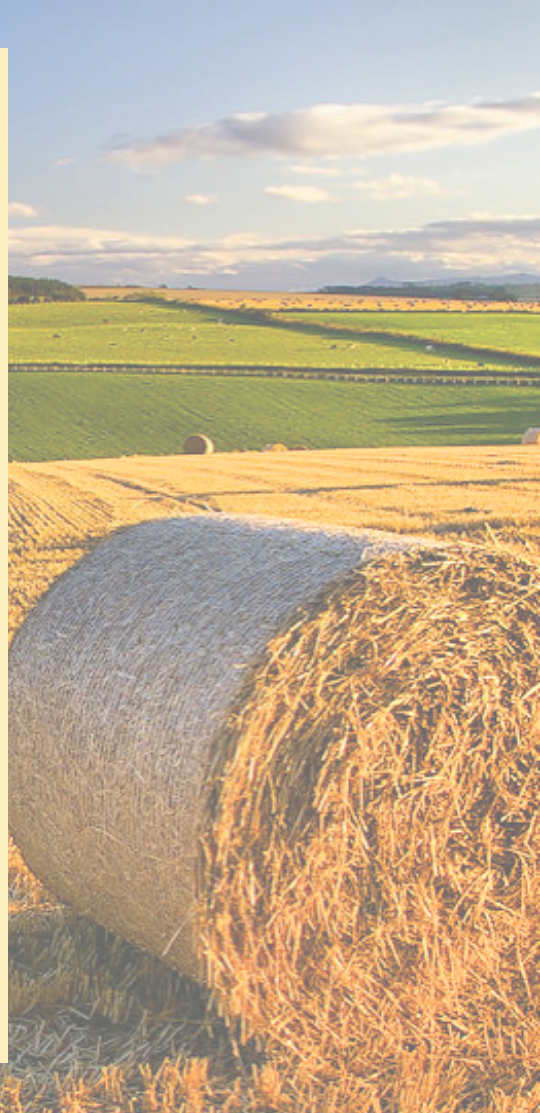

CHAPTER 2:

Public Comments for Evaluation of Existing Regulations

MARK FEBRIZIO & ZHOUDAN XIE

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Under Executive Orders (EOs) 13771 and 13777¹, federal agencies are tasked with evaluating existing regulations to identify regulations for repeal, replacement, and modification. In performing their evaluation, agencies solicited public input through the notice-and-comment process. Unlike the consultations conducted for rulemakings that seek public opinion on individual agency proposals, these comments are solicited to help agencies identify existing regulations that are “outdated, unnecessary, or ineffective” or create other unnecessary burdens.² Input from stakeholders that are directly or indirectly affected by the regulations can provide valuable information to agencies, especially because impacts of existing regulations are largely unknown due to the lack of retrospective review (Aldy 2014; Dudley 2017).

Nevertheless, little research has examined comments submitted for evaluation of existing regulations, and even basic characteristics of those comments remain unknown. Who actively

¹ EO 13771 is available at: <https://www.federalregister.gov/documents/2017/02/03/2017-02451/reducing-regulation-and-controlling-regulatory-costs>. EO 13777 is available at: <https://www.federalregister.gov/documents/2017/03/01/2017-04107/enforcing-the-regulatory-reform-agenda>.

² EO 13777, sec. 3(d)

participates in the consultations for evaluation of existing regulations? What topics do they cover? Do they identify specific regulations as candidates for review? To what extent do they rely on relevant expertise and evidence? What type of proposals do they suggest? In this chapter, we analyze the comments solicited for the evaluation of existing regulations by three major regulators of the agriculture sector, the U.S. Department of Agriculture (USDA), the Environmental Protection Agency (EPA), and the Food and Drug Administration (FDA). We aim to uncover various characteristics of the comments around two questions: Who commented? What did they say?

The analysis of comments presents a substantial portion of submissions from anonymous commenters. Among identifiable commenters, organizations commented more frequently than individuals. In particular, business groups represented the major type of stakeholders among the organizations participating in the comment process. The content of the comments exhibited significant variations. While the comments covered a wide range of issue areas, a substantial number of comments identified specific regulations and provided proposals on regulatory actions. Some of the arguments and proposals are supported by identifiable evidence and commenters' expertise from personal or professional experiences. The comments also frequently referenced specific forms of command-and-control regulations, implying a particular need of reviewing those forms of regulations. These results also provide useful insights for informing future agency efforts to seek public input on evaluation of existing regulations.

Given that the existing literature mostly focuses on comments in rulemakings, this chapter represents one of the few systematic analyses of public input solicited for evaluation of existing regulations.³ Hence this chapter contributes to the scholarship on public participation in regulatory processes and retrospective review. From practitioners' perspective, the results shed light on how agencies can use public input to inform their efforts for regulatory reform. The characteristics of the consultations agencies conducted and comments submitted suggest ways in which agencies may improve their consultation practices to obtain more substantive and specific information from relevant stakeholders.

The chapter is structured as follows. Section I investigates the consultation practices conducted by USDA, EPA, and FDA pursuant to EOs 13771 and 13777. Section II provides an overview of the characteristics of the comments submitted to those agencies, including the volume and length of comments, the occurrences of mass comments, and the relevance of comments to agriculture. Section III describes the sampling approach for selecting a subset of comments for further content analysis. Section IV presents the results of the content analysis that reflect the substance and approximate the quality of the comments. Section V summarizes the chapter and concludes with

³ To our knowledge, the only existing study that presents a systematic analysis of public input solicited for retrospective review is DeMenno (2017), which assesses comments solicited pursuant to EOs 13563, 13579, and 13610.

recommendations for agencies to improve their consultation practices for evaluation of existing regulations.

I. Consultations for Evaluation of Existing Regulations

Subsequent to EO 13771, which imposes regulatory reform initiatives to offset the number and costs of new regulations, President Trump signed EO 13777—“Enforcing the Regulatory Reform Agenda”. EO 13777 requires each agency to designate a regulatory reform officer (RRO) and establish a Regulatory Reform Task Force headed by the RRO. Each Regulatory Reform Task Force is instructed to “evaluate existing regulations ... and make recommendations to the agency head regarding their repeal, replacement, or modification,” seeking public input in performing the evaluation.⁴ In accordance with the EOs, agencies published *Federal Register* (FR) notices to solicit comments on their existing regulations. Without a standard form, the notices differ in various ways, such as the specific questions the agency asked and the length of the comment period. In this chapter, we specifically analyze the comments received by three agencies that issue many important regulations affecting agriculture.⁵

A. Selection of Agencies

A previous study that analyzed the regulations most likely to affect the agriculture sector found that USDA, the Department of Health and Human Services (HHS), and EPA are among the top five departments that issued most of the relevant regulations (Prasad et al. 2019).

As the major regulator of the agriculture sector, USDA issues a wide range of regulations governing farming practices and market activities, including subsidy programs for conservation practices, recordkeeping requirements for pesticide use, and inspection and certification requirements for imports and exports of agricultural commodities. Within HHS, agriculture-related regulations are primarily issued by FDA regarding the use of food additives, harvesting and packing of produce, regulation of animal feed, and animal biotechnology. EPA regulations also affect various agricultural activities such as permits for discharges from certain animal feeding operations, labeling and registration of pesticides, various requirements for handling hazardous substances in farming or ranching, and air and water quality standards.

⁴ EO 13777 Sec 3(d) and (e).

⁵ According to the 2018 GWRSC/USDA cooperative agreement, USDA, HHS, and EPA issued 61 percent of the agriculture-related regulations in the sample of 709 CFR parts. See, Prasad et al. (2019), Table 2 on p. 52: <https://regulatorystudies.columbian.gwu.edu/sites/g/files/zaxdzs1866/f/downloads/GW%20Reg%20Studies%20-%20USDA%20Report%20-%20Chapter%203.pdf>.

B. Consultations Seeking Input

Pursuant to EOs 13771 and 13777, USDA, EPA, and FDA issued individual FR notices in 2017 to solicit input for their Regulatory Reform Task Forces' evaluation of existing regulations. The agencies accepted comments in both electronic and written formats and made the comments publicly available in the relevant regulations.gov docket.⁶

As shown in Table 1, USDA, EPA, and FDA published the notices for public comment at different times and opened the comment period for varied lengths. Both USDA and FDA published a second FR notice to extend the comment period. Specifically, USDA issued the first notice on July 17, 2017 announcing a one-year comment period, which was extended by an additional year in a notice published in June 2018. Similarly, FDA initially announced a comment period of 90 days in its September 8, 2017 notice, which it extended by 60 days in response to requests from stakeholders. In contrast with USDA and FDA's lengthy comment periods, EPA only opened its comment period for 32 days without an extension.

The notices these agencies published differ in content. FDA issued the most detailed notice in terms of both length and specific requests. The length of the FDA notice is approximately 2,000 words, nearly twice the length of the USDA notice and three times the length of the EPA notice. Further, both FDA and USDA outlined a list of questions that they asked commenters to consider, while acknowledging that the list is not exhaustive. In particular, FDA's questions are more specific and targeted than those of the other agencies. For example, USDA asked commenters to identify whether the regulation they suggest for repeal, replacement, and modification is "outdated, unnecessary, or ineffective."⁷ For the same question, FDA further listed three clarifying questions to help commenters consider the issue, such as "Have there been advancements and innovations in science, technology, or FDA or industry practice, or any other changes that suggest repeal of or modification to the regulation may be warranted or appropriate?"⁸ EPA did not list any questions.

Further, FDA suggested a submission format for comments to facilitate more efficient consideration by the agency. The format is described as a table requesting commenters to submit information concerning the name of regulation, type of product or FDA center regulating the product, citations to Code of Federal Regulations (CFR), brief description of concern (with an example of "what innovation makes the regulation outdated"), and several other items commenters should specify in their submissions. Neither USDA nor EPA suggested any format for comments.

⁶ USDA's docket is available at: <https://www.regulations.gov/docket?D=USDA-2017-0002>. EPA's docket is available at: <https://www.regulations.gov/docket?D=EPA-HQ-OA-2017-0190>. FDA's docket is available at: <https://www.regulations.gov/docket?D=FDA-2017-N-5093>.

⁷ USDA, "Identifying Regulatory Reform Initiatives," <https://www.regulations.gov/document?D=USDA-2017-0002-0001>.

⁸ FDA, "Review of Existing General Regulatory and Information Collection Requirements of Food and Drug Administration," <https://www.regulations.gov/document?D=FDA-2017-N-5093-0001>.

Nevertheless, all agencies requested comments to be as specific as possible, including specific CFR or FR citations.

Although EPA had the shortest comment period and the notice was relatively brief, it received the largest number of comments—468,503 in total, substantially exceeding 4,200 comments for USDA and 49 comments for FDA. The FDA notice to extend the comment period also listed six other notices published by specific centers within FDA for public comments on evaluation of existing regulations and associated regulations.gov dockets. The total number of comments received by the seven FDA dockets is 241—still much fewer than USDA and EPA. Since USDA and EPA only conducted consultations at the department/agency level, we consider the FDA consultation at the agency level only to ensure comparability.

The number of comments posted differs from the number of comments received for two primary reasons. First, agencies may choose to redact or withhold certain comments with “private or proprietary information” or “inappropriate language.”⁹ Second, agencies may only post a representative sample of comments submitted as part of a mass comment campaign (MCC)—“identical and near-duplicate comments sponsored by organizations and submitted by group members and supporters to government agencies” (Balla et al. 2019a, p. 1). As Table 1 shows, the second reason mostly applied to the EPA comments (see section II.B for further discussion), which is consistent with the existing research on MCCs that occurred during past EPA rulemakings (Balla et al. 2019a). Still, the comments posted for EPA outnumber USDA and FDA to a large degree.

⁹ This statement is available in each regulations.gov docket. For example, <https://www.regulations.gov/docket?D=USDA-2017-0002>.

Table 2.1: Consultations for Evaluation of Existing Regulations

	USDA	EPA	FDA
Date of FR notice	July 17, 2017	April 13, 2017	September 8, 2017
Extension of comment period	Yes	No	Yes
Comment due date	July 18, 2019	May 15, 2017	February 5, 2018
Length of comment period	731 days	32 days	150 days
Length of FR notice (word count)	1,134	620	1,954
Specifying questions for consideration	Yes	No	Yes
Specifying format for submitting comments	No	No	Yes
Seeking specific FR/CFR citations	Yes	Yes	Yes
Number of comments received ⁽ⁱ⁾	4,200	468,503	49
Number of comments posted ⁽ⁱ⁾	4,116	63,420	49

(i): Number of comments received and number of comments posted differ because agencies may choose not to post certain comments for protection of private proprietary information or only post a representative sample of “duplicate/near duplicate” comments of a mass-mail campaign.

II. Overview of Comments

This section provides an overview of all the comments and describes the approach we adopted to prepare the comments for further content analysis.

A. Retrieving Comments

With the objective of further analyzing the input received, we obtained the metadata on public submissions from the USDA, EPA, and FDA dockets on regulations.gov¹⁰ and retrieved the text of all comments using the regulations.gov API and Python scripts.¹¹ The metadata on public submissions generally include information on the commenter’s name (if submitted), the date of submission, and whether the comment contains an attachment. Agencies also often disclose

¹⁰ Comments were retrieved from regulations.gov on February 26, 2019. Since the USDA comment period was still open, there are 11 comments posted after that date that fall out of this study.

¹¹ We used the Python PyMuPDF package (<https://pypi.org/project/PyMuPDF/>) to convert the contents of PDF attachments into raw text.

different information in the metadata. For example, EPA indicates the general type of comments, such as late comments, MCCs, and comments submitted by company or organization. While USDA and FDA do not classify comment type in similar ways, USDA indicates whenever a comment was submitted by a company or organization.

Table 2 shows the statistics from the metadata and estimates of comment length. In general, EPA comments differ from USDA and FDA comments in several ways. First, EPA is the only agency that accepted early or late comments, resulting in 838 comments submitted beyond the comment period. The latest comment was received on December 18, 2017, six months after the end date of EPA's comment period. A substantial proportion (about 70 percent) of EPA comments were submitted by anonymous commenters, while the proportion is much smaller for USDA and FDA (2 percent and 4 percent, respectively). EPA also identified 74 MCCs for which it only posted a representative comment in the docket, while USDA and FDA did not make such classification. Further, EPA identified 909 comments (1.4 percent) as submitted by companies or organizations, and USDA identified 78 company/organization comments (1.9 percent).

The length of comments varies to a substantial degree. The shortest comments contain only one word and four words, respectively, among EPA and USDA submissions, while the longest comment across agencies contains over one million words. Regardless of the wide range, the average length of comments is a few hundred words for USDA and EPA, and the median is less than 100 words. Comparatively, the distribution of FDA comment length is more condensed around a higher mean. The average length is over 3,000 words, the median is nearly 2,000 words, and the minimum is more than 100 words.

Although the basic statistics give an overview of all the comments, they do not necessarily reflect the characteristics of the comments serving the purpose of this chapter or a complete comparison across agencies. First, the classification of organization comments and MCC comments is solely based on the metadata the agencies generated. This classification was not completed for all comments and therefore inconsistent across agencies, as discussed in the next section. Second, although it is reasonable to assume that comments submitted to USDA are relevant to agriculture, not all EPA and FDA comments relate to agriculture given their regulatory authorities in many other areas. Hence, we further analyzed the comments for their uniqueness and relevance to generate a more tailored sample of comments for content analysis.

Table 2.2: All Comments Submitted for Evaluation of Existing Regulations

	USDA	EPA	FDA
Number of comments retrieved	4,105	63,420	49
Comments with attachments	90	13,725	45
Early or late comments ⁽ⁱ⁾	0	838	0
Anonymous comments	85	45,329	2
Company/organization comments ⁽ⁱⁱ⁾	78	909	<i>Not identified</i>
Mass comment campaigns ⁽ⁱⁱ⁾	<i>Not identified</i>	74	<i>Not identified</i>
Maximum comment length (words)	316,145	1,102,720	30,297
Minimum comment length (words)	4	1	113
Average comment length (words)	278	399	3,227
Median comment length (words)	45	79	1,888

(i): Early or late comments are defined as comments submitted before the start date of the comment period or after the comment due date.

(ii): The classification of company/organization comments and mass comment campaigns is solely based on the fields in the exported metadata for each agency. “Not identified” means that the agency did not include that information in the metadata.

B. Mass Comment Campaigns

Recent studies indicate that MCCs occur regularly in rulemaking (Balla et al. 2019a, 2019b). In general, MCC comments are submitted to agencies in two forms. The first form entails a single comment submitted by a sponsoring organization, accompanied with a large number of signatures by group members and supporters. For example, EPA received a single comment supporting the fuel economy and greenhouse gas standards from Consumers Union on May 15, 2017.¹² In addition to the substantive comment written on behalf of the organization, the comment also attached 31,973 signatures of consumers supporting the view. The second type of MCC comments are large numbers of identical or highly similar comments submitted individually. Those comments typically follow a template provided by sponsoring organizations and may be customized to some extent by individual commenters. When identified, the agency usually posts only a sample of such comments and indicates the number of comments received for the same

¹² This comment is available at: <https://www.regulations.gov/document?D=EPA-HQ-OA-2017-0190-37919>.

campaign. For example, in a comment received by EPA on May 9, 2017 calling for a stronger role of EPA in protecting the environment, the agency noted that “810 on time comments have been received for this web campaign.”¹³

Compared to the first type of MCC comments, the second type is more difficult to identify, especially when comments are submitted at different times and customized to various degrees. To identify possible MCC comments for USDA and FDA as well as any remaining MCCs for EPA, we read a random sample of 189 and 200 comments from USDA and EPA, respectively, and all 49 comments from FDA to identify potential MCC comments that contain identical language or highly similar formats. As a result, we found three sets of comments that might be submitted through MCCs. One set of comments is related to the Able Bodied Adult without Dependents (ABAWD) work requirements in USDA’s Supplemental Nutrition Assistance Program (SNAP). These comments are short and do not include attachments. Each comment begins with customized sentences stating the commenter’s own arguments for supporting the work requirements and always ends with the same phrase: “Re: Supplemental Nutrition Assistance Program: Requirements and Services for Able-Bodied Adults without Dependents (previously under Docket ID FNS-2018-0004-0001).” The other two sets of comments are from EPA and contain a substantial amount of common content.¹⁴

Using the common language in each set of the potential MCC comments as an identifier, we searched all the remaining comments and generated a list of comments that belong to these MCCs. In particular, we identified that 3,573 USDA comments were submitted for the SNAP ABAWD campaign, approximately 87 percent of all the USDA comments we retrieved. Among EPA comments, we found another 8,484 comments that belong to the two MCCs, which suggests that EPA’s classification of MCCs was not complete. Still, our list of MCCs is not exhaustive, since other MCCs with fewer comments may not have been captured by our random sample from USDA and EPA. However, identifying and excluding the MCCs that feature a large number of comments from the analysis could reduce the possible biases derived from the MCCs in the results.

In addition to these MCCs, we found that certain company/organization comments also have similar contents or formats. For example, several comments submitted to FDA by associations of grain growers and dealers appear to follow a sample letter that discusses concerns with the same set of FDA regulations affecting their industries. Similarly, another set of comments submitted to USDA by organizations related to animal treatment and research appear to have similar formats and contents pertaining to the Animal Welfare Act and relevant regulations. Compared to traditionally defined MCCs, these comments are generally more substantive, longer, and submitted

¹³ This comment is available at: <https://www.regulations.gov/document?D=EPA-HQ-OA-2017-0190-20695>.

¹⁴ See Appendix A for more details and examples about the three MCCs we identified.

by multiple organizations or companies in a much smaller quantity. Therefore, we do not consider these comments as equivalent to MCCs and treat them as unique comments.

C. Comments Relevant to Agriculture

We assessed the relevance of EPA and FDA comments to agriculture using two approaches. First, we read each FDA comment to determine whether it was relevant to agriculture. We excluded comments that discussed issues related to pharmaceuticals, medical devices, and cosmetics while including comments concerning food and certain animal and veterinary issues. For example, a comment submitted by Cook Group Inc. discussed regulations on certifications, investigation, and recording and reporting of medical devices, so we considered it not relevant to agriculture.¹⁵ In contrast, we determined that a comment submitted by the Natural Products Association is relevant because it commented on FDA's color additive regulations, nutrition and supplement labeling, and several guidance documents affecting the natural products industry. As a result, we identified that 23 (out of 49) FDA comments were relevant to agriculture.

Second, we determined the relevance of EPA comments by searching for predefined words and phrases, since the large number of comments made human reading unfeasible. We generated a list of key words and phrases by analyzing the commodity names listed in the National Agricultural Statistics Service commodity codes and the reference numbers and names of the CFR parts affecting the agriculture sector as identified in a previous study (GWRSC 2019). Subject matter experts at USDA then verified the list and provided additional, relevant entries. The final list contains 396 words and phrases (Appendix B).

We conducted a systematic search of those key words and phrases among the non-MCC comments for EPA. Specifically, the text of comments was converted to lower cases and stematized¹⁶ to allow for variations in the wording. We took a relatively inclusive approach to determine the relevance of comments using the search results: a comment was considered relevant if it contained one or more key words or phrases. In other words, a comment was considered irrelevant only if it contained none of the predefined words or phrases. This approach generated 48,089 irrelevant comments, leaving 6,773 non-MCC EPA comments.

D. Comments for Content Analysis

While MCCs generate a large number of comments, empirical research shows that they generally express preferences in favor of or against a rule instead of providing substantive information (Balla

¹⁵ This comment is available at: <https://www.regulations.gov/document?D=FDA-2017-N-5093-0046>.

¹⁶ Word stematization is to convert each word to its root (e.g., "agriculture" and "agricultural" are both converted to "agricultur") such that plurals and other variations of the word can be ignored when matching key words. There are many stemming algorithms available that use different rules for stematization. We use the widely used Porter stemmer in the search. Stematization was only used for search of words; phrase search requires exact match.

et al. 2019a; Shulman 2009). We therefore exclude the MCC comments identified by the agencies and our analysis from further content analysis. Further, comments not relevant to agriculture fall outside the scope of the analysis. As a result, we focus on the unique (non-MCC) and relevant comments in content analysis to extract information that is mostly likely to help agencies identify agriculture-related regulations for evaluation.

As shown in Table 3, excluding the MCC comments and comments irrelevant to agriculture resulted in 532 comments for USDA, 6,773 comments for EPA, and 23 comments for FDA. These comments indicate similar patterns for each agency in terms of the length of comments to all comments discussed in section A.¹⁷ We relied on detailed content analysis to identify other specific characteristics of these comments, such as the types of commenters and the topics discussed in the comments.

Table 2.3: Comments Excluded and Included in Content Analysis

	USDA	EPA	FDA
Comments retrieved from regulations.gov	4,105	63,420	49
MCCs identified by agency	0	74	0
MCCs identified by analysis ⁽ⁱ⁾	1 (3,573)	2 (8,484)	0
Comment irrelevant to agriculture	0	48,089	26
Comments for content analysis	532	6,773	23

(i): As discussed in section III.B, MCCs identified by our analysis include 3,573 comments for one MCC and 8,484 comments for two MCCs.

III. Content Analysis

While the overview of comments offers high-level information on their volume, characteristics, and involvement in organized campaigns, generating more precise information on the contents of the comments requires additional analysis. We aim to identify specific information from the comments including the types of commenters, references to regulations, the use of expertise and evidence, and the types of proposals.

Even after excluding comments submitted through MCCs and comments irrelevant to agriculture, a large number of comments remain. Therefore, we selected a sample from the non-MCC, relevant

¹⁷ The average length of the comments for content analysis is 278, 1792, and 3004 words for USDA, EPA, and FDA, and the median is 45, 211, and 2167 words.

comments for each agency and coded them for information that indicates who commented and what they said.

A. Sampling Strategy

Our sampling strategy involved selecting comments from each agency separately to create a sample that reflects differences across each agency's docket while remaining analytically useful for application to the agricultural sector. The sample included all relevant FDA comments (23), all USDA comments with attachments (90) and 50 percent of comments without attachments (221), and a stratified sample of EPA comments (292) selected based on the number of unique keywords that indicate relevance to agriculture.¹⁸ We chose unique sampling criteria each agency to account for the differences in relevance and number of comments across agencies.

The rationale for including all USDA comments with attachments is that those comments are generally more substantive company/organization comments, which presumably provide more detailed information for evaluating of existing regulations (Balla and Dudley 2014). For EPA, a similar approach is not appropriate given that the comments are not equally relevant to agriculture. Since the majority of comments contain only one or two key words or phrases, random sampling would generate a sample that over-represents marginally relevant comments. Instead, we included an equal number of comments from four different strata of comments by number of key words/phrases, as depicted in Table 4.

As a result, we selected a sample of 626 comments, including 311 comments from USDA, 292 comments from EPA, and 23 comments from FDA.

Table 2.4: Stratified Sample of EPA Comments

Number of key words/phrases ⁽ⁱ⁾	Number of comments ⁽ⁱⁱ⁾	Sample of comments ⁽ⁱⁱⁱ⁾
1	4,281 (63.2%)	73 (1.7%)
2~6	2,119 (31.3%)	73 (3.4%)
7~17	300 (4.4%)	73 (24.3%)
18~85	73 (1.1%)	73 (100%)
Total	6,773	292

(i): The categories are determined upon the following facts: (1) comments with 18~85 keywords are roughly the top one percent of the relevant comments; (2) comments with seven or more keywords are roughly the top five percent of the relevant comments.

(ii): The number in parentheses represents the percentage of the comments in a category in the total number of the relevant comments.

(iii): The number in parentheses represents the percentage of the sample comments in the number of comments in a category.

¹⁸ See Section II.C for a detailed discussion of how we assembled keywords.

B. Qualitative Coding Process

The content analysis consists of two stages of qualitative coding to translate the contents of the sample of comments into dimensions for systematic analysis. We developed a codebook (Appendix C) that specifies the variables used for qualitatively coding various characteristics of the comments. The codebook consists of 14 variables: commenter type; issue area; relevance to regulation; references to specific regulations; regulatory forms; types of references to specific regulations (including separate variables for CFR references, FR references, references to rule titles, references to guidance documents, and all other references); proposals for regulatory action; expertise; and evidence.

In the first stage of qualitative coding, approximately one-third of the coding (200 comments) followed double-blind coding rules.¹⁹ During this process, we revised the codebook to account for new knowledge and refinements to the variables and their definitions and recorded the important decision-making processes we used to code certain public comments for ensuring the duplicability of the coding process. In the second stage, the rest of the public comments (426 comments) were analyzed through individual coding, with close adherence to the codebook on decision-making processes. Comment variables that could not be determined by the coder were sent to a second coder for review.

IV. Results of Content Analysis

The qualitative coding permitted us to analyze the contents of a sample of 626 public comments, which were selected from the population of comments received by EPA, FDA, and USDA. The following results focus on answering two key questions related to the role of public participation in the rulemaking process: Who commented? What did they say?

A. Who Commented?

To describe who commented on the agency dockets, we coded the comments by 12 commenter types based on who the commenter claimed to be, with a separate category for comments that were anonymous or included insufficient identifiable information about the author. The classification of commenter types is based on both the submitter's name field in the docket and who the commenter claims to be in the comments (e.g., citizens, farmers, students, etc.).²⁰

We group the commenter types into three main categories for simplicity. Across all three agencies, individuals submitted 145 comments, organizations submitted 210 comments, and 271 comments

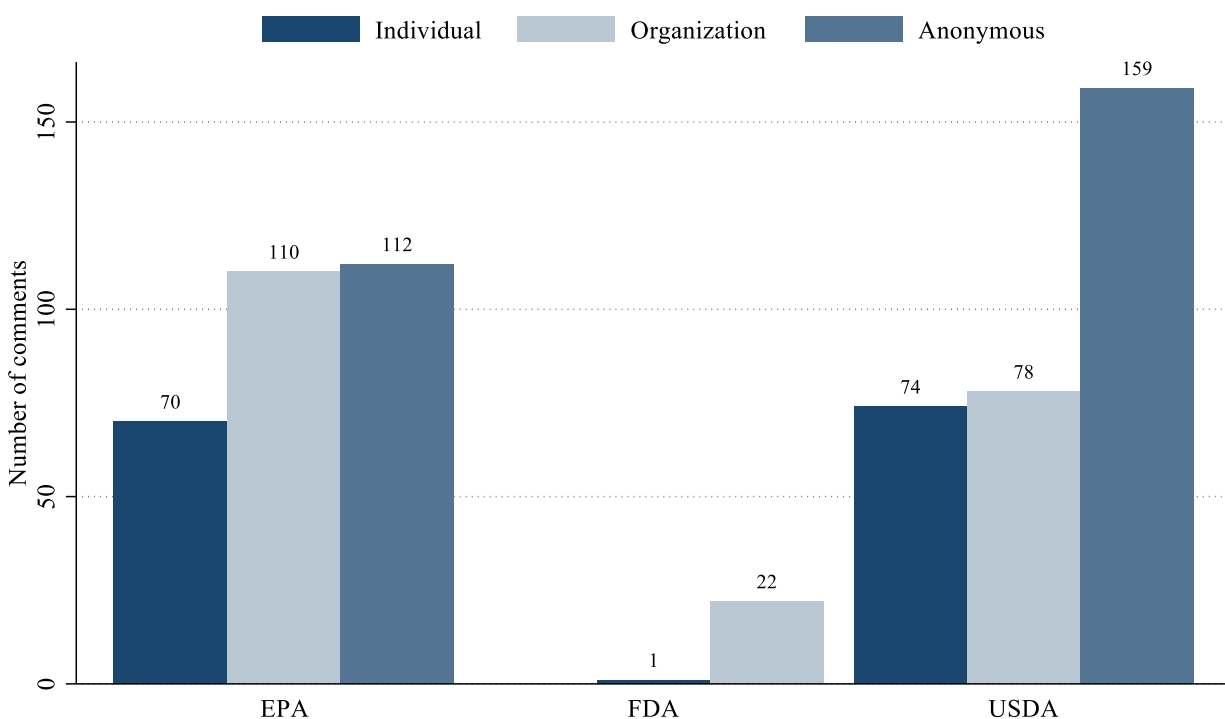
¹⁹ Namely, two coders coded the same set of comments independently and then discussed and resolved any discrepancies. Those that could not be resolved were sent to a third coder for review.

²⁰ For example, if a comment was submitted anonymously but claimed the identity of the commenter (e.g., "I am a corn farmer in Illinois"), we coded the type of commenter according the claims ("individual" in this example).

were submitted anonymously or without any claims of their identity. Thus, a plurality of comments, approximately 43 percent, are not attributable to any identifiable commenter. Of the remaining comments, more than half were submitted on behalf of organizations.

These three groups of commenters demonstrated substantial variety by agency (Figure 1). EPA received the fewest comments from individuals, while the remaining comments were relatively evenly distributed across organizations and anonymous sources. In contrast, significantly more USDA comments were anonymous. Most FDA comments were from organizations, with only one comment submitted by an individual. Overall, excluding anonymous comments, organizations commented more frequently than individuals.

Figure 2.1: Commenter Groups by Agency



Notes: The group, “Anonymous,” includes both anonymous and non-identifiable commenters.

Figure 2 conveys the specific types of organizational commenters. Business groups, which advocate on behalf of industry or professional associations, dominated our sample in terms of frequency, outnumbering the next most common commenter type by more than 3 to 1. Issue advocacy groups and business entities also appeared relatively frequently in the comments. These results are consistent with research positing that organizations that advocate for specific industries affected by regulation have an incentive to be actively involved in the regulatory process (Golden 1998; Kerwin and Furlong 2018). Additionally, they correspond with previous evidence suggesting that business interests often submit comments at a higher rate than other types of participants (Balla and Dudley 2014).

Figure 2.2: Organizational Commenters by Type

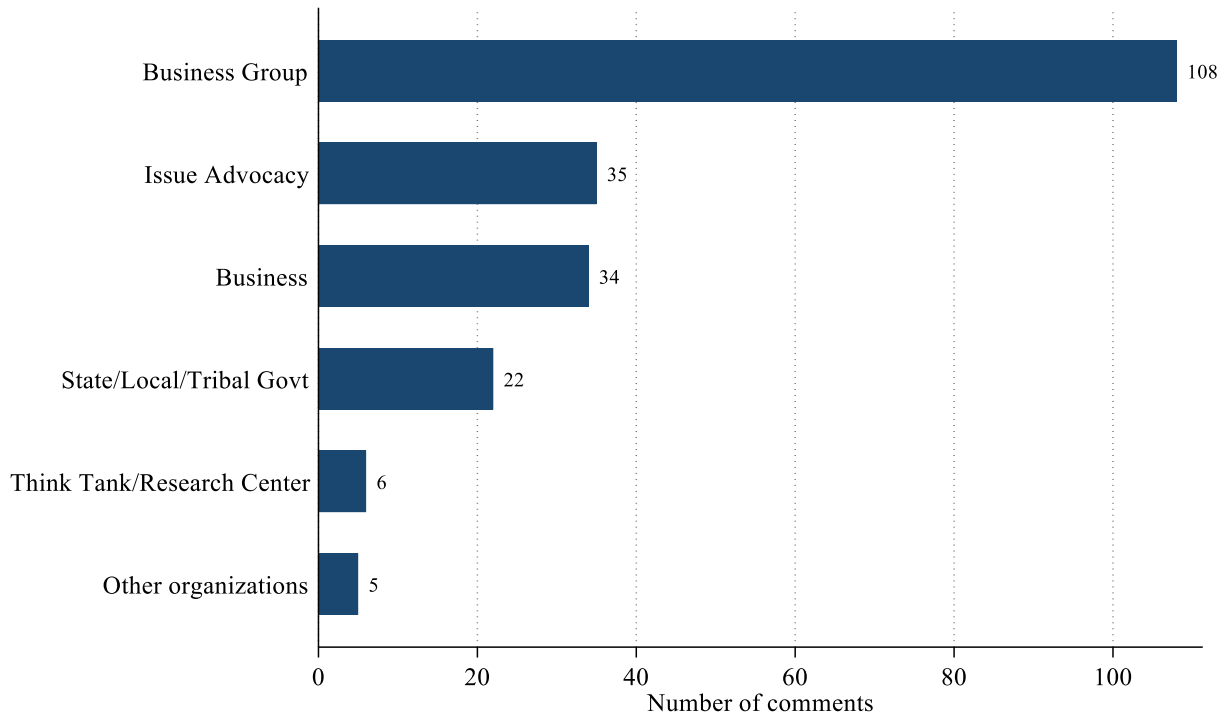
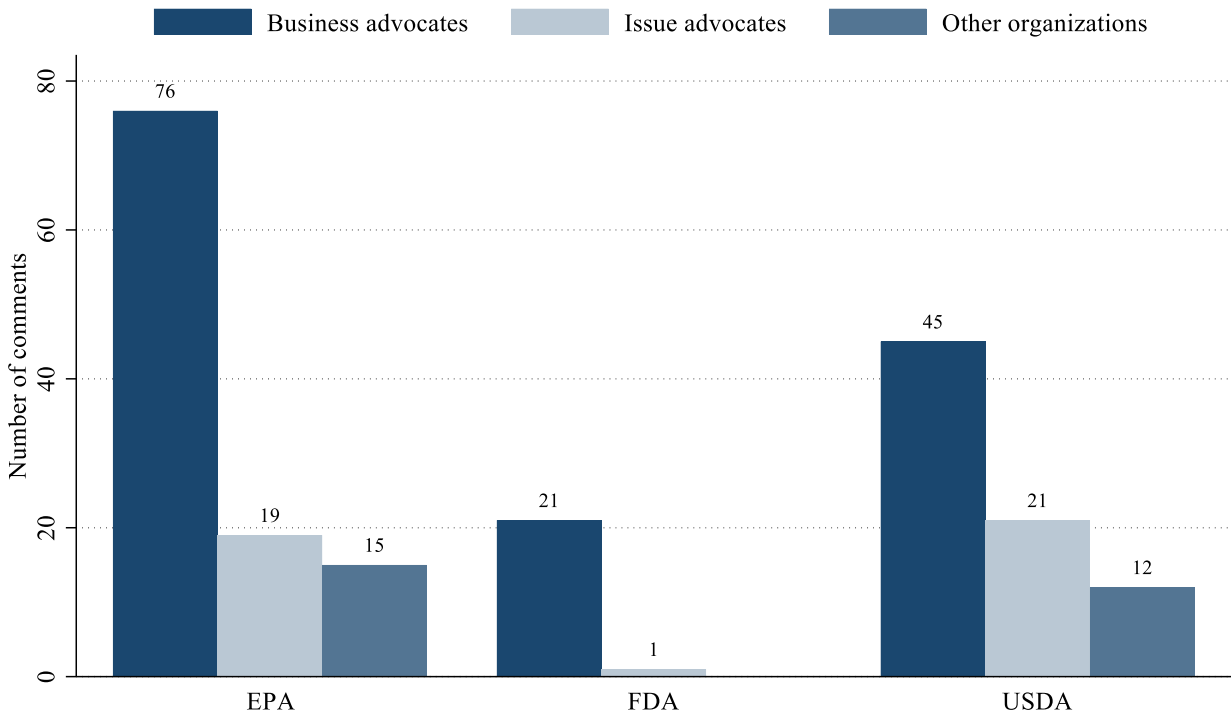


Figure 2.3: Organizational Commenters by Agency



To demonstrate the differences across agencies more clearly, Figure 3 distinguishes between “business advocates” and “issue advocates.” We group together business groups and business entities as business advocates and consider issue advocacy groups and think tanks or research centers to be issue advocates. Across each agency, business advocates represent more than double the comments submitted by issue advocates. In particular, EPA received four times as many comments from business advocates as from issue advocates.

Overall, the sample presented a diverse array of commenters, incorporating input from many individuals and organizations alongside a plurality of non-attributable sources. Furthermore, a wide variety of organizations commented, including a number of state, local, or tribal governments. Nevertheless, more than half of the organizations that commented (108 out of 210) were focused on business interests and another 34 came directly from business entities.

B. What Did They Say?

The second question our results address is what the commenters communicated to agencies in the comments. We describe systematic results across the following dimensions: issue areas, relevance to regulation, types of specific references to regulations, usage of expertise and evidence, regulatory forms in existing regulations, and proposals for regulatory actions.

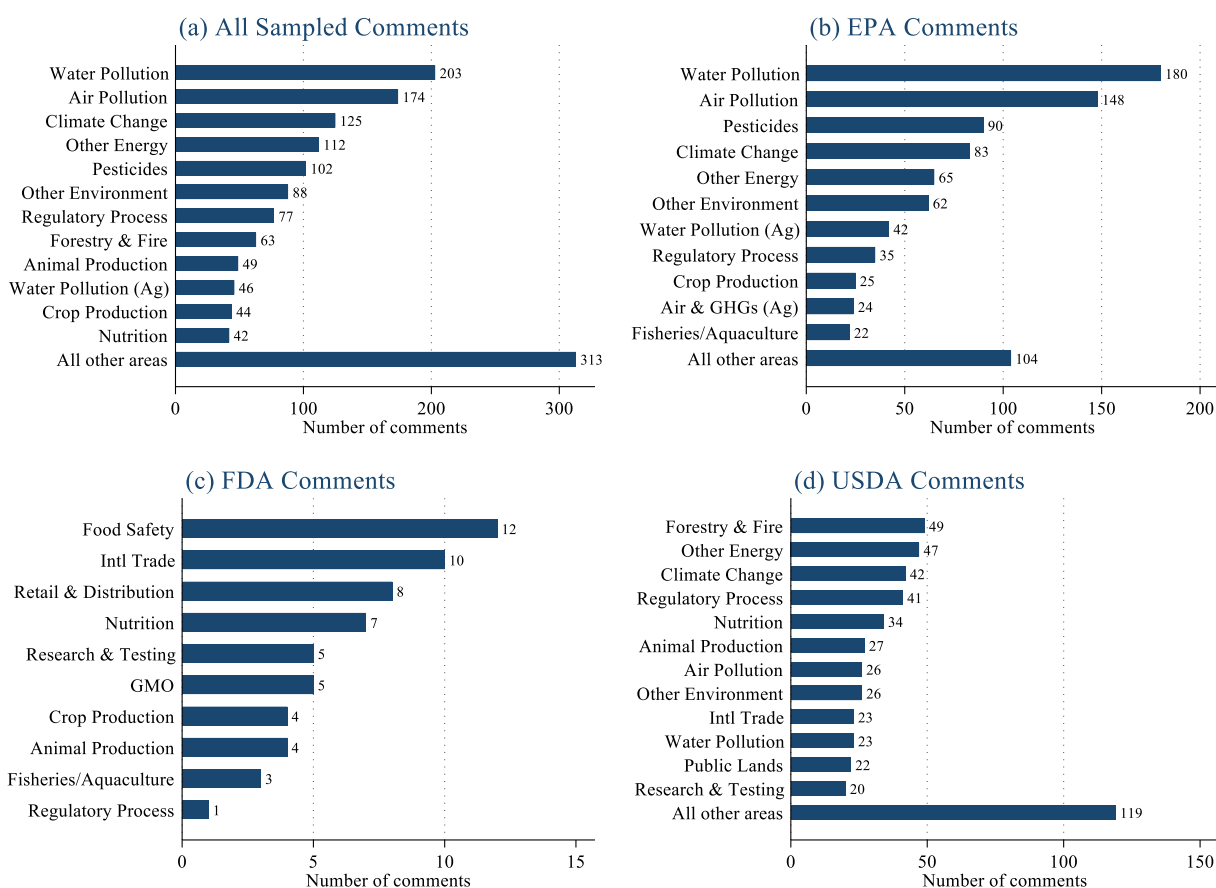
Issue Areas

We identified 28 distinct issue areas that comments discussed, in an attempt to capture every issue that was broadly relevant to agriculture or a substantial area of focus for each comment. Because of the scope of the agency notices and the great variety among commenters, the prominent topics conveyed were wide-ranging. To account for the extent of issues, we categorized agriculture-specific topics more granularly (e.g., organic farming, GMO, rural development, etc.), but classified ancillary subjects relatively broadly (e.g., regulatory process, public lands, etc.). While many comments focused on only one issue area, a majority of the comments touched on multiple areas.

Overall, the sample of comments reflected a diversity of issue areas. Figure 4 documents the top areas discussed by the entire sample of comments and breaks down these results by agency. Focusing on the entire sample, the diversity of concerns is most evident in the fact that the grouping of all other areas (mentioned in fewer than 40 comments) far outnumbers the most frequently discussed area—water pollution from non-agricultural sources—which appeared in nearly one-third of comments. One common thread across the top issue areas is a focus on environmental concerns. Each of the five most commonly discussed areas has a substantial environmental component (e.g., commenters concerned about pesticides often focused on the environmental implications of their application and concerns about exposure to humans).

The top issue varies across agencies. EPA’s top areas more closely reflect the results from all sampled comments compared to the results for FDA and USDA, which is likely related to the fact that EPA comments were more concentrated on a few issue areas—pollution, climate change, and energy. In particular, water pollution and air pollution from non-agricultural sources were the top areas of focus; climate change (and the greenhouse gas emissions that contribute to it), which also falls under the pollution reduction responsibilities of EPA, was a distinct enough topic to warrant its own designation. Conversely, USDA comments covered a wide range of topics, with the grouping of all other areas (mentioned in fewer than 20 comments) being more than double that of its top issue area, forestry and fire management.

Figure 2.4: Most Frequently Mentioned Issue Areas



Notes: Issue areas mentioned in fewer than 40 separate comments are grouped together as all other areas in panel (a), while those mentioned in fewer than 20 comments are grouped in panels (b)-(d).

EPA and USDA displayed a number of similarities across their top issue areas. Notably, climate change (and greenhouse gases) and energy-related issues (apart from bio-energy production) appeared in both agencies’ top five areas. Nevertheless, USDA commenters focused on forestry and fire management issues most frequently, as the U.S. Forest Service is housed within USDA. In addition, nutrition, animal production and processing, international trade, public lands, and

research and testing (e.g., testing on animals) were major areas that USDA commenters examined, but were a lesser focus for EPA commenters (e.g., only one EPA comment discussed nutrition).

FDA commenters primarily focused on a different set of issue areas from the other agencies. The top issues of food safety, international trade, and retailing and distribution were a relatively minor emphasis in comments submitted to EPA and USDA. A commonality among the top areas for FDA comments is a concentration on implications for consumer goods (rather than intermediate goods), such as food safety and nutrition. International trade and retailing and distribution also imply significant effects for final goods and services.

Relevance to Regulation

Comments exhibited varying degrees of relevance to regulation. This heterogeneity allows us to observe the extent that commenters responded to the subject of the agencies' requests for comment. While not perfectly assessing whether commenters addressed retrospective review of regulations, this variable does capture how many comments actually cover matters relevant to regulation. Comments that discuss issue areas but do not tie those issues to regulatory actions are not considered relevant. For instance, in a comment received by EPA, an individual focused on environmental damage from pesticides without connecting this issue to regulation generally or specific regulatory actions.²¹

²¹ This comment is available at: <https://www.regulations.gov/document?D=EPA-HQ-OA-2017-0190-60751>.

Figure 2.5: Relevance to Regulation by Agency

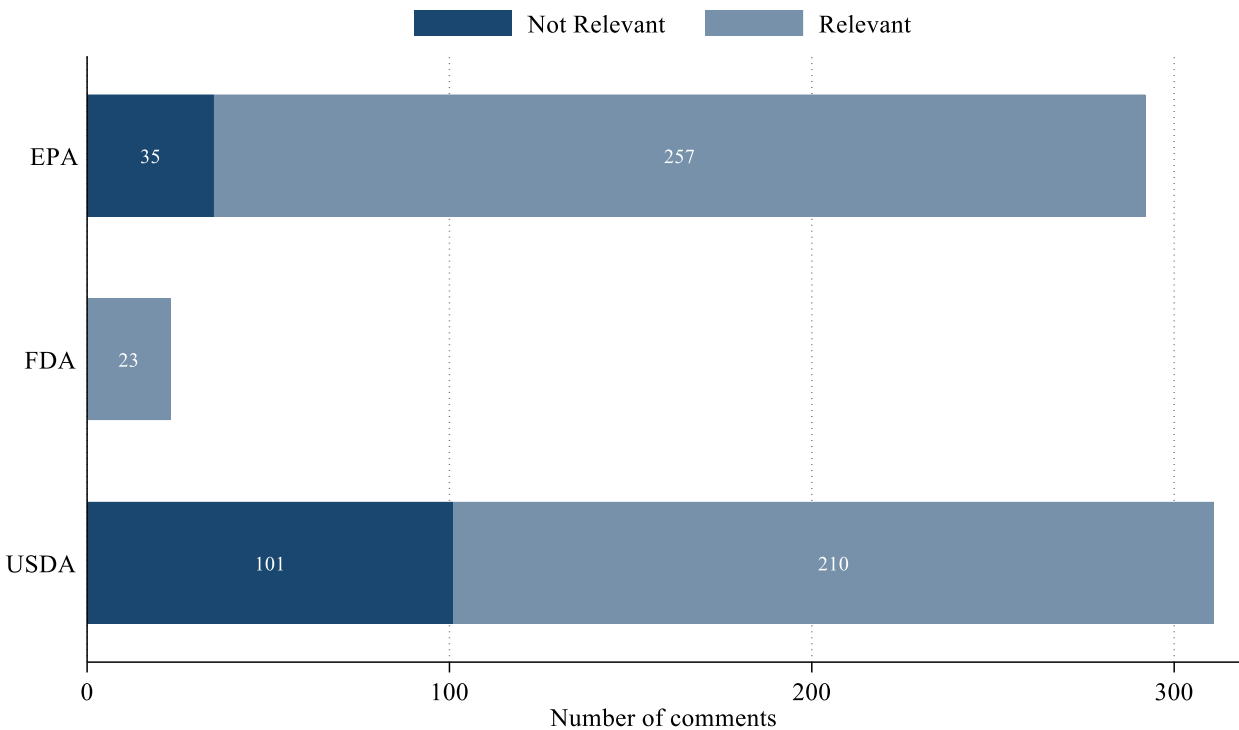


Figure 5 records the number of comments by their relevance to regulation for the three agencies. All of FDA’s comments were relevant to regulation, and the vast majority of EPA’s comments were relevant (88 percent). The results for USDA suggest that many commenters provided information largely irrelevant to the request for comment. Only about two-thirds of the sample comments are relevant to regulation, suggesting that one-third of USDA’s comments did not even touch on the purpose of the docket—regulatory reform.

Specific References to Regulations

A good proportion of the comments across agencies cited specific regulations. Distinguished from the relevance variable above, the reference to regulations variable includes citations of specific regulations that are clearly identifiable from the contents of the comment. For example, a comment received by FDA incorporates four different types of specific citations: a CFR reference, FR notices, multiple guidance documents, and a Regulations.gov docket.²² In contrast, a general reference to regulation could include indirectly mentioning regulations associated with specific

²² This comment is available at: <https://www.regulations.gov/document?D=FDA-2017-N-5093-0036>.

laws,²³ explaining the implications of regulations in detail without direct attribution to a specific rule or policy,²⁴ or explicitly acknowledging regulatory issues but including minimal detail.²⁵

Although FDA had the fewest comments, 91 percent cited specific regulations; 47 percent of EPA comments included references, and USDA had the lowest frequency of specific citations in our sample with 40 percent of comments referencing specific regulations. Across groups of commenters, 90 percent of organizational commenters cited specific regulations, while only 30 percent of individuals and 18 percent of anonymous commenters included references to particular regulations.

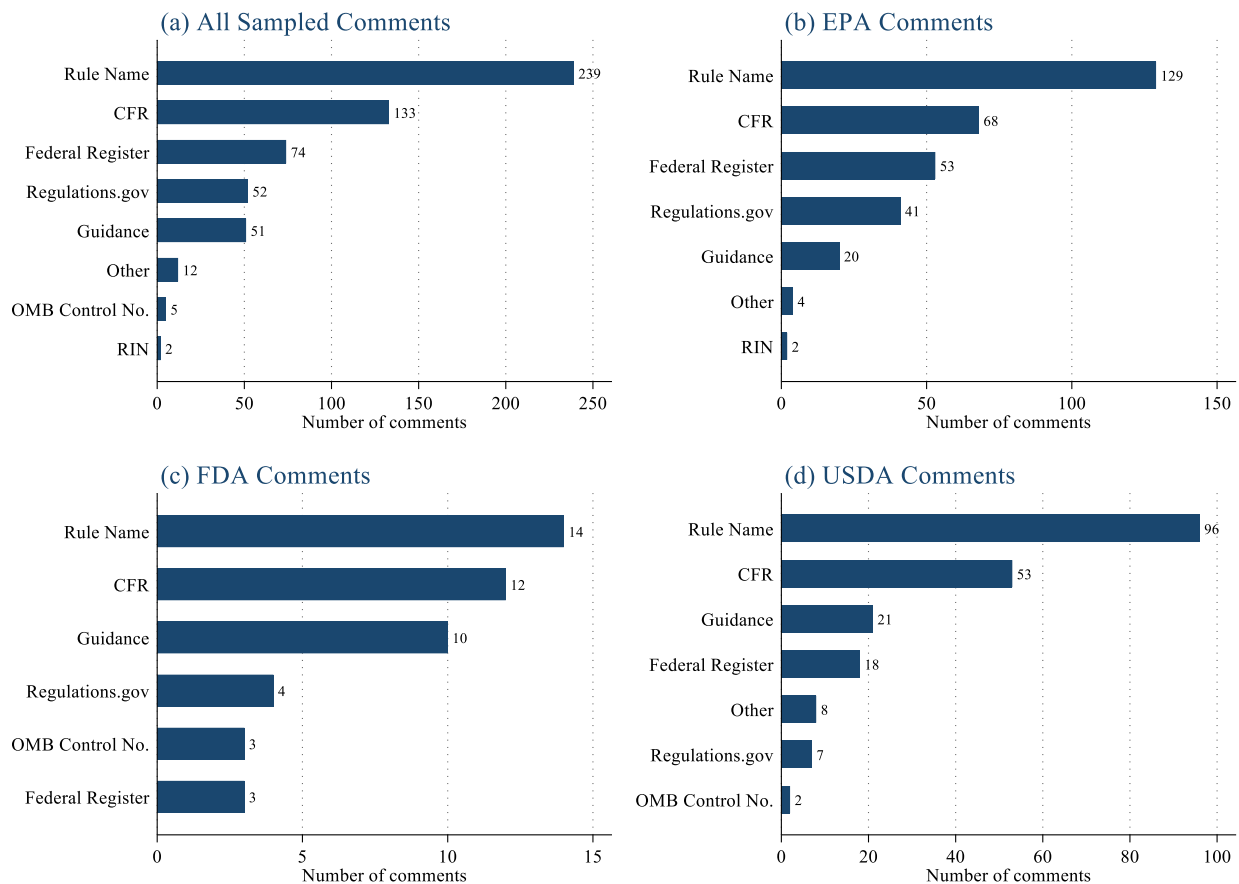
For the comments that referenced specific regulations, we classified specific citations into eight categories, including references to CFR parts or sections, FR notices, names of rules, guidance documents, regulations.gov docket numbers, Regulation Identifier Numbers (RIN), and OMB control numbers. Comments often contain multiple types of references, such as a CFR reference alongside a rule name; sometimes, the different reference types refer to the same regulatory action (such as a guidance document published in FR). The data do not indicate the total occurrence of each reference type, just whether at least one of those references were made per comment (i.e., if a comment mentioned three distinct rule names, the code for rule name was only recorded once for that comment).

²³ E.g., this EPA comment received on May 12, 2017, available at: <https://www.regulations.gov/document?D=EPA-HQ-OA-2017-0190-35663>.

²⁴ E.g., this USDA comment received on January 10, 2018, available at: <https://www.regulations.gov/document?D=USDA-2017-0002-0251>.

²⁵ E.g., this USDA comment received on September 28, 2017, available at: <https://www.regulations.gov/document?D=USDA-2017-0002-0065>.

Figure 2.6: Types of Specific References to Regulations



Notes: Comments may contain multiple types of specific references and multiple references per type.

Figure 6 depicts the types of specific references made in comments across the whole sample overall and by agency. Rule names were the most common type of specific reference, with CFR references the next most common. This trend—rule names and CFR parts as the most common specific references—was reflected in each agency’s sample. After rule names and CFR parts, the remaining references vary by agency. EPA’s results indicate that FR publications were the third most common, while FDA and USDA comments highlighted guidance documents instead.

Use of Expertise and Evidence

Another dimension that would be informative to assess is the “quality” of comments across agencies and how quality is associated with other variables like commenter type, relevance, specific citations, and proposals. Variables that directly assess the quality of comments are difficult to develop, and judging quality objectively (or in a consistent manner subjectively) is challenging.

We consider the expertise of the commenter and the evidence used in the comment as proxies for quality because they are easier to identify and delineate consistently. Furthermore, documenting how comments draw from expertise and rely on evidence is helpful for understanding how commenters arrived at proposals and evaluating what regulators can do to address problems. For instance, a proposal to repeal an existing regulation that is causing undue burden on small businesses, while producing minimal benefits, would be strengthened if the comment provided quantitative data consistent with its normative claims. In addition, arguments supported by professional expertise may be considered more credible than those not based on any relevant expertise.

For distinguishing different types of expertise, we concentrated on personal experience and professional knowledge. Personal expertise often came from an individual's own experience or observation of a family member's experience. For instance, one commenter identifies herself as a farmer's wife in a comment received by USDA,²⁶ and another comment received by EPA supports the commenter's claims by recounting his/her experience living in foreign countries.²⁷ Professional expertise includes occupational experience from working in a field, industry expertise, or subject matter knowledge of a relatively specialized nature. For example, we classified a comment from the president of the Kentucky Farm Bureau²⁸ and another comment from an associate professor at Penn State Harrisburg²⁹ as both relying on professional expertise. The same comment could incorporate both personal and professional expertise. Comments classified as having no expertise were those that did not reference any identifiable expertise.

When categorizing the different types of evidence that comments relied on, we differentiated between evidence that was strictly qualitative in nature from evidence that had some quantitative elements. Examples of qualitative evidence include case studies, logical arguments, legal analysis, and economic theory.³⁰ Comments that contained some quantitative analysis often paired qualitative approaches with statistical analysis, descriptive statistics, or empirical calculations of economic relationships like anticipated compliance costs from a policy. Finally, we distinguished comments that used evidence to support arguments from comments with no evidence, meaning that the arguments were based on sentimental judgment or broad extrapolations from anecdotal information.

Generally, nearly half of all comments relied on no identifiable expertise (49 percent), while the rest were based on personal experience (12 percent) and professional or subject matter expertise

²⁶ This comment is available at: <https://www.regulations.gov/document?D=USDA-2017-0002-0119>.

²⁷ This comment is available at: <https://www.regulations.gov/document?D=EPA-HQ-OA-2017-0190-33216>.

²⁸ This comment is available at: <https://www.regulations.gov/document?D=EPA-HQ-OA-2017-0190-40841>.

²⁹ This comment is available at: <https://www.regulations.gov/document?D=EPA-HQ-OA-2017-0190-37903>.

³⁰ E.g., this comment from the Council for Affordable and Rural Housing received by USDA on September 15, 2017, available at: <https://www.regulations.gov/document?D=USDA-2017-0002-0047>.

(40 percent). Although a single comment may contain both personal and professional expertise, professional expertise was far more commonly referenced. More than half of the comments relied on some form of evidence, either qualitative (44 percent) or quantitative (7 percent), but a substantial number of comments demonstrated no usage of evidence beyond sentimental or anecdotal information (49 percent).

Table 5 shows how comments are distributed across each combination of expertise and evidence. Comments that do not identify expertise also tend to lack evidence. Furthermore, comments based on professional expertise have the largest proportion of evidence-backed arguments; those are almost exclusively the comments that include quantitative evidence.

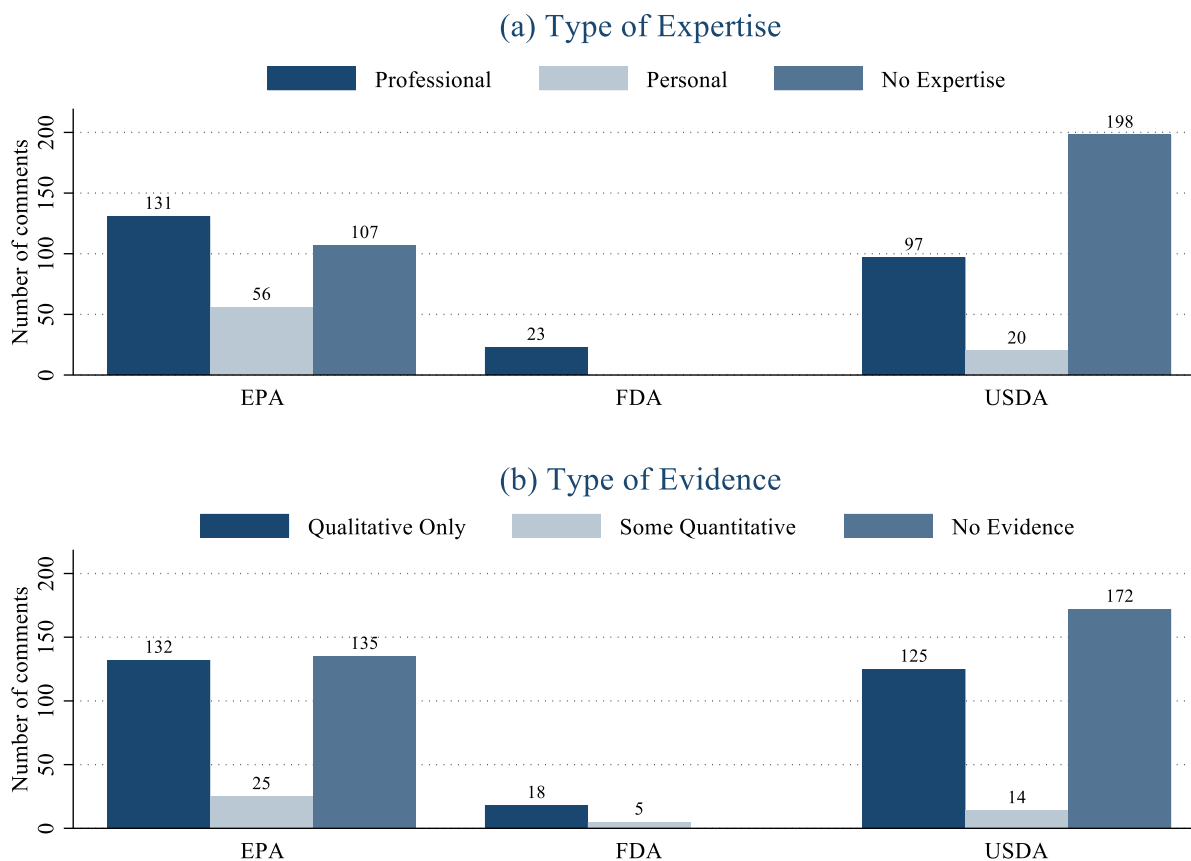
Table 2.5: Number of Comments by Expertise and Evidence

Expertise	Evidence			
	None	Qualitative	Quantitative	Total (Evidence)
None	224	80	1	305 (49%)
Personal	62	13	1	76 (12%)
Professional	23	185	43	251 (40%)
Total (Expertise)	307 (49%)	275 (44%)	44 (7%)	626 (100%)

Notes: Table does not sum to total by expertise (down) because comments may reflect both personal and professional expertise. Percentages do not sum because of rounding.

The comments received by each agency also exhibit substantial differences. When looking at the data for expertise and evidence by agency (Figure 7), USDA's docket appears to contain a majority of comments lacking expertise and relying on sentimental reasoning. Conversely, FDA comments exclusively come from subject matter experts, and all of the FDA comments reviewed included qualitative or quantitative evidence. EPA's dockets was more balanced on both dimensions, with many comments using professional experience and qualitative evidence and a nearly equal number of comments containing no expertise or evidence.

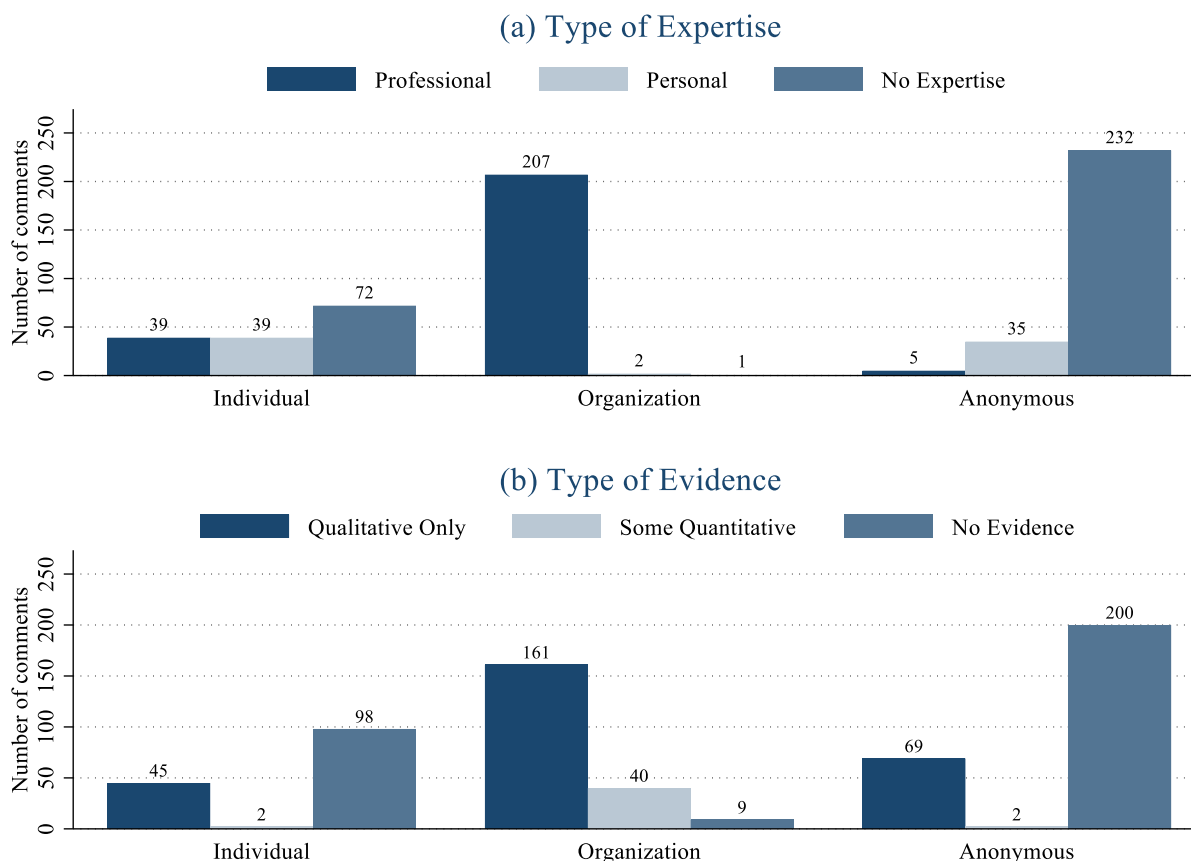
Figure 2.6: Expertise and Evidence by Agency



Notes: Comments may reflect both personal and professional expertise. “Anonymous” includes anonymous and non-attributable comments.

Expertise and evidence also vary depending on the type of commenter, and the results comported with foreseeable outcomes (Figure 8). Most comments lacking expertise are from anonymous or non-attributable commenters, while most comments citing professional expertise are from organizational commenters. Similarly, a majority of comments lacking evidence were from anonymous comments. Furthermore, organizations almost universally submitted comments containing some evidence, and they were the most common commenters to integrate quantitative evidence into their analysis, although a majority of organizations relied on qualitative evidence only.

Figure 2.7: Expertise and Evidence by Commenter Group



Notes: Comments may reflect both personal and professional expertise. “Anonymous” includes anonymous and non-attributable comments.

More than 97 percent of business advocates and 95 percent of issues advocates relied on some type of evidence in their comments. Business advocates primarily relied on qualitative evidence only but also submitted the largest amount of comments using quantitative analysis. While issue advocates submitted comments with qualitative evidence more regularly, they also use quantitative evidence at a higher rate than business advocates. Only 15 percent business advocates used quantitative evidence, versus 34 percent of issue advocates.

The analysis of expertise and evidence lends itself to a few overall takeaways. First, both variables demonstrate differences across agencies and vary even more substantially by commenter groups (individuals, organizations, or anonymous and non-attributable comments). This heterogeneity suggests the sample represents a diversity of perspectives and backgrounds, although this is less reflective of FDA’s docket. Also, to the extent that expertise and evidence indicate a comment’s quality, there is a spectrum of high-quality and low-quality comments across the three dockets.

Second, the direction of these trends appears consistent for both expertise and evidence. FDA comments were exclusively submitted by those with professional experience and always include some amount of evidence. The USDA docket is predominated by comments without identifiable expertise that do not include evidence. EPA received a more even-handed array of comments in terms of expertise and evidence, including many comments with and without expertise and varying degrees of evidence.

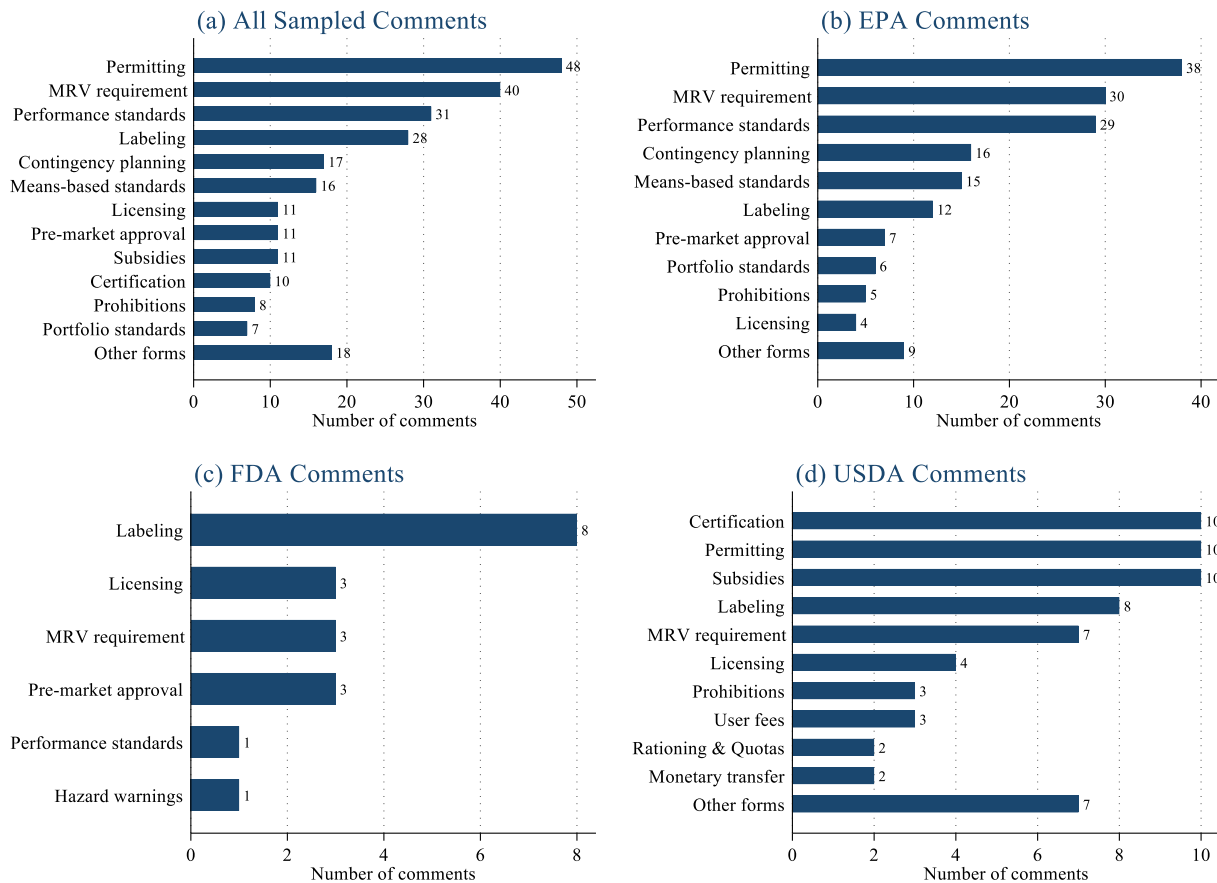
Related trends emerge when comparing commenter group by expertise and evidence. Just as anonymous comments rarely were accompanied by discernable expertise, those comments were most commonly based on sentiment or anecdotes. Conversely, comments with professional expertise were primarily from organizations, and organizations also were the biggest contributors of qualitative and quantitative evidence.

Regulatory Forms

Regulation is not a uniform mechanism for achieving policy objectives, but rather an assortment of tools and instruments that are used to pursue those objectives. A study conducted through a previous cooperative agreement with USDA presented a Taxonomy of Regulatory Forms—the first comprehensive typology of regulation by form that can be applied to regulations across policy areas—that systematically classifies different regulatory instruments in three tiers (Pérez, Prasad, & Xie 2019, p. 20). Further evidence suggests that the form of regulation is empirically meaningful (Xie 2019). In the current study, we used the taxonomy to identify and classify when comments explicitly mentioned regulatory forms in the existing regulations to repeal, amend, or replace.

Figure 9 displays four panels to examine regulatory forms across the whole sample and within each agency. When looking across all agencies, the top regulatory form commenters identified was permitting, which was closely followed by monitoring, reporting, and verification (MRV) requirements. The frequency of references to regulatory forms differs by agency. EPA received the most mentions of regulatory forms and tracks the overall results most closely. Except for labeling, the top five forms are consistent between EPA and the overall numbers. FDA comments referred to labeling requirements most frequently, which likely explains what is driving the overall mentions to labeling in panel (a). Lastly, USDA comments most commonly identified three forms—certification, permitting, and subsidies—as worthy of examination. Labeling and MRV requirements also came up in multiple comments.

Figure 2.8: Most Frequently Mentioned Regulatory Forms



Notes: Comments may reference multiple regulatory forms. Only includes for regulatory forms in existing regulations, not requests for imposing new regulatory forms.

Across the board, most references to regulatory forms focused on those falling under social regulation in the first tier of the taxonomy (Pérez, Prasad, & Xie 2019). Command-and-control regulation, which falls under social regulation as a second-tier category, appears to dominate the conversation. Specifically, many of the most frequently referenced forms—permitting, MRV requirements, performance standards, means-based standards, pre-market or pre-manufacture approval, and prohibitions—are forms of command-and-control regulation (Pérez, Prasad, & Xie 2019).

Since commenters focus the most attention on command-and-control regulations, considering how such regulatory forms affect outcomes is critical. The study conducted through the previous cooperative agreement empirically analyzed the relationship between growth in regulation and growth in land productivity, finding that growth in agriculture-related regulation is negatively associated with productivity growth but that the relationship varies depending on regulatory form (Xie 2019). Specifically, the study finds that growth in command-and-control regulation, and MRV requirements in particular, exhibits the largest, statistically significant negative association

with yield growth. The prevalence of comments highlighting command-and-control regulations for review is consistent with the empirical findings.

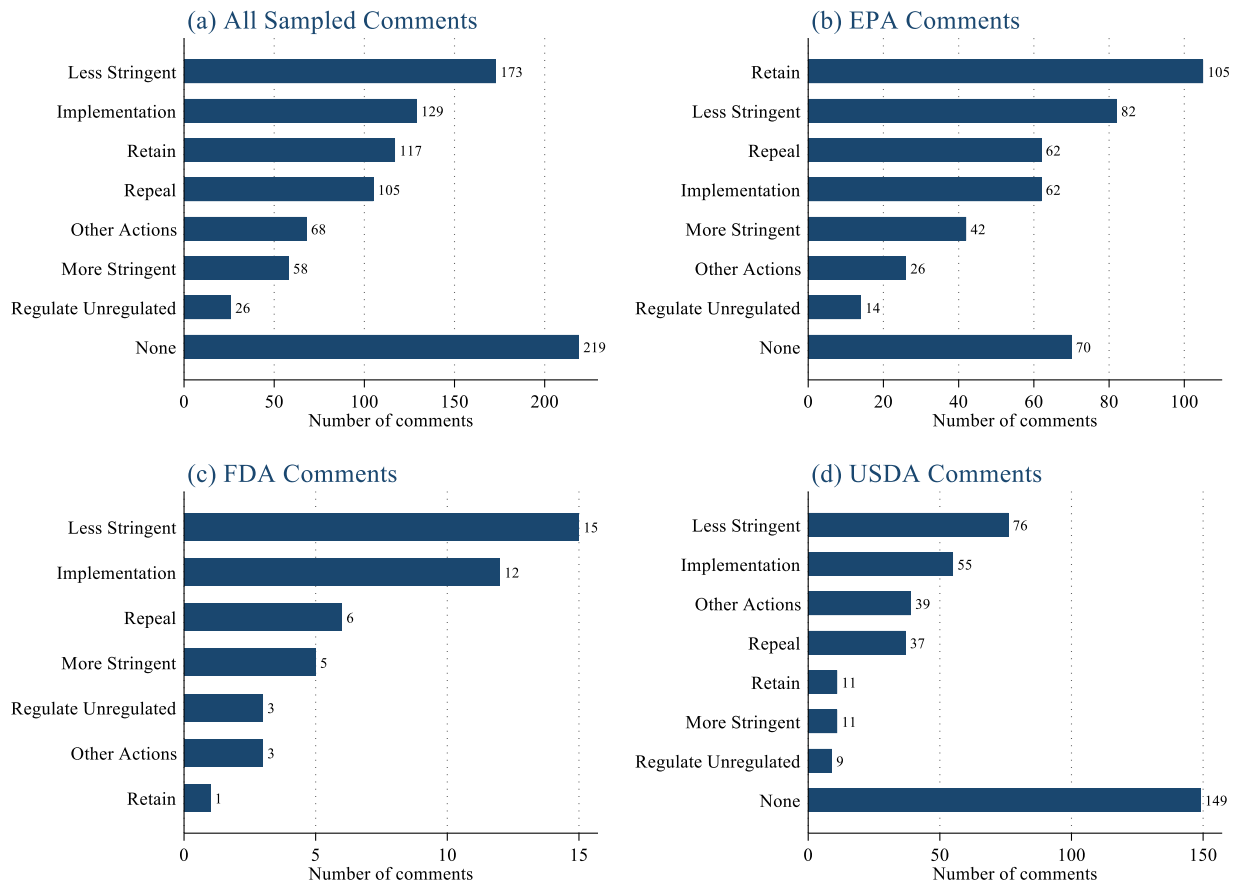
These results have important implications for agency rulemaking and retrospective reviews. If command-and-control regulations are associated with lower agricultural productivity growth, then commenters might highlight those challenges in response to agencies' request for comments. Our results suggest that commenters do focus heavily on command-and-control regulations, including specific forms like permitting and MRV requirements. Although our results do not distinguish regulatory forms by the proposal a commenter makes, a reasonable inference is that commenters would more frequently propose a reduction of regulatory forms that have worse impacts on productivity.

Proposals

For each comment, we assessed the different types of proposals that comments offered in relation to regulatory actions. While comments oftentimes contained multiple proposals, many comments offered no proposal at all. Proposals fell into seven categories—repeal existing regulations, retain existing regulations, modify existing regulations to be more stringent, modify existing regulations to be less stringent, change the implementation of existing regulations, regulate currently unregulated activities, or other types of proposals.

In general, the most common proposals were to make regulations less stringent and to alter implementation (Figure 10). The results differ by agency, although each agency had modifying existing regulations to reduce stringency as their first or second ranked proposal. A plurality of EPA comments sought to retain existing regulations.

Figure 2.9: Types of Proposals on Regulatory Actions



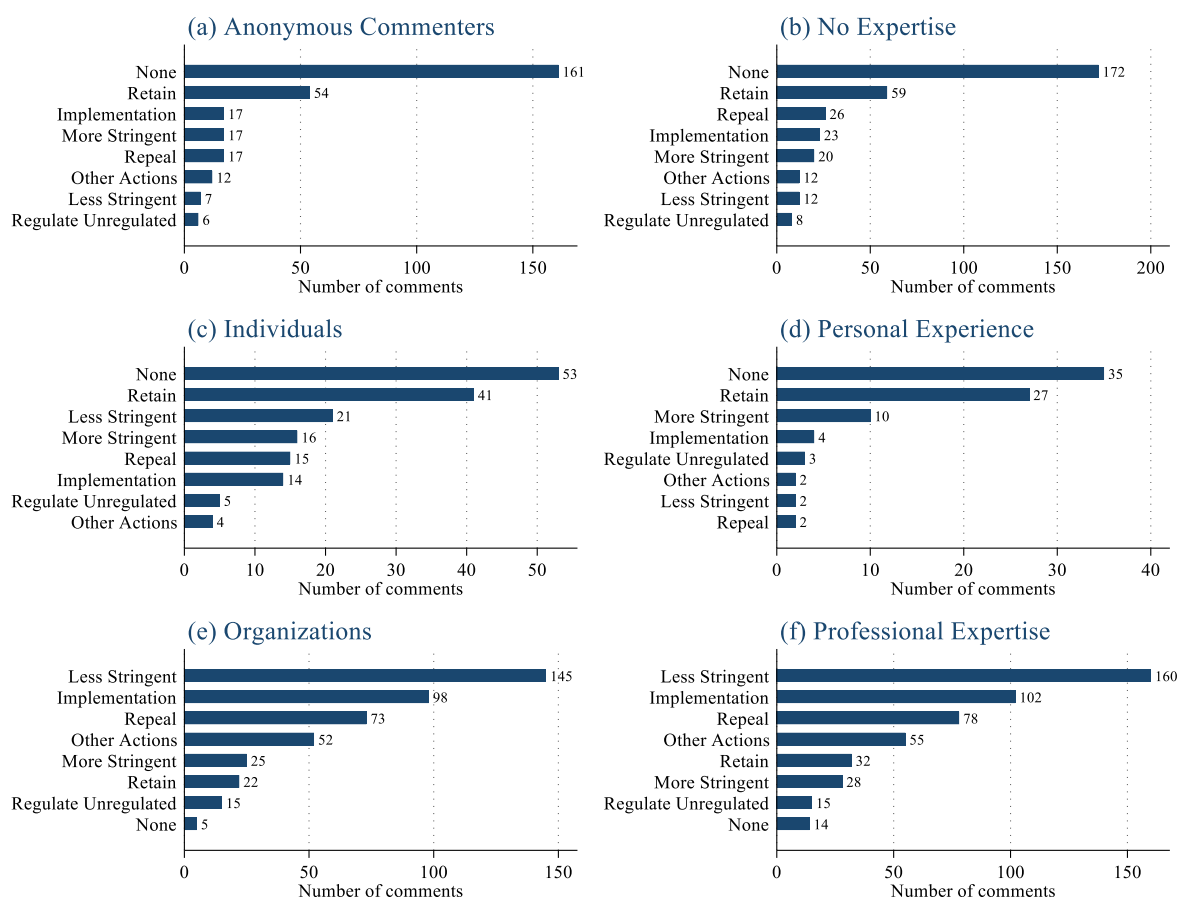
Notes: Comments may contain multiple types of proposals. Only records one instance of each type of proposal per comment. Only includes proposals for regulatory actions.

We also analyze the proposals according to three main groups of commenters (individuals, organizations, and anonymous commenters) and based on commenters' different types of expertise. Figure 11 documents these results in six panels, for comparison by both commenter groups and types of expertise.

Individuals most frequently offered no proposals in their comments. Among those that propose a regulatory action, retaining regulations was the top specific proposal offered, and modifying regulations to reduce stringency came up more commonly than increasing stringency. Anonymous commenters largely followed the same trends as individuals, with comments most regularly offering no proposal or recommending retaining regulations. In contrast to other commenter groups, organizations almost always included a proposal for regulatory action. They primarily suggested proposals that would reduce the burden of regulation (by repealing or making it less stringent) or alter the implementation of regulation, which may be a result of the prevalence of comments from business advocates.

Comments lacking identifiable expertise or relying on personal experience most commonly contained no proposal. Retaining regulations was the proposal most commonly included in these comments. Unsurprisingly, these trends align closely with those from unidentifiable commenters and individuals, since they are more likely to lack expertise or rely on personal experience. Conversely, comments reflecting professional experience align more closely to those from organizations—where reducing stringency and changing implementation are the top two recommendations.

Figure 2.10: Proposals by Commenter Group and Expertise



Notes: Comments may contain multiple types of proposals. Comments may reflect both personal and professional expertise. “Anonymous” includes anonymous and non-attributable comments.

We do not evaluate proposals based on type of evidence, primarily to avoid misrepresenting our results. This is because commenter type and expertise are holistic dimensions that accord with the entirety of a comment. In contrast, the evidence variable is often tied to a subsection of the comment. For instance, a single comment may include three distinct proposals, one supported by qualitative evidence, another including some quantitative support, and a third based on sentiment. Based on our coding strategy, the comment would be coded as using “some quantitative evidence,” which would incorrectly link all three proposals with quantitative reasoning.

V. Discussion

This chapter offers an in-depth examination of the public comments received by three federal agencies—USDA, EPA, and FDA—on the need for repealing, replacing, or modifying existing regulations. By systematically analyzing public comments solicited for evaluating existing regulations, the study contributes to the existing literature on how public participation can be leveraged to inform agency efforts to conduct retrospective review. Our descriptive analysis of these comments offers deeper insights into the characteristics and substance of public input to the major regulators of the agriculture sector.

The biggest subset of comments was from anonymous and non-identifiable commenters. Among identifiable commenters, organizations commented more frequently than individuals. In particular, business groups submitted the most comments compared to other categories of organizations, with issue advocacy groups and business entities following as the next most frequent organizational commenters. This finding is consistent with the existing research on the active participation of business interests in rulemaking (Golden 1998; Kerwin and Furlong 2018).

Many variables exhibited significant variation, providing useful results for informing future agency efforts to seek public input. A majority of the comments analyzed were relevant to regulation, although USDA received the lowest proportion of relevant comments in its sample. At least 40 percent of comments from each agency referenced specific regulations, and rule names and CFR parts were the most common citation types both overall and for each agency. Commenters focused on a broad variety of issue areas, based their comments on different levels of expertise and evidence, and suggested a wide range of proposals on regulatory actions.

Our results suggest key implications for future requests for public comments on evaluating existing regulations. First, consultations requesting specific information and specifying certain formats may elicit more substantive comments from relevant stakeholders. In other words, focusing on what information to provide in the request for comments may encourage fewer anonymous comments, solicit more relevant and specific references to regulations, and expand the use of expertise and evidence. USDA, EPA, and FDA wrote their requests for comment differently, which may have contributed to how frequently they received comments referencing specific regulations. Of the agencies examined, FDA provided the most specific questions seeking input and was the only agency to offer a format for submitting comments in its notice. It was also more successful in receiving comments with specific citations, compared to USDA and EPA. These results suggest that relatively detailed requests were successful at soliciting specific references and that commenters are responsive to a request's level of detail. This finding reinforces agency experiences with strategies for facilitating retrospective analyses. For example, to enhance stakeholder feedback, the Federal Trade Commission (FTC) “adopted a standardized series of questions that provided a starting point to facilitate public comment on regulations subject to retrospective review” (GAO 2014, p. 22). Thus, agencies should focus additional efforts on

publishing detailed requests for comment when soliciting feedback on retrospective reviews of regulations.

Second, agencies should conduct targeted outreach, prior to the opening and/or after the closing of comment periods, to supplement public comments received through FR notices. For example, because of the breadth of issues represented in public comments, sub-agencies and offices within each agency could solicit more focused and specific input related to their regulatory authority. Our results indicate that commenters' biggest areas of focus often aligned with some of each agency's key responsibilities (e.g., pollution for EPA, food safety for FDA, forestry and fire management for USDA).³¹ However, since important but less salient issues might not appear frequently in public comments, considering issues outside commenters' top priorities is also critical. Offices within an agency could play a role in identifying key stakeholders missing from the process as well as complement requests for comments with other forms of public engagement (e.g., public meetings, technical workshops, advisory committees, listening sessions, etc.), as some agencies do already (GAO 2014; Sant'Ambrogio and Staszewski 2018).³²

The need for enhanced engagement is highlighted by a report for the Administrative Conference of the United States that recommends agencies "consider conducting outreach that targets experts not already likely to be involved, individuals with knowledge germane to the proposed rule who do not typically participate in rulemaking, and members of the public with relevant views that may not otherwise be represented" (Sant'Ambrogio and Staszewski 2018, p. 159). Further, our results indicate a substantial cross-agency overlap, especially between USDA and EPA on climate change and energy-related issues (Figure 4). Such overlap stresses the need for interagency cooperation in identifying duplicated regulations and tackling common issues concerning both agencies' stakeholders.³³

Third, agencies should solicit more focused input on regulatory forms that elicit substantially more attention than others. Broadly, in the agricultural sector, commenters discussed command-and-control regulations like permitting, MRV requirements, performance standards, and labeling most frequently (Figure 9). Thus, our content analysis of public comments corresponds with empirical research suggesting that command-and-control regulations are a substantial drag on growth of

³¹ Notably, although forestry and fire management is a key responsibility of the Forest Service, which is housed within USDA, other key responsibilities of USDA do not appear among the most frequent issue areas mentioned, including food safety, conservation programs, crop insurance, and marketing programs.

³² To the extent that agencies are limited in the type of activities they may conduct while a public comment period is open, agencies should proactively plan usage of complementary forms of public engagement. In Section XII of their report for ACUS, Sant'Ambrogio and Staszewski (2018) discuss the importance of early planning for public engagement and suggests recommendations and policies for increasing its effectiveness.

³³ Another noticeable area of overlap between USDA and FDA was on "nutrition." Other areas for overlap also exist among these agencies (e.g., the regulation of produce production standards by USDA and FDA). Agencies should seek out such areas of overlap and consider other places that would benefit from interagency cooperation.

agricultural productivity (Xie 2019). Agencies concerned about how their rulemaking affects agricultural industries could consult with the public on these specific regulatory forms or solicit comment on regulations that primarily employ these forms. Furthermore, because the usage of regulatory forms varies among agencies, each agency may assess which regulatory forms it utilizes and seek consultation on relevant rules. For instance, EPA commenters focused most frequently on permitting regulations, while FDA commenters more often referenced labeling requirements (Figure 9).

Fourth, agencies may facilitate more participation of organizations that engage in issue advocacy, including think tanks and research centers. We observed that business advocates commented at least twice as much on each agency's docket as issue advocates. Nonetheless, receiving more comments from issue advocates could be beneficial for at least two reasons. First, although organization comments generally use evidence at a high level, a higher proportion of comments submitted by issue advocates use quantitative evidence relative to business advocates. Second, diversifying the pool of organizational comments could reduce overrepresentation from industry groups or directly regulated entities, which our results suggest could potentially be occurring (Figures 2 and 3).

Fifth, agencies should consider providing more assistance to commenters who lack the institutional capacity to submit more specific information. Many commenters identified specific regulations to review, offered explicit proposals, and supported their comments with expertise and evidence, but individual commenters demonstrated a lower capacity to do so than organizational commenters. Compared to individuals, a higher proportion of organizations referenced specific regulations in their comments. Individuals often failed to offer proposals in their comments, while organizations almost always included at least one proposal (Figure 11). Individuals often failed to base their comments on expertise, including personal experience, or evidence (Figure 11), indicating that many comments were of minimal quality.

Nevertheless, our results suggest that many individuals have relevant expertise and information to communicate. As noted, a substantial proportion of comments from individuals included specific citations to regulations, relied on some form of expertise in their comments, and utilized either qualitative or quantitative evidence. Even if a majority of individual commenters do not have potentially relevant information, providing additional assistance could help those individuals drawing from expertise and evidence to identify specific regulatory citations related to their concerns. For instance, when conducting consultations for evaluating existing regulations, agencies could attach supporting documentation to their dockets that identify the CFR parts that contain the major regulations they administer. Furthermore, types of proposals varied substantially by commenter type with organizations overwhelmingly wanting less stringent regulation, which is reflective of the composition of organizations being dominated by business groups. Equipping individuals with the capacity to submit more specific information could broaden the spectrum of proposals received by agencies. In turn, broadening public engagement in this manner could

enhance the picture agencies have of the primary concerns of stakeholders on both sides of regulatory issues.

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Appendix 2.A: Additional Mass Comment Campaigns

1. SNAP

The comments generally discuss the work requirements in the Supplemental Nutrition Assistance Program (SNAP). Each comment is customized to include the commenter's own arguments and ends with the same sentence: "Re: Supplemental Nutrition Assistance Program: Requirements and Services for Able-Bodied Adults without Dependents (previously under Docket ID FNS-2018-0004-0001)."

Agency	Comment Format	Identifier	Number of Comments	Example
USDA	Text without attachments	"Re: Supplemental Nutrition Assistance Program: Requirements and Services for Able-Bodied Adults without Dependents (previously under Docket ID FNS-2018-0004-0001)"	3,572	Document ID: USDA-2017-0002-1957 Available at: https://www.regulations.gov/document?D=USDA-2017-0002-1957

2. Keep All EPA Rules

The comments generally discuss retaining all EPA rules. The comments were sent to EPA in an email format. The content may be customized, but it all contains "All regulations at the Environmental Protection Agency are critical ..."

Agency	Comment Format	Identifier	Number of Comments	Example
EPA	Text in PDF attachments	"All regulations at the Environmental Protection Agency are critical"	8,130	Document ID: EPA-HQ-OA-2017-0190-57867 Available at: https://www.regulations.gov/document?D=EPA-HQ-OA-2017-0190-57867

3. KnowWho Clean

There are over 1,000 comments sent to EPA from KnowWho Automail (a commenting platform), but their contents are different to some extent. It is not clear whether those comments were submitted by individuals or some groups organizing MCCs. However, we found a subset of those comments that contain similar content and format. They all contain some or all of the following categories and ask for EPA rules related to these not to be weakened or rescinded: Toxic Wastewater Protection, Clean Water Protections, Clean Air Protections, Visibility Protections, and Clean Power Plan.

Agency	Comment Format	Identifier	Number of Comments	Example
EPA	Text in PDF attachments	“knowwho” AND one of the following: “Toxic Wastewater Protections” “Clean Water Protections” “Clean Air Protections” “Visibility Protections” “Clean Power Plan - Following judicial review, EPA must ensure the implementation of the Clean Power Plan”	360	Document ID: EPA-HQ-OA-2017-0190-45018 Available at: https://www.regulations.gov/document?D=EPA-HQ-OA-2017-0190-45018

Appendix 2.B: Key Words and Phrases Used for Determining Relevance of EPA Comments

Key words (stematized): ['agricultur', 'alfalfa', 'almond', 'angora', 'appl', 'apricot', 'artichok', 'asbesto', 'asparagu', 'avocado', 'bagass', 'banana', 'barley', 'bean', 'bee', 'beef', 'beet', 'bio-bas', 'biobas', 'bioenergi', 'biofuel', 'bioga', 'biogen', 'biomass', 'biopesticid', 'biotechnolog', 'bison', 'blackberri', 'blueberri', 'boar', 'boysenberri', 'breed', 'broadleaf', 'broccoli', 'brussel', 'bull', 'butter', 'buttermilk', 'caap', 'cabbag', 'cafo', 'calv', 'caneberri', 'canola', 'cantaloup', 'carrot', 'cattl', 'cauliflow', 'celeri', 'cellulos', 'cheddar', 'chees', 'cherri', 'chick', 'chicken', 'cigar', 'citru', 'clover', 'coffe', 'collard', 'corn', 'cotton', 'cow', 'cowpea', 'cranberri', 'crop', 'cucumb', 'curd', 'dairi', 'decidu', 'duck', 'durum', 'edibl', 'egg', 'endiv', 'equin', 'escarol', 'ethanol', 'eup', 'ewe', 'fallow', 'farm', 'farmer', 'farrow', 'feed', 'feedstock', 'fertil', 'fifra', 'fig', 'fisheri', 'flaxse', 'forag', 'fordhook', 'forest', 'forestri', 'fruit', 'fumig', 'fungicid', 'garbanzo', 'garlic', 'ginger', 'goat', 'gorgonzola', 'grain', 'grape', 'grapefruit', 'grower', 'guava', 'harvest', 'hatch', 'hatcheri', 'hay', 'haylag', 'hazelnut', 'hog', 'honeybal', 'honeydew', 'hop', 'insect', 'insecticid', 'irrig', 'kale', 'kiwifruit', 'lagoon', 'lamb', 'lemon', 'lentil', 'lettuc', 'limburg', 'livestock', 'loganberri', 'macadamia', 'malt', 'manges', 'manur', 'mapl', 'meat', 'mellorin', 'melon', 'milk', 'millet', 'mohair', 'mozzarella', 'muenster', 'mushroom', 'mustard', 'mutton', 'nectarin', 'neufchatel', 'nitrat', 'noncitru', 'npdes', 'nut', 'oat', 'okra', 'oliv', 'onion', 'orang', 'organic', 'papaya', 'parmesan', 'pastur', 'pcb', 'pea', 'peach', 'peanut', 'pear', 'pecan', 'pepper', 'peppermint', 'periqu', 'pest', 'pesticid', 'pickl', 'pig', 'pineappl', 'pinto', 'pistachio', 'plum', 'pork', 'potato', 'poultri', 'proso', 'provolon', 'prune', 'pumpkin', 'radish', 'raisin', 'rapese', 'raspberri', 're-plant', 'rfs', 'rice', 'ricotta', 'rodenticid', 'romain', 'romano', 'runoff', 'rye', 'safflow', 'seed', 'seedless', 'shallot', 'sheep', 'silag', 'sorghum', 'sow', 'soybean', 'spearment', 'spinach', 'sprout', 'squash', 'strawberri', 'sucros', 'sugar', 'sugarbeet', 'sugarcan', 'sunflow', 'sweetpotato', 'tangelo', 'tangerin', 'taro', 'tillabl', 'tobacco', 'tomato', 'turkey', 'turnip', 'turtl', 'veal', 'veget', 'walnut', 'watermelon', 'weed', 'wetland', 'wheat', 'whey', 'wine', 'wood', 'wool', 'wotus', 'wps', 'yearl', 'yogurt']

Key phrases: ['40 c.f.r. 116', '40 c.f.r. 122', '40 c.f.r. 124', '40 c.f.r. 127', '40 c.f.r. 129', '40 c.f.r. 150', '40 c.f.r. 152', '40 c.f.r. 156', '40 c.f.r. 158', '40 c.f.r. 159', '40 c.f.r. 161', '40 c.f.r. 162', '40 c.f.r. 163', '40 c.f.r. 166', '40 c.f.r. 167', '40 c.f.r. 170', '40 c.f.r. 171', '40 c.f.r. 172', '40 c.f.r. 174', '40 c.f.r. 176', '40 c.f.r. 177', '40 c.f.r. 180', '40 c.f.r. 185', '40 c.f.r. 186', '40 c.f.r. 232', '40 c.f.r. 267', '40 c.f.r. 300', '40 c.f.r. 302', '40 c.f.r. 355', '40 c.f.r. 370', '40 c.f.r. 372', '40 c.f.r. 412', '40 c.f.r. 451', '40 c.f.r. 455', '40 c.f.r. 503', '40 c.f.r. 62', '40 c.f.r. 66', '40 c.f.r. 68', '40 c.f.r. 70', '40 c.f.r. 75', '40 cfr 116', '40 cfr 122', '40 cfr 124', '40 cfr 127', '40 cfr 129', '40 cfr 150', '40 cfr 152', '40 cfr 156', '40 cfr 158', '40 cfr 159', '40 cfr 161', '40 cfr 162', '40 cfr 163', '40 cfr 166', '40 cfr 167', '40 cfr 170', '40 cfr 171', '40 cfr 172', '40 cfr 174', '40 cfr 176', '40 cfr 177', '40 cfr 180', '40 cfr 185', '40 cfr 186', '40 cfr 232', '40 cfr 267', '40 cfr 300', '40 cfr 302', '40 cfr 355', '40 cfr 370', '40 cfr 372', '40 cfr 412', '40 cfr 451', '40 cfr 455', '40 cfr 503', '40 cfr 62', '40 cfr 66', '40 cfr 68', '40 cfr 70', '40 cfr 75', '404 permit', '404 program', '404 program definitions', 'agricultural runoff', 'animal feed', 'approval and promulgation of state plans for designated facilities and pollutants', 'assessment and collection of noncompliance penalties by epa', 'battery storage', 'certification of pesticide applicators', 'certification of usefulness of pesticide chemicals', 'chemical accident prevention provisions', 'chemical storage', 'concentrated animal feeding operations', 'concentrated animal feeding operations (cafo) point source category', 'concentrated aquatic animal production', 'concentrated aquatic animal production point source category', 'continuous emission monitoring', 'data requirements for pesticides', 'data requirements for registration of antimicrobial pesticides', 'designation of hazardous substances', 'designation,

reportable quantities, and notification', 'emergency planning and notification', 'exempt activities not requiring 404 permits', 'exemption of federal and state agencies for use of pesticides under emergency conditions', 'experimental use permits', 'farm land', 'farm runoff', 'federal insecticide, fungicide, and rodenticide act', 'food additive', 'food product', 'genetically modified', 'hazardous chemical reporting: community right-to-know', 'inert ingredients', 'invasive species', 'issuance of food additive regulations', 'labeling requirements for pesticides and devices', 'lead-based paint', 'manure lagoon', 'maximum residue limits', 'national oil and hazardous substances pollution contingency plan', 'national pollutant discharge elimination system', 'npdes electronic reporting', 'pesticidal active ingredient', 'pesticide chemicals', 'pesticide registration and classification procedures', 'pesticides in animal feed', 'plant incorporated pesticide', 'plant-incorporated protectants', 'polychlorinated biphenyl', 'procedures and requirements for plant-incorporated protectants', 'procedures for decisionmaking', 'red tides', 'registration of pesticide and active ingredient producing establishments, submission of pesticide reports', 'renewable fuel', 'renewable fuel standard', 'residues in food', 'standards for owners and operators of hazardous waste facilities operating under a standardized permit', 'standards for the use or disposal of sewage sludge', 'state operating permit programs', 'state registration of pesticide products', 'statements of policies and interpretations', 'sugar cane', 'sugar mill', 'time-limited tolerances', 'time-limited tolerances for emergency exemptions', 'tolerance exemption', 'tolerances and exemptions for pesticide chemical residues in food', 'tolerances for pesticides in food', 'toxic chemical release reporting: community right-to-know', 'toxic pollutant effluent standards', 'underground storage tank', 'waters of the united states', 'worker protection standard']

Appendix 2.C: Codebook for Content Analysis

Approach:

This project will rely on two approaches to coding.

First, approximately one-third of the coding (200 comments) will follow double-blind coding rules. Namely, two coders code the same set of comments independently and then discuss and resolve any discrepancies. For those that cannot be resolved, send to a third coder for review.

Second, the rest of the public comments will be analyzed through individual coding, with close adherence to the codebook and Q&A on decision-making processes. For comments that cannot be individually coded, send to a second coder for review, with the undecided variables highlighted.

Coding Variables:

commenter_type: Which of the follows does the commenter claim himself/herself/themselves to be in the comment?

- 1: individuals, e.g., students, farmers, citizens.
- 2: business entities (businesses, companies, corporations, LLCs, etc. under private or non-government ownership).
- 3: business interest groups (groups advocating on behalf of an industry or professional associations).
- 4: issue advocacy groups (groups advocating for public interests or social welfare).
- 5: universities and colleges (either public or private).
- 6: state, local, or tribal governments.
- 7: federal government.
- 8: primary/secondary schools.
- 9: hospitals and medical facilities.
- 10: media entities.
- 11: international governments / organizations.
- 12: think tanks / research centers.
- 13: *[add new categories if you see anything that does not fall in any of the above]*

Period (.): if the commenter does not claim his/her identity.

area: Which area(s) of issues does the comment discuss? If multiple codes are applicable, separate the codes by comma (,) with no blanks before or after (e.g., 1,2).

- 1: conservation programs (e.g., Conservation Reserve Program)
- 2: organic farming
- 3: GMO (e.g., GM crop cultivation, use of GM pesticides)
- 4: pesticide
- 5: fertilizer
- 6: Climate change / greenhouse gas emissions
- 7: rural development (e.g. rural infrastructure, rural housing)

8: international trade
 9: nutrition
 10: food safety
 11: animal production and processing
 12: crop production and processing
 13: bio-energy production (e.g., ethanol)
 14: regulatory process
 15: financing (e.g., disaster payments, income support)
 16: forestry and fire management
 17: retailing and distribution
 18: public lands
 19: research and testing
 20: water pollution (other than agricultural runoff)
 21: air pollution
 22: soil pollution
 23: other environmental problems
 24: other energy-related issues (e.g., coal, oil, gas)
 25: water pollution from agricultural activities (e.g., agricultural runoff)
 26: fisheries and aquaculture
 27: air emissions (including GHGs) from agricultural activities
 28: other
 Period (.): if the comment does not discuss any issue areas.

reg_relevance: Does the comment talk about regulations? =1 if yes, =0 if not.

reg_reference: Does the comment reference specific regulations, such as CFR number, FR page, or name of a rule? =1 if yes, =0 if not.

reg_form: If the comment explicitly mentions any regulatory form in the existing regulations that need to be repealed, amended or replaced, specify the designated code for the form in this column (see Taxonomy in the folder); separate multiple references by semicolon (;) with no space before and after.

reg_specific (if reg_reference = 1): How does the comment reference specific regulations? If multiple codes are applicable, separate the codes by comma (,) with no blanks before or after.

1: CFR references (title, part, section number, e.g. 7 CFR 16)
 2: FR references (volume & page number, e.g., 82 FR 62530)
 3: name of a rule, including full or meaningful partial name (e.g., Renewable Fuel Standards)
 4: other (specify in the notes column)
 5: guidance document, including names or any unique identifiers of guidance documents
 6: Regulation.gov docket number
 7: RIN
 8: OMB control number
 Period (.): if reg_reference = 0

reg_specific_CFR (if reg_specific = 1): If the comment references a specific CFR part or section number, specify it in this column in the form of “OO CFR OO” (i.e., [title] CFR [part]); separate multiple references by semicolon (;) with no space before and after.

reg_specific_FR (if reg_specific = 2): If the comment references a specific Federal Register notice, specify it in this column in the form of “OO FR OOOOO” (i.e., [volume] FR [page]); separate multiple references by semicolon (;) with no space before and after.

reg_specific_RuleTitle (if reg_specific = 3): If the comment references a specific rule/program title, copy it into this column; separate multiple references by semicolon (;) with no space before and after.

reg_specific_guidance (if reg_specific = 5): If the comment references a specific guidance document, copy it into this column; separate multiple references by semicolon (;) with no space before and after.

reg_specific_other (if reg_specific = 4,6,7,8): If the comment references specific regulation in any other ways, copy the reference language into this column; separate multiple references by semicolon (;) with no space before and after.

proposal: What types of regulatory actions does the comment call for? If multiple codes are applicable, separate the codes by comma (,) with no blanks before or after.

- 1: if the comment suggests repealing existing regulations
- 2: if the comment suggests retaining existing regulations (such as “They should be left as they are”)
- 3: if the comment suggests modifying certain provisions of existing regulations with more stringent requirements
- 4: if the comment suggests modifying certain provisions of existing regulations with less stringent requirements
- 5: if the comment expresses a commitment toward existing regulations but suggests changes/delays in the implementation of the referenced regulations
- 6: if the comment suggests regulating currently unregulated activities, etc.
- 7: if the comment suggests other types of regulatory actions (specify in the notes column)
- Period (.): if the comment does not contain any proposals on regulatory actions.

[Note that the proposal here only refers to proposals on regulatory actions. Some comments contain proposals on website contents or legislation, but we are not interested in those types of proposals. In those cases, code period (.) in the proposal column.]

expertise: Does the comment seem to be based on any expertise? If multiple codes are applicable, separate the codes by comma (,) with no blanks before or after.

- 0: no expertise is identified in the comment.
- 1: personal experience if the comment references the commenter’s personal experience.
- 2: professional expertise if the comment references the commenter’s expertise in a subject matter (including individual expertise from his/her/their occupational experience and industry expertise from its practices).

evidence: Does the comment use any type of evidence to support its arguments?

0: no evidence if the comment is based on sentimental judgment (or only anecdotal evidence)

1: qualitative evidence only (e.g., case studies, examples, logical arguments)

2: with some quantitative evidence (e.g., statistical analysis)

Coding Q&A:

This appendix is part of the Codebook to record the important decision-making processes we used to code certain public comments. This is to ensure the duplicability of the coding process.

Q1 (*area*): If a comment discusses issue areas unrelated to agriculture, do we still code them in the *area* variable?

Answer: Yes. We code all the issue areas discussed in a comment, even if some of the issues may be not related to agriculture. To distinguish those from more agriculture-specific issues, we have categories such as bio-energy production (13) and agricultural runoff (25), even though they are essentially energy-related issues (24) and water pollution (20), respectively. Therefore, if a comment discusses specifically issues related to agricultural runoff, we would code *area* as 25 rather than 20.

Examples: This [USDA comment](#) (USDA-2017-0002-0051) focuses on water pollution, but only to the extent that agricultural activities affect water quality. Thus, we coded it as *area* = 25. In contrast, another [EPA comment](#) (EPA-HQ-OA-2017-0190-40859) more generally discusses water pollution and emphasizes the broad benefits of existing Clean Water Act-based federal regulations, so we coded *area* = 20. Finally, this [EPA comment](#) (EPA-HQ-OA-2017-0190-41565) discusses both broad water issues related to the Clean Water Act along with specific requests related to water pollution from agricultural activities (e.g., National Pollutant Discharge Elimination System (NPDES) permits). Thus, we coded *area* = 20,25.

Q2 (*area* & *reg_reference*): How do we code for *area* and *reg_reference* if the comment discusses National Environmental Policy Act (NEPA) regulations?

Answer: If the topic of a comment is NEPA regulations, we would code *area* as 14 (regulatory process) since NEPA regulations are process-based. Since each agency has its own NEPA regulations, we would only code *reg_reference*=1 and *reg_specific* accordingly only if the comment references a specific agency's NEPA regulations (e.g., USDA Farm Service Agency's NEPA regulations).

Examples: These two [USDA comments](#) (USDA-2017-0002-0265; USDA-2017-0002-0266) discuss NEPA implementation in general but make no specific references to implementing regulations, so we would only code *area* = 14. This [USDA comment](#) (USDA-2017-0002-0046) offered proposals specific to the APHIS NEPA implementing regulations in 7 CFR 372, but it did not discuss broader NEPA-related issues. Thus, we would code *area* = 14 and *reg_specific* = 1, 3. This [USDA comment](#) (USDA-2017-0002-0048) refers to NEPA and makes references to different agencies handling of the NEPA

processes; however it does not include a direct reference to any agency's NEPA implementing regulations. Thus, we would code *area* = 14 without a corresponding *reg_specific* entry.

Q3 (*reg_relevance*): When should we code *reg_relevance* = 1?

Answer: The objective of this variable is to filter out the comments that only discuss other issues related to agency rather than its regulations, such as legislation, funding, personnel, and agency websites. In general, we code *reg_relevance* = 1 if the comment uses the terms “regulations”, “rules”, or other specific references that clearly point to regulations (e.g., Clean Power Plan, Renewable Fuel Standards). Some comments may only mention general terms such as “protections”; we do not code *reg_relevance* as 1 since there are many means of “protections” other than regulation.

Q4 (*reg_reference*): Do we code for *reg_reference* if the comment references a specific state, local or tribal regulation?

Answer: No. We only focus on federal regulations. We would not consider the references of state, local or tribal regulation when we code for *reg_specific*. Namely, we would code *reg_reference*=0 if the comment references only state, local or tribal regulation but no specific federal regulation.

Q5 (*reg_form*): If a comment references a specific regulation (i.e., *reg_reference* = 1), should we code *reg_form* when we know the form of that regulation but the commenter does not explicitly discuss the form?

Answer: No. We should only code *reg_form* when the commenter explicitly mentions a form of regulation. If we happen to know the form of a specific regulation, this information would already be captured by *reg_specific*. To avoid biasing the results by favoring more well-known or salient regulations, we do not infer the regulatory form, unless the specific mechanism used in a regulation is discussed in the text of the comment such that a general reader would be able to identify the form based on the comment's description and definitions in the Regulatory Taxonomy.

Examples: This EPA [comment](#) (EPA-HQ-OA-2017-0190-16938) mentions the [Clean Power Plan](#), an Obama-era rule that regulated greenhouse gas emissions from existing power plants. Even though the specific reference to a regulation is clear, the comment does not explicitly mention any regulatory form(s). In contrast, another EPA [comment](#) (EPA-HQ-OA-2017-0190-16740) discusses the Renewable Fuel Standard (RFS) program and articulates specific aspects of the program's mechanism that clearly identify the form as 122 (i.e., portfolio standards).

Q6 (*reg_form*): If the comment suggests a regulatory form the agency should adopt, would we code that form in *reg_form* variable?

Answer: No. The *reg_form* variable should capture the forms adopted in the existing regulations that a comment suggests for repeal, amendment, or replacement. If a form is only mentioned as a proposal, we would not code it as in *reg_form*.

Q7 (*reg_specific_XXX*): For *reg_specific_XXX* variables, would we include a regulation if it is only referenced as a citation or example in the comment (i.e., there is no clear proposals associated with the regulation)?

Answer: Yes. We take an inclusive approach. We would record a regulation reference (e.g., CFR, rule title) as long as it is mentioned in the comment, regardless the context in which it is mentioned.

Q8 (*reg_specific_CFR*): If a comment references specific CFR section numbers, should we identify that in *reg_specific_CFR*?

Answer: No. We only record CFR references at the part level (i.e., OO CFR OO). In other words, if a comment discusses multiple sections of a CFR part separately, we would only have the CFR part number recorded once.

Q9 (*proposal*): Should we code *proposal* if the comment appears to have a proposal for a non-regulatory action?

Answer: No. We only code proposals on regulatory actions (including requests for new regulations) and exclude proposals on other matters, such as legislation or website contents. Thus, if *reg_relevance* = 0, then we do not code a proposal for regulatory action. If a comment includes one proposal on a regulatory action and another proposal on a legislative action, only code the former. *Also see*, Q3 (*reg_relevance*).

Examples: These two [EPA comments](#) (EPA-HQ-OA-2017-0190-14699; EPA-HQ-OA-2017-0190-0889) discusses supporting “protections” for the environment but do not specifically discuss proposals on regulatory actions. Such proposals for retaining existing protections could apply to non-regulatory actions like legislation.

Q10 (*proposal*): If a comment proposes to repeal an existing regulation and replace with a new regulation, what would we code it for *proposal*?

Answer: If the new regulation implies a less stringent regulation than the existing one, we would code *proposal* = 4 (less stringent) and ignore the “repeal” language, because the relevant activities would eventually regulated by the new regulation as proposed by the comment. Although it is rare that a comment says repealing an existing regulation and replacing it with a more stringent regulation, we would code *proposal* = 3 (more stringent) if it is the case.

Q11 (*proposal*): If a comment proposes to repeal a regulation because it is duplicative with another regulation that imposes same requirements, would we code *proposal* as 1 (repeal) or 4 (less stringent)?

Answer: We would code *proposal* = 4 (less stringent). Although the comment calls for an existing regulation to be repealed, the other regulation that imposes same requirements would still be in place, so the relevant activities would still be regulated.

Q12 (*proposal*). If a comment indicates a regulatory proposal but it is not clear whether the proposal would mean less or more stringent regulatory requirement, how would we code for *proposal*?

Answer: If the comment proposes certain changes in regulatory requirements (not repeal or retaining, etc.) but the proposal is ambiguous in term of less or more stringent, we would code *proposal* as 7 (other).

Q13 (*evidence*): Should we code a comment as using some quantitative evidence (*evidence* = 2) if it cites numbers in its main text?

Answer: No. Citing numbers from other sources in a comment is not counted as quantitative evidence. Instead, references of existing studies would be qualitative evidence (*evidence* = 1). To count as quantitative evidence, the comment should provide original quantitative, either descriptive or inferential, analysis using mathematical and statistical techniques.

Q14 (*evidence*): Should we code a comment as using some quantitative evidence (*evidence* = 2) if it attaches a study that includes quantitative analysis?

Answer: No. As mentioned in Q4, references of existing studies are counted as qualitative evidence, even if the cited study includes quantitative analysis.

Examples: This [comment](#) (EPA-HQ-OA-2017-0190-10829) attaches an IPCC report to support its claims on climate change, but it does not include any original quantitative analysis, so we code it as *evidence* = 1