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# AGENCY ECONOMISTS

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# Agency Economists

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## Executive Summary

This report examines the relationship between the organization of economists in agencies and the robustness and integrity of economic analysis that is intended to inform decisions about the design and adoption of individual regulations. It considers three methods of organizing economists who work on regulations: “divisional” organization (placement in the program office that writes regulations), “functional” organization (placement in a unit separate from the program office), and a hybrid organization that places economists in the program office but also has a central economics office that reviews regulations and the accompanying analysis.

Organization theory, prior empirical research, and interviews of senior regulatory economists and attorneys in federal agencies suggest that the choice of organizational structure often involves a tradeoff between the quality and objectivity of economic analysis and the extent to which the analysis is considered in decisions. Federal agencies often implement decision-making authorities, practices and procedures intended to support the strengths and remedy the weaknesses of the chosen organizational structure.

Agencies that place their economists in a functional organization can mitigate some of functional organization’s disadvantages by (1) including economists on multidisciplinary regulatory development teams from the outset, (2) ensuring that the economists can make independent recommendations to high-level decision-makers, and (3) giving the head of the economics office signoff authority on regulatory actions. Agencies that place their economists in a divisional organization can mitigate some of divisional organization’s disadvantages by (1) ensuring that economists in the program office report to and are managed by other economists in the program office who are at a senior level; (2) empowering a central economics review office at the departmental level to serve as a quality check on economic analyses from the program offices, provide leadership in standardizing and disseminating high-quality analytical methods, conduct longer term research and development to inform future regulatory proceedings, and ensure that the economists’ perspective is heard by high-level decision-makers; and (3) giving the central economics office authority to object to specific regulatory actions.

This research also identified two other practices that appear to improve the integrity and impact of economic analysis regardless of organizational structure: (1) publicly formalize an early role for economists and economic analysis in the regulatory development process, and (2) explicitly give some entity (usually the functional economics office or central economics review

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office) responsibility for improving and articulating relevant analytical methods and establishing agency-specific guidelines for economic analysis.

Finally, the research suggests that functional or “hybrid” organization of economists may produce economic analysis that is more thorough and objective than analysis produced by a purely divisional organization. Potential disadvantages of the functional organization can be mitigated with appropriate practices and procedures to ensure that economic analysis is considered in decisions. Because wholesale reorganization can also involve significant costs, however, it may be the most attractive solution only when an agency’s leadership determines that the agency is not consistently producing useful regulatory impact information and fundamental structural change is necessary.

## Introduction

For more than four decades, executive orders have required executive branch agencies to conduct economic analysis to inform regulatory decisions (Weidenbaum 1997). Some executive branch and independent agencies also face statutory requirements to conduct and/or consider various kinds of economic analysis for some or most of their regulations (Bull and Ellig 2018, 891-913; Cecot and Viscusi 2015, 584; Copeland 2013; Pierce 2013). Regulatory agencies may face greater pressure in the future to produce and consider high-quality economic analysis as a result of *Michigan v. EPA* (135 S. Ct. 2699 [2015]), which suggested that it may be per se arbitrary and capricious for agencies to ignore economic costs entirely (absent a statutory directive to do so) or to adopt a regulation with costs that are wildly disproportionate to the underlying benefits (Masur and Posner 2018, Sunstein 2017).

The economic analysis that Executive Order 12866 requires executive branch agencies to conduct and consider is known as “regulatory impact analysis.” In other agencies, similar analysis is often just called “economic analysis;” such analysis may or may not include all of the elements of a regulatory impact analysis and may be woven into orders rather than presented as a freestanding document or section or an order. In many agencies, the term “cost-benefit analysis” (or “benefit-cost analysis”) is used as a synonym, but a complete economic analysis to inform regulatory decisions should go well beyond an estimate of the benefits and costs of the regulation at issue.

Executive Order 12866, the Office of Management and Budget’s (OMB) regulatory impact analysis guidance to agencies (Circular A-4), federal agencies’ own economic analysis guidelines, and relevant scholarship agree that a thorough analysis should include at least four elements: (1) an explanation of the need for the regulation, which should ideally assess the

significance and cause of the underlying problem the regulation is intended to solve, (2) development of reasonable alternative solutions that could address all or part of the problem, (3) assessment of the benefits of each alternative, and (4) assessment of the costs of each alternative (GAO 2014, 3; McGarity 1991, 112; Zerbe and Dively 1994, 2-3; USDA 1997, HHS 2016, EPA 2010, OIG and RSFI 2012). Decision-makers can then compare the benefits, costs, and net benefits (benefits minus costs) of the alternatives.

A complete economic analysis to inform regulatory choices will likely include other elements. Cost-effectiveness analysis, which compares the cost of each alternative with the amount of desired outcome achieved, can help decision-makers determine the lowest-cost way to achieve a desired policy outcome (Posner 2003). Decision-makers may also desire a distributional analysis that shows who gains and who loses under each alternative (Robinson, Hammit, and Zeckhauser 2016).<sup>1</sup>

Recent academic literature investigates whether the organization of economists within regulatory agencies affects the overall quality of economic regulatory analysis and the likelihood that decision-makers will consider the results of that analysis when designing regulations. Occasionally agencies have sought improvement by changing their organizational structure for economists; examples include the Federal Communications Commission (FCC) in 2018 and the Federal Trade Commission (FTC) in 1961. Given the potential for organizational structure to affect the quality and consideration of economic analysis, the Administrative Conference of the United States requested this report to summarize existing research, supplement it with qualitative

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<sup>1</sup> The assessment of economic effects on small businesses mandated by the Regulatory Flexibility Act, 5 U.S.C. § 601 *et seq.*, is primarily a distributional analysis. Assessment of job gains and losses from individual regulations is primarily a distributional issue (Coglianese, Finkel and Carrigan 2015).

interviews of regulatory officials in federal agencies, and identify approaches that regulators may find useful.<sup>2</sup>

Section I of the report outlines relevant organization theory that suggests how functional organization, divisional organization, and one type of hybrid organization – a centralized high-level economic review office in addition to functional or divisional organizations – could affect the quality and consideration of economic analysis in government agencies. Section II summarizes prior empirical research on the topic, including qualitative interviews, case studies, and one econometric study. Section III reports the results of new qualitative interviews of senior economists and non-economists in six Cabinet agencies and two independent agencies conducted for this report. Section IV suggests conclusions and implications for federal agencies drawn from the research discussed in sections I-III.

## **I. Relevant Organization Theory**

It is a truism in management theory that organizational structure can affect performance by affecting the distribution of decision-making authority and information flows (See, e.g., Brickley, Smith, and Zimmerman 1997, 172-239; Milgrom and Roberts 1992, 539-79; Shugart, Chappell and Cottle 1994, 467-87). Hammond (1986) outlined a general theory showing that organizational structure within a government agency can influence outcomes by affecting which options are presented to the ultimate decision-maker. The most in-depth theoretical treatment of the relationship between the organization of economists and the quality and consideration of economic analysis in federal agencies is by Froeb, Pautler, and Röller (2009). Although they address the organization of economists in the specific context of antitrust agencies, their

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<sup>2</sup> The past four decades have seen significant debates over analytical methods and the role that economic analysis should play in regulatory decisions (see, e.g., Ackerman and Heinzerling 2002, Graham 2008, McGarity 1991, Revesz and Livermore 2008, Sunstein 2018). Those debates are outside the scope of this report. This report merely assesses how differences in organizational structure and management of economists may affect regulatory agencies' ability to comply with whatever economic analysis requirements they are subject to.

discussion of the pros and cons of different organizational forms is at a broad enough level of abstraction that it should apply to agencies that primarily pursue their missions through rulemaking as well.

Froeb et al. (2009) distinguish between two ways of organizing and managing economists: (1) “divisional” organization, which disperses economists among the divisions, bureaus, or office that carry out various aspects of the agency’s mission, or (2) “functional” organization, which places economists in their own division, bureau, or office. In a regulatory agency, divisional organization is equivalent to placing economists in the program office that develops regulations; functional organization is equivalent to placing economists in their own unit separate from the program office. Froeb et al. (2009) adapt standard organization theory to investigate how the two different organizational forms, as well as hybrid forms, are likely to affect the agency’s ability to produce high-quality economic analysis on questions of interest to decision-makers that is communicated in a useful form.

A primary advantage of divisional organization is closer coordination between economists and attorneys; the economists can make greater use of the specific knowledge of subject matter experts in the operating division.<sup>3</sup> Since economists and attorneys are grouped together, decisions can also be made more rapidly, and the economic analysis is more likely to cover all of the key questions that are of interest to decision-makers. However, the quality of economic analysis may be lower, because non-economist managers would find it difficult to quality control the economic analysis and may not have the background to adequately evaluate and reward good economic analysis. In addition, less information may reach decision-makers,

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<sup>3</sup> The same logic applies to coordination between economists and other professionals, such as engineers, toxicologists, epidemiologists, accountants, and other subject matter experts. For the purpose of explicating the theory, Froeb et. al. (2009) make the simplifying assumption that the only two professional inputs are economists and attorneys.



because the economists' and attorneys' work is combined into one product with a single recommendation for action. Finally, dividing economists up among divisions makes it harder for them to develop standardized analytical approaches that are applied consistently across different parts of the agency.

Froeb, et al. (2009) argue that a functional organization, on the other hand, is more likely to produce high-quality economic analysis, for several reasons. A functional organization can exploit economies of scale; economists with specialized expertise, such as econometrics or structural modeling, can serve multiple divisions across the agency. Economist managers can more easily exercise quality control over the analysis. A functional organization may also have an advantage in hiring. The opportunity to work with a larger group of economists in an environment more like a university economics department, with an academic seminar series, research time, and external publication opportunities, is likely to be highly attractive to potential recruits coming out of graduate school. Such an organization is more likely to be able to develop and implement standardized analytical approaches across different divisions. A functional organization may also be more innovative, as economists managed by other economists are encouraged to keep up with, and even publish, new research in their fields.

The primary disadvantage of functional organization is that it can reduce communication and coordination between the economic and the legal analysis. As a result, the economic analysis might not address all of the key questions of interest to decision-makers. Attorneys might even end up stepping in to do some of the economic analysis. Another disadvantage is that higher-ups must spend more time evaluating conflicting analyses when attorneys and economists disagree.

In a bureaucracy, pay raises and career advancement tend to depend on performance evaluations by one's superiors (Downs 1967, Tullock 1965). Froeb et al. (2009) do not explicitly

address how different organizational structures could affect this incentive for economists, but Hazlett (2011, 6-7) does. In a functional organization, where economists are managed and evaluated by other economists, they have greater opportunity to respond to the incentives created by the external norms of the economics profession. “Economists are driven to provide public goods, relatively reliable estimates of net regulatory benefits, in seeking to improve their standing within the economics profession” (Hazlett 2011, 6). Thus, economists in a functional organization are more likely to provide an independent and potentially more objective perspective on regulatory options.

Froeb et al. (2009) also discuss the advantages and disadvantages of a hybrid form of organization, in which front-line economists are placed on teams working directly with attorneys, but a chief economist reviews their work and can make a separate recommendation to decision-makers. US regulatory agencies have an organizational analog to this structure. Some departments have a chief economist or central economics office that reviews regulations and RIAs (Nou 2015, 452-58). A hybrid structure allows an agency to achieve some of the benefits of both forms of organization: economists in the program office can coordinate their work closely with the attorneys or other professionals who write the regulations, while an economist or economics office independent of the program office can exercise quality control. The chief economist can also make his or her own recommendations to decision-makers, which can create an incentive for the project team to utilize economic analysis and offers a remedy if the team fails to do so.

However, a hybrid structure also has some disadvantages. Program offices could still treat the front-line economists on the teams as second-class team members and ignore them. Compounding this problem, since these economists report to the program office, they may not

have appropriate career incentives to go around their immediate superiors to the chief economist (Froeb et al. 2009).

Four main conclusions emerge from this theoretical analysis:

1. There is no one optimal organizational form for all agencies and all circumstances. The optimal organizational form will depend on the agency's specific facts and circumstances.
2. To produce and use high-quality economic analysis that addresses relevant issues, a divisional organization must implement a strong quality control process for economic analysis, develop methods for recognizing and rewarding functional economic expertise, avoid penalizing economists if they disagree with the program staff based on objective analysis, and provide an independent channel for economists' recommendations to reach decision-makers.
3. To produce and use high-quality economic analysis that addresses relevant issues, a functional organization must build strong linkages between its economists and program office personnel who write regulations.
4. A hybrid organization with a centralized economics review office combines some of the strengths of a divisional and a functional organization, but it should not be regarded as the optimal solution in all cases because hybrid organizations have their own unique challenges.

These last three points imply that organizational structure should not be considered in isolation. Decisionmaking authorities, operating procedures, practices, and norms can increase the benefits or decrease the disadvantages associated with any given organizational structure.

## **II. Prior Empirical Research**

This section summarizes empirical research on the relationship between the organizational structure of economists and the quality and consideration of economic analysis in regulatory agencies. “Empirical” is here defined broadly to include research “originating in or based on observation or experience” (Merriam-Webster 2019), rather than just statistical or econometric studies. Therefore, the research described below includes interviews, case studies, and an econometric study of multiple agencies.

### **A. Interviews**

Shapiro (2017, 2016) conducted the most recent interview research on organizational structure and the quality and use of analysis in multiple agencies. He interviewed 16 high-level economists who have worked on or reviewed regulatory impact analyses and 16 high-level environmental assessors who have worked on reviewed environmental impact analyses. The economists had been involved with more than 700 regulatory impact analyses, and the environmental assessors had been involved with more than 1000 environmental impact analyses.

Almost all the economists believed that economists can be more objective if they are not located in and reviewed by the program office that writes the regulations they are analyzing. One noted, “It’s very difficult to conduct a BCA [benefit-cost analysis] if your boss wrote what you are analyzing” (Shapiro 2017, 691). Economists in a separate analytical office feel much freer to disagree with the program office.

Economists also saw an independent economics office as having greater ability to ensure that economic analysis is considered in regulatory decisions. These offices typically have the responsibility of getting regulations and the accompanying analysis through the OIRA review process. Due to this experience, they have a good sense of what OIRA will and will not accept

and can negotiate changes in regulations to increase the likelihood that OIRA will approve them (Shapiro 2017, 291).

Economists in independent offices did also acknowledge a key disadvantage that may reduce the consideration of economic analysis. They are not usually invited to internal program office meetings where initial regulatory options were discussed. As a result, many key decisions had already been made by the time the economists were involved. Independence “allowed economists to speak freely but on some occasions too late to be heard” (Shapiro 2017, 692).

More frequently than the economists, the environmental assessors said they were normally included on teams run by the program offices. This usually occurred for low-profile decisions or in agencies that tended to confer a lot of decision-making authority on regional offices. Environmental assessors complained more about performing analysis after decisions were made when they dealt with high-profile decisions at the national level. One other difference between the environmental assessors and the economists was that the former are more likely to say that their analysis was part of the organizational culture – an accepted feature of the right way to do planning (Shapiro 2017, 692-93).

An earlier survey of economists in the major federal health and safety regulatory agencies was conducted by Williams (2008). He interviewed senior economists at the Food and Drug Administration, Department of Labor, Department of Homeland Security, the Department of Agriculture, the Consumer Product Safety Commission, the Environmental Protection Agency, and the Department of Transportation. The survey did not primarily focus on organizational structure, but some of the results touched on the issue and are consistent with Shapiro’s findings.

One of the economists’ major concerns was agencies’ tendency to change the economic analysis to support decisions. One respondent said this occurs in his agency because the

economists are located organizationally alongside the individuals responsible for justifying regulatory decisions. He felt they could voice their concerns about regulations more freely if they were not located in the part of the organization that developed the policy. The author also recounted an incident in which he was told on a Friday to reduce the costs and increase the benefits of a regulation or not bother to come back to work on Monday. The program office ultimately changed the benefit and cost numbers. In this case the primary pressure came not because the economists were located in the program office, but because the regulation was written in the FDA commissioner's office (Williams 2008, 10). The economists who did not raise this type of concern were usually in agencies that faced statutory requirements to conduct economic analysis (Williams 2008, 12).

Several mentioned problems that occur when economists are managed by non-economists. One noted, "It would be a luxury to be managed by economists; non-economists focus mainly on deadlines and not on quality economics or having economics influence policy" (Williams 2008, 13). Several others argued that their agencies would be able to recruit and retain better economists if they were managed by other economists.

The foregoing interview research highlights the tradeoffs identified in the theoretical literature: economists in a functional organization have more freedom to be objective but may be less involved in decisions, at least at the early stages. However, respondents also pointed out that the existence of OIRA review gives agencies some incentive to listen to the functional economics offices. Finally, they also suggested that economists can produce better analysis and perhaps have their analysis considered more seriously when they are managed by other economists.

## **B. Case Studies**

Three federal regulatory agencies have been the subject of case studies that shed light on the relationship between organizational structure and the quality and consideration of economic analysis on regulation. They are the Federal Trade Commission, the Securities and Exchange Commission, and the Federal Communications Commission. For all three agencies, published case studies were supplemented by the author's interviews with current or former economists and other high-ranking officials, and in the case of the FCC the author's own recollections from his tenure as chief economist between July 2017 and July 2018. Interviews are mentioned in the text only when they provided information that is not available in published sources.

### ***1. Federal Trade Commission***

The Federal Trade Commission organizes its economists in a functional Bureau of Economics (BE), headed by a chief economist who is typically a visitor from academia serving for one or a few years. The bureau has separate antitrust and consumer protection divisions, which group the economists to match the FTC's two attorney-led bureaus, Competition and Consumer Protection (FTC 2019). The Bureau of Competition is largely an enforcement bureau, bringing cases that implement antitrust policy that has developed in a common-law-like fashion under very general statutes. This bureau does, however, periodically revise and publish enforcement guidelines, which have some similarity to regulations. The Bureau of Consumer Protection both writes regulations and brings enforcement cases. The FTC also submits comments on other agencies' proposed regulations when those regulations would have significant effects on competition or consumer protection (Cooper, Pautler, and Zywicki 2005); these comments often incorporate BE's analysis. The FTC's independent BE has been the

subject of several studies and reports, virtually all of which are summarized in an extensive history of BE written by a former deputy director of the bureau (Pautler 2015, 2018).

The economists were not always in a separate organization. In 1955, more than half of the economists working on antitrust were moved to the Bureaus of Investigation and Litigation, where they reported to attorneys (Pautler 2015, 71). They had little effect on antitrust investigations, and BE's influence in the FTC was at a minimum (Pautler 2018, 106, 111). Fritz Mueller, the chief economist responsible for returning the antitrust economists to the Bureau of Economics in 1961, noted the direct effect of organizational structure on economists' freedom to conduct objective analysis and share their results with decision-makers:

I think the reason the economists were moved out of the Bureau of Economics into the legal division was an outgrowth of the controversy between economists and attorneys. . . . The economists . . . disagreed vehemently with the economic approach being taken by the legal division, and the lawyers wanted greater control over the economists. I think it's a terrible idea myself. (Bureau of Economics 2003, 28)

Antitrust economists have had a more independent role in antitrust policy and enforcement cases since they were moved back into BE (Pautler 2015, 72).

In addition to the organizational structure, studies identify several operating procedures and practices that help bring economic knowledge to bear on decisions at the FTC. For decades the FTC has included economists on cross-functional teams that craft regulations and make enforcement recommendations (Bureau of Economics 2003, 89-90, 151-52). Baker (1997, 869) noted, "Together, the legal and economic staff review documents, interview witnesses, develop theories explaining how the conduct under review might be beneficial or harmful to the public, and identify possible remedies."

Economists also make their own recommendations to the Commission on most matters, both in written confidential memos and orally at commission meetings (Pautler 2018, 114; Baker



1997, 896). They thus collaborate with attorneys on antitrust and consumer protection initiatives but also provide evaluations to higher-level decision-makers on whether those initiatives should go forward (Pautler 2018, 109). Since 1961, economists have usually had direct access to the commissioners (Pautler 2018, 110-11). The separate memos from economists and attorneys create an incentive for staff to harmonize the legal and economic analysis before matters reach the commission, but also allow either bureau to bring matters to the commission’s attention when they do not agree (Pautler 2018, 113). A recent report by the FTC’s inspector general said that BE’s recommendations differ from those of other bureaus less than 10 percent of the time (FTC OIG 2015, 9).

BE’s independence is widely recognized as a factor that contributes to quality economic analysis. A report by the FTC’s inspector general’s office concluded in 2015, “Virtually all stakeholders interviewed recognized the importance of the BE’s purpose in providing unbiased and sound economic analysis to support decision-making—a function that is facilitated by its existence as a separate organization” (FTC OIG 2015, 9).

According to Pautler (2018, 117), economic analysis is considered extensively at the FTC, and the existence of BE as a separate organization has helped preserve this practice as administrations changed.<sup>4</sup> Jonathan Baker, a chief economist at the FTC during the Clinton administration, argues that routine application of benefit-cost logic created “continuous regulatory reform” at the FTC (Baker 1997, 868-69). He contends that the Bureau of Consumer Protection reconsiders or revises proposals if they will not pass a benefit-cost test (Baker 1997, 871). Beales (2005, 1061-65) gives economists substantial credit for helping develop the commission’s 1980 policy statement defining what constitutes an “unfair” business practice. An

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<sup>4</sup> He also notes that the influence of economists does tend to vary depending on the willingness of the chairman and individual commissioners to listen to economic arguments. (Pautler 2018, 111)

unfair practice creates substantial harm to consumers that they could not reasonably avoid and that is not outweighed by any benefit to consumers. The influence of benefit-cost logic on this formulation is obvious. Pautler (2015, 84) writes that economists are currently involved in many FTC consumer protection matters, but their role is “less ingrained” on the consumer protection side than on the antitrust side. Separate economist memos to the commission on consumer protection matters are sporadic rather than customary (Pautler 2018, 114).

For antitrust, an econometric study found that the Bureau of Economics’ recommendations to the commission have a statistically significant effect on decisions in merger cases (Coate 2000, 340-46). A more significant indicator of economists’ role, however, is their contribution to various iterations of the DOJ-FTC merger guidelines. A history of these guidelines reveals that they are clearly as much a product of the economists as they are of the antitrust attorneys (Pautler 2015, 72-76). Pautler (2015, 106) notes, “It is undoubtedly true that having economists work directly for attorneys would reduce the economist/attorney tensions that have always existed on both the antitrust and consumer protection sides of the agency. It would do so, however, by making economic input largely irrelevant for decision-making.”

The FTC’s experience demonstrates how functional organization of economists can promote high-quality analysis while also ensuring that economic analysis gets considered by decision-makers. Placing economists in a separate organization where they are managed by economists gives them a degree of independence to pursue objective analysis. Placing economists on cross-functional teams keeps them involved with projects from the outset. Likewise, giving economists authority to make their own written recommendations to decision-makers helps ensure that they cannot be marginalized on those teams.

## ***2. Securities and Exchange Commission***

Starting in 2012, the SEC significantly improved its quality and consideration of economic analysis in rulemakings -- not primarily through a change in the organizational structure, but through changes in decision-making authorities, practices, and procedures. The SEC had long housed its economists in a separate functional unit, the Office of Economic Analysis. In 2009 the economists were combined with statisticians, risk assessors, financial engineers, and other industry experts in the Division of Risk, Strategy, and Financial Innovation (Lewis 2012; see also <https://www.sec.gov/dera/about>). This division was later renamed the Division of Economic and Risk Analysis (DERA).

Prior to 2012, attorneys rather than economists took the lead in drafting economic analysis for rules (Peirce 2013, 582). Kraus (2015, 302) characterizes the relationship between SEC economists and lawyers at that time as a “stable dysfunctional equilibrium.” According to Kraus, economists were not very involved in rulemaking, focusing more on research studies. Rule-writers avoided involving the economists since the analysis might “limit their policy discretion.” This “Siberia effect” (Brennan 2017) is one of the main potential disadvantages of functional organization of economists.

The D.C. Circuit’s *Business Roundtable v. SEC* decision in 2011 (647 F.3d 1144 [2011]) provided the primary impetus for change (Kraus and Raso 2013, 325). The case involved a challenge to an SEC rule that required corporations to include shareholder-nominated board candidates in the board’s proxy materials. The D.C. Circuit vacated the rule for numerous reasons related to what the Court believed was insufficient benefit-cost analysis. This decision came on the heels of two previous decisions – *Chamber of Commerce v. SEC* (412 F.3d 133 [2005]) and *American Equity Life Ins. Co. v. SEC* (572 F.3d 923 [2010]) – in which the D.C.

Circuit held that language in the SEC's authorizing statute requires the commission to analyze the economic effects of its rules (Copeland 2013, 57-58). At the same time, the SEC's economic analysis was subject to critical assessments by the Government Accountability Office (GAO 2011, 2012), the SEC's inspector general (SEC OIG 2011, SEC OIG 2012), and independent economists (Fraas and Lutter 2011). Congressional leaders criticized the SEC's economic analysis and introduced legislation to impose new analytical requirements (Kraus and Raso 2013, 321-22).

In response, the SEC's general counsel and chief economist issued new guidance in March 2012 that specifies how economists are to be involved in the rulemaking process. The guidance states that economists should be involved at the earliest stage of the process, before a preferred alternative has been chosen. They should be "fully integrated members of the rulewriting team, and contribute to all elements of the rulewriting process." At the preproposal stage, rulewriting teams should prepare an explanation of the economic rationale for the regulation, a high-level discussion of the likely economic impacts of the alternatives under consideration, and a description of any additional data needs. The analysis accompanying proposed and final regulations should be prepared primarily by economists or in close consultation with economists, and the economics office must concur with the analysis (RSFI and OGC 2012, 15-17). SEC Chair Mary Schapiro (2012) emphasized that economists are expected to evaluate the effects of different regulatory alternatives with the goal of "influencing the choice, design, and development of policy options."

The guidance also establishes standards for substantive economic analysis of regulations. It identifies four components that should be included in the economic analysis of any rule: (1) an explanation of the need for the regulation, (2) a definition of the baseline the agency will use to

measure the rule's economic impacts, (3) discussion of alternatives, and (4) assessment of the benefits and costs of the proposed rule and alternatives (RSFI and OGC 2012, 3-15). These are of course key elements of regulatory impact analysis required from executive branch agencies, and the guidance explicitly cites Executive Order 12866, Executive Order 13563, and OMB Circular A-4 (Revesz 2017, 568-69; Kraus and Raso 2013, 327-30).

Several other changes enhanced the potential role of economic analysis. The positions of chief economist and director of RSFI (now DERA) were merged. This change means that the SEC's economists now report to the chief economist rather than an attorney who previously headed the division, and the chief economist became a direct report to the SEC chairman (Peirce 2013, 585). The division's budget more than doubled between 2011 and 2014, from \$20 million to \$42 million, and the number of Ph.D financial economists more than doubled (White 2015, 308-09). Because the chief economist must concur in the economic analysis before an item can go to the commission, rule-writers actively seek to get economists involved in rulemaking. Economists, rather than attorneys, are now the primary drafters of the economic analysis section of each order (Kraus 2015, 303).

Several initial indicators suggest that the guidance and associated changes led to modest improvements in economic analysis rather quickly. The SEC's Conflict Minerals rule was upheld in court in 2013; the court ruled that the SEC had fulfilled its statutory analysis requirements and its cost estimates were not arbitrary or capricious (*NAM v. SEC*, 956 F. Supp. 2d 59-61). The SEC's inspector general published a post-guidance assessment of SEC economic analysis in 2013. Although the report found fault with some of the economic analyses, it also found that economists had collaborated with the rule-writing teams for eight of the 12 rules examined, and it concluded that the SEC "followed the spirit and intent" of the 2012 guidance (SEC IG 2013).

An evaluation of one post-guidance rule, the Clearing Agency Standards rule, found that the economic analysis was slightly better than the analysis for pre-guidance rules (Ellig and Peirce 2014, 431-35).

More recent, systematic research finds that the quality of the SEC's economic analysis and its usefulness for decisions have both improved. Kraus (2015, 296-302) offers several examples of improved economic analysis that affected SEC decisions. His most extensive discussion involves the SEC's rule reforming regulation of money market funds. A major DERA study, several DERA memos, and a research paper by the SEC's chief economist played a critical role in the design of this regulation. He contends that this type of data-intensive research that is directly relevant to regulatory decisions was simply not done very often prior to the 2012 changes:

Hard-won economic facts like these were simply unavailable to the Commission before its staff of empirical economists was expanded and charged with ascertaining them. These examples show how the SEC, no longer dependent solely on studies proffered by interested parties, now deploys its econometric abilities to ascertain for itself the economic reality of financial markets before it seeks to regulate them. (Kraus 2015, 300)<sup>5</sup>

In a forthcoming study, I compare the quality of the SEC's economic analysis for seven major regulations adopted before and seven major regulations adopted after the 2012 guidance. The scoring rubric evaluates the quality of analysis based on the major elements discussed in the 2012 guidance: the underlying problem, baseline, alternatives, benefits, and costs. The post-guidance regulations score higher on every criterion, and the differences are statistically significant. Substantial improvement occurred both for qualitative and quantitative economic analysis. The post-guidance regulations also include more extensive explanations of how the economic analysis influenced regulatory decisions (Ellig forthcoming).

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<sup>5</sup> See also Kraus and Raso (2013, 326-27).

Two key lessons emerge from the SEC's experience. First, the "Siberia effect" is not merely hypothetical; centralizing economists in one organizational unit can make them easier to ignore. Second, this problem can be overcome through appropriate specification of decision-making authority, procedures, and processes. The SEC's economic analysis guidance specifies that economists should be included on rulemaking teams and establishes standards for economic analysis. The chief economist must concur with the economic analysis of a rule, which provides a quality check and also gives the analysis more clout.

### ***3. Federal Communications Commission***

The FCC formally stood up its new Office of Economics and Analytics (OEA) in December 2018. Prior to the establishment of OEA, the management of FCC economists was a paradigmatic example of divisional organization, but it failed to achieve some of the potential benefits of divisional organization.

Most of the FCC's economists were dispersed among the various operating bureaus that write regulations. A small number of economists were located in the Office of Strategic Plans and Policy (OSP), along with attorneys, the FCC's chief technologist, and other professionals. The chief economist, typically a visitor from academia for a year or two, was also housed in OSP, but the chief economist had no staff and no defined role in rulemaking (Hazlett 2011, 7, 16). In the words of one former chief economist, the FCC had "no location anywhere in the organizational structure devoted primarily to economic analysis" (Hazlett 2011, 7).

Based on my observations and conversations with others while I served as chief economist at the FCC from July 2017-July 2018, historically the most common role for economists in rulemaking was to furnish attorneys in the rulemaking bureaus with research or data to support decisions that had already been made. Attorneys in a bureau would be tasked

with writing an order justifying a regulation, and they would then (sometimes) turn to the economists to supply supporting information. I also heard about rules adopted in the past that had significant economic implications or could have been improved with economic analysis, but attorneys did not involve the economists because they did not realize economics was relevant to the rule – or because they believed that economic research would undermine the case for the rule. Clearly these practices are not conducive to objective economic analysis, nor do they give economists much input into decisions. A key potential advantage of divisional organization is close coordination of economists with bureau staff who write regulations; the economists know what projects are in the works and understand what questions need to be answered. This potential benefit was often not achieved at the FCC.

This basic pattern could vary a great deal depending on who was chairman of the FCC and how each bureau operated. For example, during my tenure at the FCC, colleagues told me that some chairmen liked to have bureau staff prepare “options memos” before a rule was developed, and economists were sometimes involved in writing these memos. The chairman’s staff made it clear that they welcomed my input on items that would come before the commission and specifically asked me to be involved on some items. I also witnessed instances where bureau attorneys modified draft orders in response to an economist’s comments. When Copeland interviewed FCC officials for the ACUS report on economic analysis at independent agencies, one claimed that the agency seeks to include benefit-cost analysis in every order. This change in practice occurred after President Obama issued Executive Order 13579, which requested that independent agencies conduct benefit-cost analysis when developing regulations. Chairman Genachowski directed FCC staff to follow the order (Copeland 2013, 103).



FCC Chairman Ajit Pai's speech announcing the OEA initiative cited additional, significant historical examples of the use of economic analysis at the FCC, including spectrum auctions for wireless licenses, incentive auctions that rewarded broadcasters for releasing some of their spectrum, adoption of standard antitrust principles to guide wireless and Internet policy, and reverse auctions for awarding universal service support (Pai 2017, 4).<sup>6</sup> However, Pai argued, economists were not consistently incorporated into policy work, the FCC had no guiding principles to shape economic analysis, economists were divided up in separate silos (bureaus), benefit-cost analysis was performed for rules only occasionally, and the FCC collected a wealth of data that it often used poorly (Pai 2017, 3-4). Hazlett (2011, 11-15) also suggests that the FCC's organizational structure for economists allowed it to reject Ronald Coase's (1959) seminal idea about auctioning spectrum for decades before finally adopting it.

Pai appointed a working group composed of senior FCC career staff to draft a plan for the proposed OEA. Based on extensive interviews with FCC personnel and experts outside the FCC, the working group concluded that economists and economic analysis were not systematically incorporated into policymaking, economists worked in silos with little coordination across bureaus, economists did not have a regular opportunity to offer a separate opinion on policy issues, and data were not systematically managed to inform policymaking (Leighton et al. 2018, 5). The interviews also confirmed most of the advantages and disadvantages of functional versus divisional organization identified in prior published literature reviewed above (Leighton et. al. 2018, 5-6).

The working group's recommendations covered three topics: organizational structure, decision-making authorities, and formal and informal practices. *Organizational structure*: The report recommended creation of a centralized organization that would house most of the FCC's

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<sup>6</sup> Faulhaber, Singer, and Urschel (2017) document many of these examples.

economists and the leadership responsible for data policy. *Decision-making authorities:* To avoid isolating the economists from the operating bureaus, the report recommended that OEA be given a formal role in all rulemakings, transactions, auctions, and enforcement matters. *Formal and informal practices:* Some of the recommended practices most relevant to economic analysis include:

- creation of a joint OEA-OGC guidance memo specifying how economic analysis would be incorporated into decision-making and how economists would be incorporated into project teams,
- development by OEA and the bureaus of informal procedures to coordinate economists' work with that of the bureaus and determine how economists will participate on teams that handle rulemakings, transactions, auctions, and enforcement matters, including assignment of at least one economist to each team working on a major rulemaking,
- development of an OEA guidance document describing how to apply regulatory impact analysis to communications policy issues,
- production by OEA of a separate, non-public memorandum on economic issues to accompany documents circulated to the commission,
- production by OEA of research, workshops, and other activities that address emerging economic issues or policy challenges,
- modification of SES performance criteria to include effective appreciation of economic concepts and incorporation of economic analysis,
- inclusion of feedback from non-OEA units in OEA staff performance reviews, and
- expansion of internal FCC training to include regulatory impact analysis and best practices in data management (Leighton et. al. 2018, 15-19).

The plan explicitly sought to capture the advantages of functional organization while adopting decision-making authorities and practices intended to mitigate the disadvantages:

While organizing economists and data professionals into OEA has many benefits, meaningful measures must be taken to avoid OEA being excluded—or “siloed”—from the Commission’s work. The theory underlying this plan for OEA is that a centralized organization of economists only will be successful if clear formal and informal steps are taken to counteract this possibility. For this reason, the plan relies on multiple tools designed to place OEA squarely at the heart of the Commission’s work. At the same time, these tools are designed to facilitate the natural development over time of collaborative norms within the agency. (Leighton et. al. 2018, 20)

In January 2018, the FCC approved an order that largely adopted the working group’s plan. The order moved most of the FCC’s economists into OEA, along with some attorneys, data professionals, and other personnel. Some of OEA’s duties most directly relevant to regulation, codified in the CFR, include conducting economic analysis of significant communications policy issues; developing procedures and plans for effective benefit-cost analysis; advising other bureaus and offices on analysis of benefits, costs, and other regulatory impacts of FCC policies, rules, and proposals; reviewing and commenting on all significant economic and data analysis issues relevant to proposed FCC actions; and reviewing each rulemaking before it is released to the public. The new rules adopted also commit OEA to prepare “a rigorous, economically-grounded cost-benefit analysis for every rulemaking deemed to have an annual effect on the economy of \$100 million or more” (FCC 2018a, 4-6).

At the time OEA management was interviewed for this report, the office had formally been in existence for only five months. That time span included the Christmas holidays and federal employee furloughs. OEA spent a great deal of time playing “catch-up,” reviewing a large backlog of items that were already in process. Economists had just begun to get involved in some rulemaking projects initiated after OEA was created. Because it usually takes 12 months to

write a commission order, there are few examples of rulemakings in which economists had been involved from beginning to end. Between the creation of OEA and when the interview occurred, the FCC had not initiated a rulemaking project with an economic impact greater than or equal to \$100 million, which would trigger the commission's rule requiring a "rigorous, economically-grounded cost-benefit analysis." It is therefore too soon to evaluate a sample of major commission orders to determine whether the new structure has improved the quality or use of economic analysis across the board.

Interviews conducted for this study, however, suggest that OEA has made progress in achieving its objectives. Creation of OEA has empowered economists to offer independent advice. One told me, "My job used to be to support the policy decisions made in the chairman's office. Now I'm much freer to speak my own mind."

OEA focused much of its early effort on ensuring that economists reviewed and commented on every commission-level rulemaking. Indeed, the chairman's office declared that OEA should review all items that come before the commission, not just rulemakings. When an item is circulated to the commission, the cover memo indicates whether OEA believes there are any significant economic issues and, if so, whether they have been satisfactorily resolved in the draft item presented to the commission. OEA thus has the option of disagreeing with the bureau responsible for the item and making its own recommendations to the commission. I was told that as a result of OEA's formal authority in the review process, it is now harder for bureau staff to ignore the economists.

Interviews confirmed that economists are seeing items that go before the commission sooner than they previously did. In some cases bureaus are involving economists when they are

still developing and considering alternative options. Interview subjects said a lot of incremental changes had been made in items going to the commission as a result of the economists' input.

The interviews revealed two perceived difficulties with the new structure. First, non-economists are sometimes surprised to find out that the rules they are working on have economic impacts, and they view the economists' involvement as simply another layer of review that delays rules. Second, procedures to coordinate the economists' involvement in rulemaking and other items were not established until after OEA was officially stood up in December 2018. Thus, there was initially a degree of confusion as procedures were worked out.<sup>7</sup> Both of these problems appear to be transitional issues that have been or will be resolved as OEA and the rulemaking bureaus gain more experience operating under the new structure.

The FCC's experience offers several lessons. First, placing economists in the program offices that write regulations does not guarantee that they will be included on teams that develop regulations, or even consulted. Second, a potential disadvantage of functional organization – diminished consideration of economics in decision-making – can be overcome with appropriate specifications of decision authorities, practices, and processes. Third, economists can make a noticeable contribution to development of regulations simply by being involved in the discussion and design of regulations, before any economic analysis in a commission decision is written.

### **C. Econometric study**

A recent econometric working paper from the FCC assesses whether there is a correlation between executive branch regulatory agencies' organizational structure for economists and the quality of regulatory impact analysis (Ellig and Konieczny 2019). Catherine Konieczny and I

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<sup>7</sup> Although the commission voted to create OEA in January 2018, numerous changes in internal procedures could not be implemented until the FCC received approval for the reorganization from OMB and the House and Senate Appropriations Committees and reached an agreement with the National Treasury Employees Union. These steps were completed in late October 2018. (FCC 2018b)

undertook this study while working at the FCC in 2018.<sup>8</sup> The study employs two samples of regulations: economically significant regulations finalized between October 2000 and September 2009 for which agencies provided monetized estimates of benefits and costs, and economically significant, prescriptive proposed regulations that cleared OIRA review between 2008 and 2013. The quality of economic analysis for each set of regulations was previously evaluated by two different sets of researchers outside the FCC using somewhat different scoring rubrics based on Executive Order 12866 and OMB Circular A-4 (Shapiro and Morrall 2012, Ellig 2016). Thus, each regulation received a score indicating how thoroughly the economic analysis satisfied the requirements of the executive order and OMB guidance.

The FCC study found similar econometric results using both samples of regulations. After controlling for other factors that could affect the quality of analysis (such as the number of economists in the department, the regulatory workload, statutory and judicial deadlines, the size of the regulation's economic impact, and a number of political variables), the FCC study found that functional organization of economists is positively correlated with scores for the quality of regulatory impact analysis. In some econometric specifications, a variable indicating whether the department had a centralized economics review office is also positively correlated with scores for the quality of analysis. When the functional organization and economist review variables were combined, so that there was just one variable indicating if there was any kind of economics office independent of the program offices, that variable was positive and statistically significant.<sup>9</sup>

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<sup>8</sup> The author served as chief economist of the FCC from July 2017 thru July 2018. Ms. Konieczny interned in the FCC's Office of Strategic Plans and Policy during the spring semester of 2018.

<sup>9</sup> A variable's statistical significance indicates the likelihood that its observed correlation with another variable occurred purely by chance. In economics, the conventional cutoff point for calling a variable "statistically significant" is the 95 percent confidence level – that is, there is only a 5 percent chance that the correlation is a result of random chance.

For one of the samples of regulations, score data assessing the extent to which the agency claimed in the NPRM to use the results of the regulatory impact analysis in decisions were also available. These scores were not correlated with functional organization, which suggests that agencies are no more likely to ignore their economists when the economists are placed in a separate organization.

The FCC study focuses on two observable factors: the quality of the regulatory impact analysis, and the extent to which the agency claimed in the NPRM to use the analysis. These variables may not capture the quality or consideration of economic analysis or advice supplied by agency economists while the regulation is being developed. They might be reasonable proxies, but it is unknown whether the observable quality and the agency's claimed consideration of regulatory impact analysis are correlated with the unobservable quality and influence of the advice economists offer during internal deliberations.<sup>10</sup> Therefore, the study's results should be interpreted in light of the interview and case study research that provides insight into the quality and consideration of undocumented economic analysis and advice.

### **III. Interview Research Conducted for this Report**

To supplement and update findings from existing literature, the author interviewed 15 senior economists and 10 senior attorneys or other non-economist professionals who work on regulations in six Cabinet agencies and two independent agencies. (In some agencies, the economists' counterparts who design regulations are policy analysts or engineers rather than attorneys.) Most of the interview subjects were career civil servants in managerial or advisory positions. Most had experience at some point in their careers actually doing the type of economic analysis considered in this report.

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<sup>10</sup> A survey of economists in regulatory agencies indicates that many believe they have at least a moderate amount of influence (Williams 2008, 4-5), which seems to contradict those who conclude that regulatory impact analysis has had only a marginal effect on regulations (Hahn and Tetlock 2008).

## **A. Agencies covered**

The mix of agencies was chosen to include examples of both functional and divisional organization of economists. The two independent agencies – the FCC and SEC – were also selected because each has undertaken significant efforts in recent years to improve the quality and consideration of economic analysis in rulemakings. The FCC’s effort included a shift from divisional to functional organization of economists, but the SEC’s effort involved no such change. The six Cabinet agencies account for approximately 90 percent of major regulations reviewed by OIRA between October 1, 2006 and September 30, 2016 for which benefit and cost estimates are available (OMB 2017, 10). During that same time period, the SEC promulgated 70 of the 156 major rules issued by independent agencies (45 percent); the FCC issued nine major rules (6 percent) (OMB 2017, 90-91).

As Table 1 shows, most of the Cabinet agencies studied use a hybrid form of organization in which a senior economist or economics office outside the program office reviews regulations and regulatory impact analysis. At the FCC and the SEC, regulations and accompanying economic analysis are reviewed by the upper management of the economics office, where the economists who performed the analysis are also located.

Interviews were conducted from April through July 2019. Each interview lasted 30-60 minutes. All participants were promised anonymity, a common practice in this kind of survey research (Shapiro 2017, 690).



**Table 1: Agencies selected for interviews**

	<b>Functional or divisional organization of economists</b>	<b>Centralized economist review outside of program office</b>
Department of Transportation	Functional organization (National Highway Traffic Safety Administration)  Divisional organization (all other agencies)	Director of Regulatory Analysis in Office of the General Counsel, Office of the Secretary (initiated 2015)
Environmental Protection Agency	Divisional organization	National Center for Environmental Economics in the Office of Policy, Office of the Administrator
Department of Health and Human Services	Functional organization (Food and Drug Administration)  Divisional organization (all other agencies)	Office of the Assistant Secretary for Planning and Evaluation
Department of Energy	Most work performed by contractors with which the program office has a longstanding relationship	No
Department of Homeland Security	Divisional organization	Chief Economist in the Office of the General Counsel, Office of the Secretary
Department of Agriculture	Divisional organization	Chief Economist in the Office of the Secretary
Federal Communications Commission	Functional organization (initiated 2018)	Chief of the Office of Economics and Analytics
Securities and Exchange Commission	Functional organization	Chief Economist, Division of Economic and Risk Analysis

**B. Interview questions**

All subjects interviewed were asked the following four questions:

1. How does your agency’s form of organization for economists affect the quality and objectivity of economic regulatory analysis?
2. How does your agency’s form of organization for economists affect the consideration of economic analysis by decision-makers?

3. How does your agency's form of organization for economists affect the coordination of work between the personnel who write rules and the economists?
4. How does economic regulatory analysis affect litigation risk at your agency?

The first two questions are intended to assess whether organizational structure affects the quality or use of economic analysis. In the second question, what constitutes "consideration" of economic analysis was intentionally left undefined, so that respondents could discuss any way in which any part of the economic analysis was used instead of focusing solely on decision rules like "maximize net benefits" or "regulate only if monetized benefits exceed monetized costs." The third question was intended to give interview subjects an opportunity to discuss effects of organizational structure on the work process, including unintended consequences. In response, many individuals also offered information about practices and procedures that affect the quality and consideration of economic analysis. The final question addresses a potential disadvantage of giving economists more independence: more independent economic analysis might undermine the case for the regulation and make it more vulnerable in court.

### **C. Interview responses**

Surprisingly, there were few discernible differences in the pattern of responses from economists and non-economists. This may have occurred because the individuals interviewed were all in fairly senior positions; the economists had experience working with non-economists, and vice versa.

*1. How does your agency's form of organization for economists affect the quality and objectivity of economic regulatory analysis?*

a. Functional organization

In agencies where economists are organized functionally, respondents cited independence, collaboration with other economists, and the opportunity to develop better analytical methodologies as advantages of functional organization. Functional organization gives economists greater freedom to be objective by making the role and authority of economists clearer. One individual mentioned that he sometimes felt pressure from the program office to alter the analysis, but since he reported to an economist who had previously done similar analysis, his boss understood why he could not always accommodate the program office. Another said that the amount of pressure from the program office to steer the analysis depends on how much popular interest there is in the regulation and the size of its impact. A note of caution about functional organization came from a respondent who had previously worked in a very small economics office organized functionally: if the economists are working in different practice areas, they may be isolated because they are not really collaborating with other economists but are not part of the program office either.

b. Divisional organization

Respondents in agencies where economists are organized divisionally said that placing economists in the program office can improve the quality of the analysis because the economists better understand the details of the regulatory problem and thus can supply analysis that is more accurate and relevant. Time savings in the regulatory development process were also mentioned as a benefit.

The majority of individuals in agencies with divisional organizations who offered an opinion said they experienced or knew of instances where economists were pressured or told to produce an analysis with the results the decision-makers wanted. One said the usual process in his agency is for the economists to “work backward” to produce an analysis that supports the regulation. An economist recounted conflicts with attorneys who wanted to write or rewrite the economic analysis so it would support the positions they wanted to take. Several individuals said that pressure to change an analysis is easier to resist if the economists in the program office are managed by an economist (or other analyst) and the head of the analytical shop is at a senior GS level and can appeal directly to decision-makers. The OIRA review process was also cited as a factor that helps economists resist pressures to change their analysis to support preconceived conclusions. Finally, a few individuals in agencies with divisional organization said they have a reasonable degree of autonomy and have not been pressured to change their analysis to support a decision.

c. Centralized economic review

In agencies with a centralized economic review office independent of the program office, respondents cited numerous advantages of this arrangement. These offices received credit for spotting problems and recommending improvements in economic analysis accompanying regulations. Some of them also conduct their own analysis and assist a component agency if there are problems in the original analysis, the regulation cuts across several entities in the department, or the agency writing the regulation lacks its own economics staff. Numerous respondents emphasized that the centralized review office affects the quality of economic analysis by developing better methods for regulatory impact analysis, ensuring consistent analytical methodologies across the department, and engaging in longer-term research and

development to inform future rulemakings. In some cases, the central office also provides training in regulatory impact analysis. Some economists said the central office strengthens their hand in defending objective analysis when they feel pressure to support preconceived conclusions. In other cases, when the program office economists tend to “go along to get along” with the program office, the central review office plays more of a quality control role.

Respondents in multiple agencies that locate economists in the program offices but also have a centralized economics review office said the central office is valuable precisely because it is not in the program office’s chain of command.

*2. How does your agency’s form of organization for economists affect the consideration of economic analysis by decision-makers?*

a. Functional organization

Several respondents in agencies with functional organization said that form of organization induces decision-makers to consider economic analysis because they are freer to offer an alternative point of view from the policy office. A functional organization is also likely to have a more senior head who has more clout in internal discussions. One respondent tied these two points together, stating that to contribute to decisions, an individual economist must be willing to speak up and must also enlist senior leadership in the economics office to back up his or her position. Another fleshed out the role of leadership by stating that economists cannot be ignored in his agency because the head of the economics office has signoff rights on regulations and can make independent recommendations to decision-makers. This individual had seen numerous changes made in regulations as a result of points the economists raised.

The formal signoff rights held by the head of the economics office vary from agency to agency. In some cases, the head of the economics office only signs off on the economic analysis.

In other cases, the head has greater flexibility to take issue with the substance of the regulation in light of the economic analysis. Another respondent went so far as to suggest that the main factor determining whether decision-makers consider economic analysis is whether the economists have an independent line of communication to decision-makers and whether the decision-makers are willing to listen, and this is much more important than formal organizational structure or signoff rights.

When respondents in functional organizations were asked about the ways economic analysis is considered, three types of responses predominated. One response was that the decision to regulate is usually predetermined, but decisions about the design of the regulation, its scope, and its timing are affected by the economic analysis. Another response was that the economic analysis usually focuses just on assessing the effects of the chosen approach, but sometimes major changes get made to the regulation when the economic analysis turns up unexpected new information about the likely effects, such as large unanticipated benefits or costs. A third response emphasized that much of economists' contribution occurs in meetings when regulatory alternatives are being discussed, before any economic analysis document is written, and their agencies have formal policies stating that economists should be included at this stage.

#### b. Divisional organization

Where economists are organized divisionally, I heard a much greater diversity of ways the analysis is considered. The two extreme responses were that the numbers in the regulatory impact analysis usually determine what regulation gets adopted, or that the economic analysis rarely has any influence on regulatory decisions. The most common response was that the analysis is usually done to assess the effects of decisions that have already been made, but

program offices and higher-level decision-makers will reconsider if the analysis turns up significant problems with the chosen approach. Others mentioned that the Regulatory Flexibility Act analysis sometimes alters decisions.

Several individuals in divisional organizations emphasized that much of the economists' contribution to decision-making occurs because they participate in meetings where the regulation is designed – not because of the written regulatory impact analysis. In their view, economists add value because non-economists tend to start with a favored approach rather than starting with a problem that might have multiple solutions. Economists are likely to ask if there is proof a regulatory approach will produce benefits, and whether there are any alternatives that would work better or at lower cost. One observed that economists in the program office are more likely to be included at early stages of rule development if they are managed by a senior economist at the GS-15 level. Others noted that placing economists in the program office does not guarantee that they will be invited to participate in rule development; they can still be marginalized or ignored.

#### c. Centralized economic review

Where a centralized economic review function exists outside of the program office, respondents thought decision-makers were more likely to consider the economic analysis. The chief economist or other head of this office has the ear of high-level decision-makers, such as the department's general counsel, the head of the departmental policy office, or the office of the departmental secretary. In most cases, it appears that the economists in the program offices have a sufficiently good working relationship with the central review offices that the review offices can provide "backup" to help ensure that the economic analysis is considered.

In some departments, high-level economists habitually work with other policy officials as part of the regulatory review process. “Signoff” rights possessed by the heads of these central review offices vary widely. Some have no formal signoff authority and rely solely on persuasion. Others have signoff authority only on the economic analysis, and still others can make their own written recommendations to decision-makers.

No respondents explicitly mentioned any disadvantages of centralized economic review relative to the consideration of economic analysis. But obviously the reviewers usually see regulations and analysis that are already well in process, and so they are unlikely to be involved in discussions that shape regulations at the early stage. All of the agencies with centralized review also have economists who can be involved in development of regulations from the beginning – either because they are in the program office or because lower-level economists in the central office are available to participate in development of regulations at an early stage. Centralized economist review of economic analysis produced by attorneys is also possible but was found to work poorly; this is the *de facto* model that the SEC abandoned in 2012.

*3. How does your agency’s form of organization for economists affect the coordination of work between the personnel who write rules and the economists?*

a. Functional organization

Respondents in agencies with functional organization of economists offered three main types of responses to this question: (1) since economists and rule-writers are in separate parts of the agency, communication and coordination of economic analysis with rule-writing varies by rule and is almost entirely driven by personal relationships, (2) the agency achieves coordination by including economists on multidisciplinary committees that design each regulation (although one respondent noted that in his agency this does not guarantee that the economists will be



listened to), or (3) economists get involved at an early stage when options are being considered because the agency's leadership has made it clear that they should be involved and the head of the economics office can get the attention of the agency's leadership.

b. Divisional organization

Respondents in divisional organizations said that coordination is at least potentially easier because the economists are closer to the regulation-writers. Several mentioned that economists are regularly included on multidisciplinary teams that develop regulations. Others, however, said that economists' main role in their agency was to assess the impacts of regulatory decisions after they were made, rather than participating in the decision process.

c. Centralized economic review

Respondents mentioned two ways that the centralized economic review office affects the coordination of economic analysis with regulation development. First, as discussed under #2 above, the knowledge that the central office leadership has access to top-level decision-makers motivates rule-writers to consider the economists' views more seriously. Second, central review offices play an indirect role in coordination through their role in writing or shaping policies and procedures for rule development.<sup>11</sup>

4. *How does economic regulatory analysis affect litigation risk at your agency?*

Responses to this question varied little based on the organizational structure of economists in the agency. Respondents discussed the risk that an agency will be sued, the risk that an agency will lose if sued, or both.

One common response was that the economic analysis has little effect on the likelihood that the agency will be sued. Rather, the risk of litigation depends largely on how controversial

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<sup>11</sup> Some examples are listed in Section III.C.5.a below.

the regulation is and who bears the costs. One respondent said litigation at his agency focuses much more on legal process issues than on the economic analysis.

The most common response was that low-quality economic analysis increases the risk that the agency will lose a case, but high-quality economic analysis reduces this risk. A good regulatory impact analysis helps demonstrate that a regulation is not arbitrary or capricious, and a good analysis published at the proposed rule stage should create an opportunity for better public comments. Several respondents emphasized that high-quality analysis is especially important for regulations issued under a statute that requires some kind of economic analysis. Others said the economic analysis had less effect on litigation in their agencies because the authorizing statutes clearly prioritize reduction in environmental, health, or safety risks over costs. In short, the economic analysis may be more important for courts when the statute places greater emphasis on economic efficiency.<sup>12</sup>

Some respondents suggested that even if economic analysis was unrelated to litigation risk in the past, it may affect the risk of litigation or the risk of losing lawsuits in the future, for two reasons. First, the *Michigan v. EPA* (135 S. Ct. 2699 [2015]) decision makes it more likely that courts will expect agencies to produce adequate analysis of costs when the statute does not prohibit consideration of costs. Second, an increasing amount of litigation in the future may focus on substantive economic analysis due to the “diminishing marginal returns” to health and safety regulation. That is, many of the steps that achieve significant benefits at low cost have already been taken, and now a more careful analytical approach is necessary to identify how much more regulation is worthwhile and how it should be designed.

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<sup>12</sup> This observation is consistent with research that finds federal appeals courts are more likely to examine an agency’s economic analysis carefully when the statutory language is more specific about the economic factors the agency is supposed to consider. See Bull and Ellig (2018), 888-914.

No one suggested that an agency could reduce litigation risk by declining to do economic analysis that is relevant to the decisions the agency must make. However, some respondents said they try to reduce litigation risk by ensuring that the economic analysis does not wander into extraneous issues or excessive detail.

##### *5. Other factors affecting the quality or consideration of economic analysis*

In addition to addressing the four questions above, respondents suggested a number of other factors that can affect the quality or consideration of economic analysis of regulations. Some are commonsense and straightforward, such as omnipresent political pressures; the existence of statutory mandates and deadlines; the number of rules that must be issued in a particular time frame; the availability of funding and personnel for research and development that can inform future rulemakings; the number, quality and seniority of the agency's economists; and the persuasiveness and effectiveness of individual economists in presenting their point of view.

Several respondents also offered observations on their agency's use of contractors. One said the work of contractors frequently was well-coordinated with regulation-writing. Others suggested that coordination with external contractors was more difficult, either because the contractors did not understand the regulations as well as in-house personnel would, or because the time span of the rulemaking sometimes exceeded the length of the contract.

Two factors, however, were mentioned repeatedly by respondents working under all types of organizational structures. They are standard procedures for developing rules and guidance for producing economic analysis.

a. Standard procedures for developing rules

Numerous agencies have published, standardized processes for developing rules that delineate the role that economists and economic analysis are supposed to play:

- USDA's Regulation 1512 empowers the Office of the Chief Economist to review benefit-cost assessments for economically significant, major, and significant rules to ensure that the analytical techniques are adequate, the analysis is accurate, all departmental analytical requirements have been met, reasonable alternatives have been considered, and required risk assessments have been conducted (USDA 1997, 10).
- DOT's Order 2100.6 specifies that before a component of DOT can initiate a rulemaking, it must prepare a rulemaking initiation request that includes a description of the market failure or other need for the regulation and a discussion of potential economic impacts.
- The SEC's economic analysis guidance specifies that economists should be involved at the earliest stage of the rulewriting process, before a favored alternative has been chosen, and that economic analysis should be written by economists or in close consultation with them (RSFI and OGC 2012, 15-17).
- The portion of the CFR that establishes the FCC's OEA gives the office authority to advise on the economic implications of all items that go before the commission, review each rulemaking and other items that go before the commission, and prepare a cost-benefit analysis of any rulemaking with an annual economic impact of \$100 or more (FCC 2018a, 4-5).

- DOE’s “process rule” in the CFR outlines the process it will follow when it develops energy efficiency standards. The department commits to publishing an advance notice of proposed rulemaking that identifies potential standards, discloses preliminary analysis, and solicits stakeholder feedback. The rule also explains how analysis will be performed to determine what standard meets the statutory requirement of achieving the greatest energy savings that are economically justified, and it explains how the results of the analysis will be used to make decisions (10 CFR Part 430, Appendix A). In short, the rule makes a highly visible commitment to using analysis to make decisions.
- The EPA’s Action Development Process specifies that for the most important actions (“Tier 1” and “Tier 2”), the workgroup developing the action is to seek guidance from senior management on significant cost issues, other significant economic impacts, and opportunities to consider alternatives to traditional command-and-control regulation (EPA 2018, Stage 2, 5) Within a few weeks, the workgroup then must prepare a draft analytic blueprint that outlines the data collection and analyses, including economic analyses, that will be undertaken for an action. “The purpose of the Blueprint is to document for the members of the workgroup and management a clear and common understanding of analytic activities early in the action development process. It is also a way for participating offices to help ensure that analysis will appropriately address key issues, including compliance with the EPA’s economic guidance, OMB’s Circular A-4, peer review requirements and other important considerations ...” (EPA 2018, Stage 2, 7)

b. Guidance for producing economic analysis

- An appendix to USDA Regulation 1512 explains how to integrate risk assessments and benefit-cost analysis, both of which are required by law for certain USDA regulations (USDA 1997, Appendix C).
- The SEC's economic analysis guidance lists the major topics any economic analysis of a rule must cover and offers guidance on how to conduct the analysis (RSFI and OGC 2012, 3-15).
- HHS (2016) has a manual that explains how to conduct regulatory impact analysis, with explanations of how to perform analysis that is especially relevant to HHS regulations, such as valuing reductions in mortality and morbidity risks, estimating ranges of the value of a statistical life, cataloging resource costs of regulations (opportunity costs), and assessing changes in producer and consumer welfare when the regulation alters the quantity of the good or service produced.
- EPA (2010) produces and periodically updates a comprehensive set of guidelines for conducting economic analysis of environmental regulation. The guidelines make extensive use of examples to show how to handle common analytical challenges.

#### **IV. Conclusions and Implications**

Economic analysis requirements in executive orders and statutes have proven to be quite durable, surviving across multiple administrations and Congresses. If anything, courts are likely to pay more attention to economic analysis in the future. Interviews with regulatory agency officials described above reveal a widespread perception that high-quality economic analysis increases the odds that a challenged regulation will be upheld in court, but low-quality economic analysis increases the risk that a regulation will be remanded or struck down.

This report has discussed how organizational structure can affect the adequacy and influence of economic analysis in federal regulatory agencies. The findings of prior empirical research and new interviews conducted for this report are broadly consistent with what organization theory teaches about the pros and cons of different ways of organizing economists in regulatory agencies.

**A. Decision-making authorities, procedures, and practices should complement organizational form**

Organizational structure is not a silver bullet. Theory and evidence demonstrate that functional and divisional organizations need to be supplemented with an appropriate set of decision-making authorities, practices, and procedures. These additional elements should be designed to support the strengths and remedy the weaknesses of the chosen organizational structure.

Functional and hybrid organization of economists have the potential to promote more objective, consistent, and higher-quality analysis. Economists in a functional organization, however, may be less well-informed about critical details of regulatory problems and could be easier for the program office to ignore since they are in a separate organization. Practices that mitigate these problems in a functional organization include (1) placing economists on multidisciplinary regulatory teams from the outset, (2) ensuring that the economists can make independent recommendations to high-level decision-makers, and (3) giving the head of the economics office signoff authority on regulatory actions. The strongest version of (2) occurs at the FTC, where economists write separate recommendation memos to the commission on every antitrust matter and some consumer protection matters. The strongest version of (3) gives the

head of the economics office authority to consider the substance of the regulation as well as the economic analysis.

Divisional organization of economists can promote analysis that is more relevant to specific, on-the-ground regulatory decisions and can give economists an early voice in the development of regulations. Economists in a divisional organization, however, may face incentives to produce less objective analysis that simply justifies the regulatory approach the program office wants to take, since they work for the program office. Also, they may have less opportunity to sharpen their skills through collaboration with other economists across the agency. Practices that mitigate these problems in a divisional organization include (1) ensuring that economists in the program office report to and are managed by other economists in the program office who are senior-level employees, (2) empowering a central economics review office at the departmental level to serve as a quality check on economic analyses from the program offices, providing leadership in standardizing and disseminating high-quality analytical methods, conducting longer term research and development to inform future regulatory proceedings, and ensuring that the economists' perspective is heard by high-level decision-makers, and (3) giving the central economics office signoff authority on regulatory actions.

### **B. Some procedures and practices are productive regardless of organizational form**

The research discussed in this report also unearthed several insights that seem to be helpful regardless of organizational structure.

1. The written economic analysis presented with a proposed or final regulation is often not the primary economic research considered when regulators make decisions. In both functional and divisional organizations, this analysis is often written *after* many regulatory decisions are already made. For this reason, all types of organizations should ensure that



economists can be involved in significant regulatory developments while alternatives are still being developed and considered.

Putting economists in program offices or on cross-functional regulatory development teams is a clear way of promoting such involvement, but the research above demonstrates that their contributions may still be ignored regardless of organizational structure. One solution suggested in both the case studies and the interviews is a rule, guidance, or other public document that clarifies the role that economists and analysis should play in regulatory development, such as USDA's Rule 1512, the SEC's economic analysis guidance, the FCC's rule creating OEA, or DOE's process rule for energy efficiency regulations. Another way of formalizing economists' involvement at an early stage, at least for major regulations, would be for agencies to commit to issuing an advance notice of proposed rulemaking that includes a preliminary economic analysis of alternatives, as Carrington and Shapiro (2016) suggest. DOE's process rule and DOT's Order 2100.6 both commit to issuing advance notices for certain types of regulations. When an advance notice is not used, some degree of earlier economist involvement could be prompted by an internal procedure requiring that, six months prior to final agency review of proposed or final regulations, high-level decision-makers must be provided with a preliminary analysis that lists options considered and rough estimates of their benefits and costs, as suggested by Harrington, Heinzerling, and Morgenstern (2009, 225).

2. Every agency needs a "locus of expertise" on the kinds of economic regulatory analysis that are relevant to that agency. The functional economics office or the central economics review office often has primary responsibility for improving and articulating relevant analytical methods and setting standards for consistency in economic analysis. In many cases these offices also offer training, workshops, or assistance in economic regulatory analysis to the

program offices. The guidance publications from the USDA, SEC, HHS, and EPA cited in Section 3.C.5.b above are examples. Interviews identified this leadership function as a significant way the central office affects the quality of economic analysis, in addition to review of individual economic analyses.

### **C. Choice of organizational form affects outcomes**

Agencies seeking to improve the robustness and integrity of economic analysis can also consider altering the way they organize and manage economists. The evidence discussed in this report suggests that functional organization of economists tends to produce more thorough and objective economic analysis that can inform decisions rather than simply justifying decisions that were already made. It also suggests that the potential disadvantages of functional organization can be mitigated with appropriate decision rights, practices and procedures to ensure that economic analysis is considered in decisions.

Of course, a change from divisional to functional organization, or vice versa, involves significant time and cost, so such a change should not be considered lightly. It is noteworthy that the two agencies that moved their economists to a functional organization – the FTC (in 1961) and the FCC (in 2018) – did so because divisional organization failed to deliver on one of its most significant potential benefits. Economists were often ignored, even though they were located in the same bureaus as the attorneys. The SEC, on the other hand, chose to retain a functional organization and make it function better by amending “the micro-constitution of the SEC staff, elevating the economists to the status of a co-equal branch of the agency” (Kraus 2015, 302). DOT did not reorganize the economists in its operating units but added a director of economic analysis in its Office of General Counsel in 2015. In short, wholesale reorganization may be the most attractive solution only when an agency’s leadership determines that the agency

is not consistently producing and considering regulatory impact information, and fundamental structural change is necessary.

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