing us to make better regulatory policy.

## Data availability

The datasets generated by the survey research during and/or analyzed during the current study are available in the Dataverse repository, <https://doi.org/10.7910/DVN/205YXZ>. Individual interview transcripts have not been shared because to do so would violate our Rutgers Institutional Review Board approval.

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## Notes

- 1 See <http://www.behaviouralinsights.co.uk/> (last viewed March 27, 2018).
- 2 See [https://www.washingtonpost.com/news/wonk/wp/2017/08/11/governments-are-trying-to-nudge-us-into-better-behavior-is-it-working/?utm\\_term=.74ca8fafd71a](https://www.washingtonpost.com/news/wonk/wp/2017/08/11/governments-are-trying-to-nudge-us-into-better-behavior-is-it-working/?utm_term=.74ca8fafd71a) (last viewed March 28, 2018).
- 3 Indeed, we did do one interview with someone in the environmental office of a large business to test this premise and he bore out the assumption that large businesses see regulation as part of their business and use offices dedicated to compliance to manage their regulatory responses. This is consistent with arguments that large businesses view regulation differently than small businesses (Rinfret and Pautz, 2018). Our interview subject noted, “I don’t think the cost is too significant...rolling back regulations would be more disruptive...the big companies understand there is a benefit. We use these regulations to show that we are reducing emissions. We are all looking for sustainable development type measures”.
- 4 See <http://www.visualcapitalist.com/wp-content/uploads/2017/09/cognitive-bias-infographic.html> for example (last viewed October 12, 2018).
- 5 Two of these statement pairs were adapted from an earlier survey by the Pew Research Center. These are the questions on “public interest” and “environmental regulations”.
- 6 This may also indicate another phenomenon discussed in the behavioral literature, the role of social norms. If businesses are discussing the unfairness of regulations with each other, their beliefs about this unfairness becomes more justified in their minds (Sunstein, 2013).
- 7 See the discussion in the next section.

- 8 They were referring to the OSHA Hazard Communication Standard described here, [https://www.osha.gov/Publications/HazComm\\_QuickCard\\_Pictogram.html](https://www.osha.gov/Publications/HazComm_QuickCard_Pictogram.html) (last viewed November 20, 2017).
- 9 While we did not see loss aversion explicitly in our interview subjects, there is reason to believe that because regulations are always a loss for businesses, that loss aversion is a part of the naturally occurring bias against regulations from owners and managers.

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## Competing interests

The authors declare no competing interests.

## Additional information

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