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Identifying the analytical implications of alternative regulatory philosophies

Abstract: The core analytical elements of Executive Order 12291 are widely seen as having been embraced by both Democratic and Republican administrations. Some critics argue, however, that this embrace is superficial and serves more as a cover for political decisions. To address this question, this paper examines the analytical priorities presented in the annual *Report to Congress on the Benefits and Costs of Federal Regulations* over the period from 1997 to 2012. While there is general agreement across administrations on such broad issues as the importance of benefit-cost analysis in providing a shared framework and discipline to the analytic process, we identify important differences in five areas: monetization of benefits, scope of costs considered, behavioral economics, intergenerational benefits, and the general equilibrium impacts of regulation. All are active and exciting issues in the current scholarly work on regulation. These cross-administration differences appear to reflect a relatively modest shifting across political parties on issues where reasonable people might disagree, rather than major ideological swings in approach.

Keywords: Benefit-cost analysis; economic growth; cost-effectiveness analysis; discount rates; regulation.

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1 Introduction

When President Reagan called for an expansion of the economic analysis of federal regulations in Executive Order (E.O.) 12291 – issued a mere 28 days after inauguration – it was widely seen as an overtly political order that would not

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stand the test of time. Three decades later, the mainstream view is that the core benefit-cost elements of E.O. 12291 have been embraced by both Democratic and Republican administrations. But have the key elements *really* been embraced by both political parties? Wagner (2009) claims many view the embrace as superficial at best; Shapiro and Morrall (2012, p. 189) suggest that “rules that were issued away from the glare of the political spotlight had higher net benefits than politically salient rules.” In contrast, West (2005, p. 89) notes that the Office of Information and Regulatory Affairs’ (OIRA) essential mission and culture has remained relatively stable across administrations. Further, former senior officials of OIRA, including former OIRA Administrator Dudley (2011, p. 116), see a relatively strong embrace, consistently enforced across administrations by the OIRA civil servants.¹

Our sense is that the truth lies closer to the latter view. At the same time, despite the broad agreement on issues such as the need to improve the quality of regulatory impact analyses (RIAs), the importance of independent peer review, and related concerns, it should not be surprising to find differences in emphasis on analytical issues associated with the administration or political party in power. Yet discerning these differences in a consistent and coherent manner is no simple task.

Since 1997, the presidentially nominated, Senate-confirmed OIRA administrator – typically an established academic or attorney from outside of government with extensive regulatory experience – has been mandated to issue an annual *Report to Congress on the Costs and Benefits* [later *Benefits and Costs of Federal Regulations* (hereinafter, *Report*) and to make recommendations for reform; provide guidelines for agencies to standardize benefit and cost estimation; and assess the impact of federal regulations on state and local governments, small businesses, wages, and economic growth.²

These *Reports* provide a window on the regulatory policy and analytic priorities of each administration. The *Reports* differ from individual RIAs, highly

¹ Dudley (2011, p. 116) also notes the continuation of this mission in the current administration and quotes President Obama’s observation that OIRA provides “a dispassionate and analytical ‘second opinion’ on agency actions.”

² The OIRA *Reports to Congress* are authorized by Section 624 of the Treasury and General Government Appropriations Act of 2001, Pub. L. No. 106-544, 31 U.S.C. § 1105 note. Pre-2001 *Reports* were authorized by Section 645 of the Treasury, Postal Services and General Government Appropriations Act, 1997, and Section 625 of the Treasury and General Government Appropriations Act, 1998. The authorizing language requires a statement of the “costs and benefits of Federal regulations.” Up through 2006. The title for the *Reports* placed “costs” ahead of “benefits.” Beginning in 2007, the order was reversed and the title became *Report to Congress on the Benefits and Costs of Federal Regulations*.

technical documents that are the product of career staff in the individual regulatory agencies. In contrast to individual RIAs, which themselves often involve rule-specific assumptions about baselines, selection of dose-response functions from the literature, or other potentially contentious issues, each *Report* is a single, statutorily mandated document designed to lay out the executive branch views on generic regulatory issues that transcend the analysis of individual rules. These *Reports* serve as an important vehicle for presenting and reporting on administration regulatory policy initiatives, such as the recent Obama administration initiative to promote retrospective analysis of rules (OIRA, 2009, pp. 36–45; OIRA, 2011, pp. 59–64) or the Bush administration effort to identify and implement regulatory reform recommendations through a public nomination process. (OIRA, 2004, pp. 59–100; OMB, 2002, p. 15014). They can also serve as a source for outside evaluation of the federal regulatory process (see, e.g. Copeland, 2013, pp. 60–71).

Following the statutory dictates, the *Reports* present the available estimates of the benefits and costs for each of the major regulations from the preceding year and cumulative estimates of the benefits and costs of rules issued over the previous decade.³ As we discuss below, most of the historical change in the *Reports* is associated with the recommendations for regulatory reform and the assessments of the effects of regulation on the economy, including small businesses.

This paper examines the analytical priorities of all 15 *Reports* issued over the period 1997–2012 with the aim of identifying similarities and revealing consistent differences in the approaches to regulatory policy across the Clinton, Bush, and Obama administrations.

At the outset, we highlight one of the key themes of virtually all the *Reports*, namely the importance of improving the quality of RIAs.⁴ The 2003 *Report* recommends (a) placing greater emphasis on cost-effectiveness analysis; (b) improving the quality of uncertainty analysis, including a requirement for a quantitative uncertainty analysis for rules with an annual effect >\$1 billion; and (c) seeking

³ The early Clinton *Reports* present aggregate estimates of the benefits and costs of regulation developed in large measure from the academic literature; later *Reports* use a “bottom-up” approach of aggregating the benefits and costs of “major” or “economically significant” rules over the previous 10 years. Many federal rules are not major and are not included in this “bottom-up” approach.

⁴ The first *Report* (1997) provides some general principles for regulatory analysis summarizing a “Best Practices” document that was issued in January 1996; the 2000 *Report* provides final guidelines to assist the agencies in preparing the “accounting statements” on the benefits and costs of regulations that OMB can then include in its annual *Report to Congress* (issued as *Memo-randum M-00-08*). The 2003 *Report* includes revised guidelines, developed by an interagency group co-chaired by the Council of Economic Advisers and OIRA, to make continued improvements in regulatory analysis (issued as *OMB Circular A-4, Regulatory Analysis*).

a more systematic evaluation of qualitative as well as quantified benefits and costs. The 2010 *Report* provides guidance on the treatment of the social cost of carbon-related damages developed by the administration's Interagency Working Group. Most recently, the draft 2012 *Report* requests comments on the need for and possible structure of guidance on the assessment of the effects of regulations on employment.

Despite the many similarities in the various *Reports*, the focus here is on cross-administration differences. To identify these differences, we examine what we consider the most substantive issues, although we try not to take sides on the merits of one approach versus another. We recognize that our assessments, like those of other observers and participants in the regulatory process, are judgmental. Because many of the key issues are discussed in multiple *Reports*, we pay particular attention to the emphasis accorded to different topics, such as whether they rise to the level of recommendations as compared with observations, the nature of discussion on the issue, and the extent of repetition within and across *Reports* during the same administration.

We note significant distinctions in five analytical areas. First, although the *Reports* issued by all three administrations seek to enhance the overall quality and analytical rigor of RIAs and related analyses, they clearly have different emphases reflecting, perhaps, differences in perspective on the role of OIRA in the RIA development process. The early Bush-era *Reports* tend to place OIRA in the position of gatekeeper for rulemaking and overseer of the quality of information and analysis (OIRA, 2002, p. 14).⁵ These *Reports* also devote particular attention to more traditional economic approaches, emphasizing quantitative analyses wherever possible; peer review; and more complete measurement of effects (e.g. *Circular A-4, Regulatory Analysis*). (OIRA, 2003, pp. 118–165.) The *Reports* issued during Democratic administrations, especially during the Obama administration, while maintaining the analytical requirements of prior years, rely to a greater extent on the transparency and openness of agency rulemaking processes as a means of improving RIA quality. Thus, the Bush administration issued a number of specific directives aimed at changing agency practices, with some degree of enforcement, whereas both the Clinton and Obama administrations have taken a more cooperative approach of encouraging better practices, generally with limited enforcement efforts.⁶

⁵ Graham (2008, p. 457) also alludes to this role in explaining, “[t]he White House empowered me to establish control over the flow of new regulations.”

⁶ Katzen (2011, p. 105) notes that the relationship with the agencies was for the most part collegial (with the possible exception of disagreements with EPA). She also identifies as one of the clearest examples of a different philosophy for OIRA across administrations that OIRA in

A second area of difference is the relative emphasis on difficult-to-measure benefits, generally favored by the Obama administration – for example, the value of ecological services and the value of dignity and equity. In contrast, the Bush administration – while seeking a more systematic discussion of qualitative benefits in general (for example, covering Department of Homeland Security rules) – provides more discussion of the uncounted costs of regulation, including those faced by small businesses. The emphasis of the Clinton administration lies somewhere between the two. Similarly, during the Obama years there appears to be a reduced emphasis on cost-effectiveness analysis (CEA) in the assessment of human health impacts. The mandate for CEA originally articulated in 2003 has been replaced in the draft 2012 *Report* with softer “should consider the use” language. At the same time, at least in the case of EPA rules, there has been a pullback from presentation of the CEA information, which has the effect of maintaining the focus on mortality reduction per se, rather than on extensions to life expectancy. A corollary of these differences is the interpretation given to the evolving literature on retrospective cost and benefit studies. Although both Bush and Obama favor the expansion of this work, the Bush administration interprets the existing, limited literature as tending to overestimate benefits more than costs, whereas the Obama administration, looking at a larger but still limited set of studies, reports roughly comparable overestimation of both benefits and costs.

A third area of difference is the willingness to design policy approaches relying heavily on information disclosure as a regulatory tool. Here the Bush administration seems to focus on specific issues, in some cases acting on them with “prompt” letters to engage agency leadership, whereas both Democratic administrations express a repeated support in the *Reports* for the implementation of disclosure-based approaches which require companies to provide information about their products directly to consumers (e.g. appliance efficiency labels). The Obama *Reports* shift to a broader discussion of “behaviorally informed” approaches to regulation.

The treatment of intergenerational benefits is a fourth area of difference. Despite reasonable consistency across administrations on the issue of discounting, the approach has evolved gradually, with the Bush administration requiring the use of both 3% and 7% as discount rates in its *Circular A-4* guidance (compared with earlier Clinton guidance that specified 7%). Both *Circular A-4* and earlier OIRA guidance allow the use of sensitivity analysis to evaluate the

Democratic administrations “would implement neutral principles to achieve smart or sensible regulations rather than advance a decidedly antiregulatory agenda.” Sunstein (2013, p. 1875) states that “OIRA does not so much promote centralized direction of regulatory policy as incorporation of decentralized knowledge.”

effects of alternative discount rates. In addition, where intergenerational effects are important, *Circular A-4* suggests that agencies could provide a separate discussion of the equity concerns associated with intergenerational effects and also provide a further sensitivity analysis using a lower – but positive – discount rate. Although it has retained *Circular A-4*, the Obama administration has taken an additional step in its social cost of carbon assessment by increasing the weight given to benefits obtained by future generations, particularly as regards the damages from global climate change.

A fifth area of difference concerns the connection between environmental, health, and safety regulation and the broader economy – specifically, economic growth and employment. On this issue, the Bush administration tends to emphasize the trade-offs between regulations and more broadly defined economic performance. In contrast, the Obama administration places greater emphasis on the potential for a positive link between regulation and overall “well-being,” highlighting studies that support such a view. Similarly, while the employment issue has surfaced only in recent years, a closer look at the empirical studies cited in several *Reports* indicates somewhat of a greater focus in the Obama-era *Reports* on those analyses that find negligible impacts or even a positive relationship between regulation and employment – several of which were published during the Bush years – and a de-emphasis of the literature that finds a negative relationship.

While recognizing the OIRA administrator’s role in supporting an administration’s policy preferences, our review provides support for those who see the key elements of economic analysis as generally insulated from politics, not subject to wild swings of emphasis or approach across administrations. Despite the noted differences, the similarities across administrations clearly outweigh the differences and reflect a broadly shared economic perspective. The differences that do exist are largely in areas for which there is reasonable debate within the academic community. The topics of monetization, cost definition, behavioral economics, intergenerational benefits, and the general equilibrium impacts of regulation are among the most active and exciting in the current scholarly work on regulation. Our review indicates that this work has been absorbed by policymakers, albeit with different emphases.

Arguably, this review of the OIRA *Reports to Congress* represents a limited perspective on the regulatory approaches of different administrations. Additional executive branch documents, such as speeches, memoranda, guidance documents, executive orders, RIAs, and actual regulatory decisions, represent key parts of the record but are excluded from this review.⁷ The analysis presented here

⁷ A recent evaluation of the quality of RIAs is provided in a recent paper by Ellig, McLaughlin, and Morrall (2013).

reflects the interpretations drawn by the authors from a review of the *Reports* and our somewhat subjective judgment of the emphasis accorded to different topics.

In the following sections, we first review the basics of the relevant executive orders and the analytical requirements they established. The subsequent section presents the results of our findings on nine issues representing actual or potential philosophical differences across administrations. In summation, we integrate several of them into the five issues identified above. Specifically, we consider alternative approaches to improving RIA quality; monetization of difficult-to-measure benefits; emphasis on difficult-to-measure costs; establishment of an appropriate discount rate for intergenerational analysis; information disclosure as a regulatory mechanism to achieve behavioral change; the use of cost-effectiveness analysis, particularly to complement the standard treatment of mortality benefits; the relationship between regulation and economic growth; the relationship between regulation and employment; and the approach to retrospective analysis.

2 Background: the basics of executive order review and regulatory analysis

The principal requirement of E.O. 12291 and successive orders issued by both Democratic and Republican administrations is that an RIA must be prepared for all major regulations (those with annual benefits or costs in excess of \$100 million) issued by the executive branch agencies prior to publication of the rule in the *Federal Register*.⁸ The RIA aims to provide decision makers with the best available information on the benefits and costs of the regulatory alternatives considered in developing the rule and to inform the public, Congress, and the courts about the economic basis for the rule.

Critics of OIRA have argued that it has largely served as an antiregulatory body within the White House, politicizing the regulatory process and undermining the legitimate decisions of the president's political appointees in the regulatory agencies.

Several of the OIRA administrators over this period have published papers/articles describing OIRA's role during their tenure and have responded to the concerns of OIRA's critics.⁹ Katzen (2011), Graham (2008, p. 465), Dudley (2011, p. 116),

⁸ More recent executive orders include E.O. 12866 and 13563.

⁹ These papers focus on OIRA's review of regulation, with only a few direct references to the *Reports to Congress*. Nevertheless, they place OIRA within the context of a broader White House policy process.

and Sunstein (2013, pp. 1874–1875) describe OIRA operation as an integral part of a broader White House decision making process on regulatory policy. Each recognizes OIRA as having a dual role as regulatory analyst within the White House and as the entity charged with ensuring that regulatory decisions are consistent with the policies of the president. Thus, former Deputy Administrator Arbuckle (2011, p. 884) writes that OIRA operates within what has been described as “the seventeen most political acres on the face of the earth.”¹⁰ Graham (2008, p. 466) claims that OIRA as an apolitical, career organization is well placed to bring both a distinctive technical and analytical perspective to regulatory policy and to coordinate the views of multiple agencies and White House offices on regulatory policy. Katzen (2011, p. 105) reports that OIRA in Democratic administrations implements “... neutral principles to achieve smart or sensible regulations rather than advance a decidedly anti-regulatory agenda.” Similarly, Sunstein (2013, p. 1872 and 1874) recognizes that it both plays a technical role (shared with economists in the White House and in other agencies) and serves as a convening body bringing experts and views from throughout the federal government together to address key regulatory issues.¹¹ In this role, Sunstein (2013, pp. 1874–1875) reports that “OIRA sees itself as a guardian of a well-functioning administrative process. ... In these respects, OIRA does not so much promote centralized direction of regulatory policy as incorporation of decentralized knowledge.” He notes further that in his experience, political considerations have not been a significant part of OIRA’s role.¹²

10 Arbuckle (2011, p. 884) argues: “This White House oversight of agency regulatory analysis means that OIRA’s work, though primarily analytic, competes daily with the intense political pressures that characterize all work in the White House. Even in the face of the demands of politics, analysis is respected and utilized. A balance between politics and analysis is maintained in several ways. Several structural characteristics of the White House help protect analysis, such as a strong complement of offices whose role is primarily analytic (for example, the Council of Economic Advisors, the Office of Science and Technology Policy, and OMB). OIRA’s ability to successfully coordinate its regulatory review with White House officials ensures that it serves as an agent for presidential regulatory policy at the same time it champions higher quality benefit-cost and risk analysis. This role as intermediary between analytic and political judgment also results from OIRA’s expertise in such analysis and its reputation for the discretion necessary to maintain the trust of the president’s upper level staff.”

11 Note as well that President Obama, in his January 30, 2009, *Memorandum on Regulatory Review*, has stated that OIRA provides “a dispassionate and analytical ‘second opinion’ on agency actions.”

12 Sunstein (2013, p. 1873) also addresses the concerns of the critics that OIRA brings a politicized process to regulatory decisions by reporting, “Political considerations – the concerns of Congress, the views of State and local governments – are brought to OIRA by other parts of the White house. But, generally, these concerns have not been a significant part of OIRA’s role.”

In addition to this broader debate on the role of OIRA and benefit-cost analysis, a variety of more technical issues affect the quality of the RIA. For example, an RIA is required to consider some basic elements, including the identification of a market failure or other compelling reason for regulation and the consideration of alternatives to federal regulation, which could involve deferring to state and local regulation. After a regulatory agency has decided that a federal regulation may be appropriate (or required by statute), key elements of an analysis include the development of a baseline, the evaluation of a reasonable set of alternative regulatory options or degrees of stringency, the quantification and monetization of benefits and costs, the proper treatment of future streams of benefits and costs, and the proper treatment of the uncertainty in the benefit and cost estimates for each alternative.

Over the years, a number of controversial issues have arisen in connection with the development of RIAs, including the appropriate discount rate to use in evaluating future streams of benefits and costs (or other alternative techniques for treating these future streams) and the quantification and monetization of certain kinds of benefits, particularly with respect to the valuation of reductions in the risk of mortality and of other difficult-to-measure and -value benefits and costs.

Although most RIAs provide monetized cost estimates, one of the goals identified in the Clinton and early Bush *Reports* was to expand the practice of estimating the monetized benefits of new rules. In fact, the proportion of RIAs with monetized benefits increased from 40% for the first two *Reports* in the 1990s to almost 60% in the last year of the Clinton administration. Across the Bush and Obama years, the proportion of RIAs with monetized benefits has been relatively constant, in the range of 60–65% (see Figure 1). Multiple factors are clearly at work here, including the increasing resources devoted to analytical endeavors, improvements in the available models and data over the years, and the general pressure from the Office of Management and Budget (OMB).

3 Issues across administrations in the OIRA Reports to Congress

To conduct our review of the *Reports*, we developed a list of key words based on critical topic areas associated with developing regulatory analysis. OMB *Circular A-4* provides guidelines on the development of regulatory analysis, and this served as an initial basis for identifying critical topic areas, supplemented by our experience developing and reviewing RIAs and studying the economic literature evaluating RIA quality. For example, *Circular A-4* in the final 2003

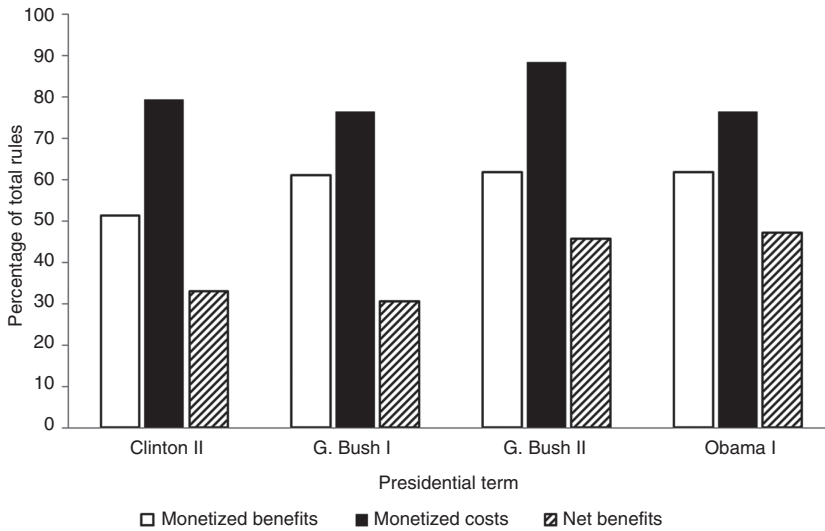


Figure 1 Percentage of RIAs with monetized benefits, monetized costs, and net benefits.

Report identifies some key elements that are necessary for an adequate regulatory analysis. In addition, as noted above, the statutory language mandating the *Reports* requires them to address the effects of regulation on economic growth, wages, and small businesses. In this way, we arrived at a set of key words to use in our search, including “discount rate,” “economic growth,” and “uncertainty analysis.”

Some *Reports* do not address an issue, and in those cases the key word simply does not come up in the search. Where a key word does come up, we then evaluated the resulting discussion and context. In a number of instances, the use of the key word is incidental – it does not reflect a substantive discussion of the issue. Where the key word is used in the context of a substantive discussion, we then evaluated and compared the discussion with similar discussions in other *Reports*. In some cases – for example, the discussion of the effect of regulation on wages – the same set of paragraphs appears year after year for a number of years. In other cases, the discussion changes from year to year, with (generally) more pronounced changes across administrations. Our review focuses on the more pronounced changes.

In this section, we review the key issues identified earlier that we believe have the potential to reveal differences in regulatory philosophy. For each one, we describe the cross-administration differences and draw tentative conclusions on those differences.

3.1 Improving RIA quality

Specific administration initiatives to improve the overall quality and analytical rigor of regulatory analysis represent one area where we see differences in approach. For example, the 1997 and 1998 *Reports* recommend an OIRA outreach and collaborative effort within the executive branch, calling for OIRA staff to meet with agency officials to review current procedures and emerging issues (OIRA, 1997, p. 66; OIRA, 1998, p. 89). In contrast, the *Reports* issued during the Bush administration focus on specific OMB mandates to conduct technical analysis and peer review. The Obama-era *Reports*, building on the previously established analytical criteria, emphasize the importance of promoting, within agency rulemaking processes, the open-government objectives of the administration. For example, the 2010 *Report* encourages the agencies to make information relevant to rulemaking (including underlying data) available to the public by electronic means. In this way, it is argued, public comment and discussion would help encourage improvements in the RIAs and in the regulations themselves (OIRA, 2010, pp. 50–52).

The 1997 and 1998 *Reports* describe an OIRA outreach effort among the agencies to raise the quality of agency analyses by promoting greater use of the Best Practice guidelines and providing technical assistance. In addition, these two *Reports* discuss the formation of a collaborative interagency group to review a selected number of agency regulatory analyses. This effort was intended to provide an ex post disinterested peer review to identify areas that needed improvement. The resulting Interagency Technical Working Group, comprising staff from the major regulatory agencies and co-chaired by the Council of Economic Advisers, developed a series of recommendations, such as (a) extending the agency's quantitative estimates of the value of reductions in mortality risk based on appropriate unit values estimated from the literature; and (b) supplementing agency estimates of reductions in mortality risk by estimating the additional longevity (e.g. years of life gained) (OIRA, 1998, p. 90).

The Bush administration's focus on additional analytical criteria and peer review requirements is manifest in its first two *Reports* through several initiatives (OIRA, 2001, pp. 39–51; OIRA, 2002, pp. 11–29):¹³

- improving the quality of regulatory analysis by refining OIRA's analytical guidance and enforcing these analytical guidelines in the review process;
- ensuring the quality of information disseminated by federal agencies;

¹³ The 2002 *Report* also sets out specific steps to increase the transparency of the OIRA regulatory review process.

- ensuring that economically significant rules are supported by analyses that have been subject to formal, independent external peer review; and
- ensuring that regulatory analyses are based on sound risk assessment.

Progress in implementing these recommendations is tallied in subsequent *Reports*. The 2002 *Report* discusses OMB's government-wide guidelines to ensure and maximize the quality of information disseminated by federal agencies.¹⁴ The OMB guidelines require each federal agency subject to the Paperwork Reduction Act, including the independent agencies, to issue tailored information-quality guidelines that are compatible with OMB's general guidelines and submit them for OMB review. Subsequent *Reports* compile a list of agency websites containing the agency guidelines and outlining agency processes for responding to public concerns with information quality.¹⁵

The 2003 *Report* includes revised regulatory analysis guidelines presented by OMB's *Circular A-4*, which includes the requirement for agencies to conduct a quantitative uncertainty analysis for rules with annual costs in excess of \$1 billion.¹⁶ The 2005 *Report* highlights the *Final Information Quality Bulletin on Peer Review*, designed to enhance the practice of peer review of government science documents.¹⁷ The *Bulletin* directs agencies to choose a peer review mechanism that is adequate, giving due consideration to the novelty and complexity of the science to be reviewed, the relevance of the information to decision making, the extent of prior peer reviews, and the expected benefits and costs of additional review. Highly influential scientific assessments require more rigorous review than does other scientific information.

The 2008 *Report* points to a joint OMB–Office of Science and Technology Policy memorandum on *Updated Principles for Risk Analysis* released in

¹⁴ Section 515 of the Treasury and General Government Appropriations Act for Fiscal Year 2001 (Pub. L. No. 106-554; H.R. 5658) requires OMB to issue guidelines to ensure the quality of information issued by federal agencies.

¹⁵ A final version was issued on February 22, 2002 (67 Fed. Reg. 8452), available at <http://www.whitehouse.gov/omb/>.

¹⁶ We note that the 2008 *Report* (OIRA, 2008, 19–24) discusses a proposal to adopt a “scorecard” as a way of evaluating the extent of compliance of agency RIAs with *Circular A-4*. OMB would then report the scorecard results in future *Reports*. In the final 2008 *Report*, OMB expresses support for the scorecard approach, noting that it has merit and deserves further consideration. However, in light of comments from peer reviewers, OMB decided not to implement a scorecard in the 2008 *Report* because development of an effective scorecard required further careful deliberation.

¹⁷ OIRA issued the *Final Information Quality Bulletin on Peer Review* on December 16, 2004, available at <http://www.whitehouse.gov/omb/memoranda/fy2005/m05-03.pdf>.

September 2007 (OIRA, 2008, pp. 67–28). This memorandum updates previous principles from 1995 with reference to more recent guidance from the scientific community, Congress, and the executive branch.

The Obama administration *Reports* have gone in a somewhat different direction by emphasizing increased transparency of agency regulatory processes as part of a much broader “open government” initiative. The first Obama *Report* (2009) emphasizes the central role of public comment and discussion, which would, in turn, help foster better regulatory analysis and better rules. The 2009 *Report* states that significant rules should have clear, tabular presentations of benefits and costs (presenting both qualitative and quantitative estimates) (OIRA, 2009, pp. 41–42). The 2010 *Report* expands on the 2009 *Report* recommendations with some new wrinkles, such as encouraging agencies to make information relevant to rulemaking (including underlying data) available to the public (OIRA, 2010, pp. 50–52). With the exception of the discussion of the social cost of carbon estimates contained in the 2010 *Report* (OIRA, 2010, pp. 53–54), the Obama *Reports* generally do not focus on new technical/analytical criteria as a means of improving RIA quality.¹⁸

We interpret these differences in approach to improving analytical rigor as largely reflecting a difference in perspective on the role of OIRA. The early Bush-era *Reports* place OIRA in the position of gatekeeper for rulemaking and overseer of the quality of information and analysis.¹⁹ Whereas the Bush administration focuses on greater use of economic and related studies, the Obama administration shifts the focus to emphasize more transparency and openness of the agency rulemaking processes.²⁰ This is not to imply that the Obama administration does

18 The 2011 *Report* includes an Agency Checklist for RIAs that effectively reaffirms the key elements of Circular A-4.

19 As gatekeeper for rulemaking, the Bush administration “revived the ‘return letter,’ making clear that OMB is serious about the quality of new rulemakings” (OIRA, 2002, p. 14). The 2002 *Report* notes that OIRA did not return any rules to the agencies for reconsideration over the last four years of the Clinton administration; in contrast, over an initial 15-month period in the Bush administration, OIRA returned 22 rules to the agencies for reconsideration. In the Obama administration, OIRA has issued one return letter, involving a final EPA rule for ozone. In this case, the president directed Sunstein to return the draft rule to the EPA administrator for reconsideration (see Sunstein, 2011). As Sunstein (2013, p. 1848) notes, “A relatively large number of return letters need not mean that OIRA and other interagency reviewers are acting aggressively, and a small number of return letters, including no such letters, does not mean that OIRA and other interagency reviewers are acting passively.”

20 Transparency of agency procedures is distinct from the transparency of the OMB process, long a contentious issue. Over the years, a series of incremental steps have been taken to increase the transparency of the OMB process in all three administrations considered.

not favor the use of specific analytical approaches, or that the Bush administration does not favor transparency and openness in agency processes, but it does suggest a shift in the relative emphasis between the two, a point we return to below.

3.2 Monetization of difficult-to-measure benefits

Because the benefits of regulation (e.g. those arising from homeland security or environmental regulation) are often difficult to measure, much less monetize, it is not surprising that RIAs vary significantly in the degree of quantification employed. As shown in Table 1, the 1997, 1998, and 1999 *Reports* under the Clinton administration include some discussion and encouragement of potential techniques for quantifying and (more importantly) monetizing difficult-to-measure benefits. These techniques include both the estimation of willingness to pay through market exchanges and the use of contingent-valuation methods for nonmarket goods. In the Bush II administration, the 2003 *Report* discusses hedonic pricing models and revealed preference methods as potential alternative approaches. Other *Reports* issued during the Bush administration largely restrict their attention to the difficulty of monetizing the benefits associated with Department of Homeland Security rules – a key administration priority. Several of these *Reports* include a separate section discussing the Homeland Security rules and providing a qualitative description of the expected benefits (OIRA, 2003, pp. 136–41).²¹

In contrast, all of the Obama administration *Reports* (2009–2012) discuss monetizing difficult-to-measure benefits, albeit with a different emphasis than in prior years. Instead of a discussion of specific methodologies (with attendant qualifications), these *Reports* encourage the use of available techniques for estimating monetary values, with particular emphasis on ecological and related benefit categories.²² For example, the 2009 *Report* recommends “a candid effort to go as far as existing knowledge allows, while also fairly presenting the limits

²¹ As noted above, the 2008 *Report* also discusses a proposal to adopt a scorecard. One of the questions contained in the proposed scorecard (OIRA, 2008, p. 19) was, “Does the analysis quantify and monetize benefits and costs of the proposed action?” However, the *Report* provides only a limited treatment of the issue, and the final 2008 *Report* defers the adoption of a scorecard.

²² In fact, discussion of the difficulty of monetizing the benefits of Homeland Security rules largely fades away in the Obama administration *Reports*.

Table 1 Treatment of difficult-to-measure or -monetize benefits across administrations.

	Clinton II			G. Bush I					G. Bush II					Obama I			
	1997	1998	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012		
Did OMB emphasize the quantification or monetization of difficult-to-measure benefits? ^a	x	x	x			x						x	x	x	x		
Separate section addressing Homeland Security rules?						x		x	x	x		x					

^aNot including Homeland Security rules.

of such knowledge” (OIRA, 2009, p. 42). This section also suggests that a break-even analysis may be the most that can be done (OIRA, 2009, pp. 40–42). The 2011 *Report* discusses the Agency Checklist for Regulatory Impact Analysis, which was developed to promote “the link between better analysis and open government” by simplifying and clarifying the central elements for regulatory analysis. The Checklist presents the key elements of a regulatory analysis in the form of questions that hew closely to key principles of E.O. 12866 and Circular A-4. For example, the Checklist includes a question as to “whether the RIA quantifies and monetizes, to the extent feasible, the anticipated benefits from the rule” (OIRA, 2011, pp. 147–51, app. I).²³

Also noteworthy are some recent changes in the approach to valuing certain types of benefits (OIRA, 2011, pp. 16–17). For example, the 2011 Report (OIRA, 2011, p. 21, note 26) points out that “caution” should be used in comparing benefits and costs over time because of changes in the estimation of benefits arising from new scientific evidence on the relationship between air pollutants and health, changes in EPA’s assumptions about the effects of fine PM at low ambient levels, and changes in the values used in monetizing benefits (including changes to the value of a statistical life).²⁴ Interestingly, these changes largely affect benefit estimates for rules that would have had substantial positive net benefits in any event, including under the methodologies used by EPA during the Bush and Clinton administrations. Thus, even

23 A footnote to this question notes that Circular A-4 offers a discussion of appropriate methods for monetizing benefits that might not easily be turned into a monetary equivalent. Note that the Agency Checklist is somewhat similar in content to a proposal during the Bush administration to develop a “scorecard” for evaluating RIAs. However, under the scorecard approach discussed in the Bush administration’s 2008 Report, OIRA would evaluate RIAs and report the results of the evaluation in future Reports to Congress. In contrast, the Obama administration’s Checklist is to be self-administered by the agencies. Thus, it is an agency checklist, not an OIRA scorecard.

24 For example, the US Environmental Protection Agency’s (EPA’s) practice in adopting a threshold has changed over the years. For the 1997 ozone and PM National Ambient Air Quality Standards, EPA adopted thresholds of 12 g/m³ and 15 g/m³ in developing its mortality benefit estimates. From 2002 to 2006, EPA assumed that the concentration–response relationship for PM mortality was linear down to background levels. From 2006 to 2009, EPA used a threshold assumption of 10 g/m³ for its primary estimate of the reduction in mortality risk. Beginning in 2009, EPA’s benefit estimates associated with reductions in fine particulate matter (PM) concentrations include mortality estimates for populations exposed to PM levels below 10 g/m³. EPA has also updated the value it uses for monetizing reductions in mortality risk, using a more recent currency year (2006\$) and reflecting growth in income to 2020 (OIRA, 2011, p. 18). Taken together, the changes in EPA’s methodology roughly double the estimated benefits attributed to some rules that reduce ambient levels of fine PM as reported by OIRA in the *Reports*.

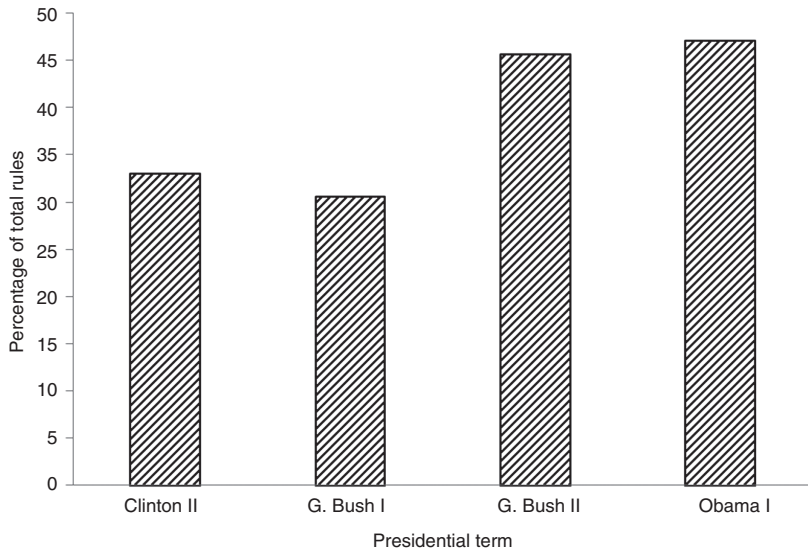


Figure 2 Percentage of RIAs with positive net benefits.

with the efforts of the Obama administration to expand the monetization of benefits, the proportion of major rules with positive net benefits has remained relatively constant over the 15 years of *Reports*. Roughly one-third of the major rules have positive net benefits (see Figure 2). The remaining rules either have negative net benefits (when benefits are actually monetized) or else do not include benefit estimates at all.²⁵

The most obvious interpretation of these findings is that although both political parties are interested in monetizing more of the benefits of environmental, health, and safety rules, Democratic administrations seem to be more proactive on the issue than Republican administrations. In particular, the Obama administration has introduced specific methodological changes to increase monetized benefits.²⁶

²⁵ Hahn and Dudley (2007) report similar results for RIAs issued by the Reagan, Bush I, and Clinton administrations. They note that net benefit information does not exist for 69% of the RIAs in their sample. A few rules have reported negative net benefits in each administration: Clinton (5%), Bush II (6.5%), and Obama (6%).

²⁶ Note that because the methodological changes have been concentrated in areas where the benefits already greatly exceed the costs, we find no evidence that these changes have significantly increased the proportion of rules with reported net benefits, although the total dollar amount of benefits has increased.

3.3 Treatment of costs

Direct compliance expenditures, such as those for capital and operating expenses associated with new regulation, are the most obvious and commonly estimated type of costs considered in RIAs. However, beyond these costs, changes in output, prices, and demand affect both consumers and producers. Increased administrative or transaction costs due to complex regulatory procedures may reduce productivity and add to the cost of regulation. Of course, cost savings could also arise from regulation. In principle, any complete cost–benefit analysis would include all of this information. However, in practice, the extent to which agencies consider cost categories in addition to direct compliance costs in RIAs varies a great deal. In this section, we evaluate how OIRA's *Reports* have emphasized these additional costs across different administrations.

3.3.1 Clinton administration

The first Clinton *Report* has an extensive discussion of the potential costs of regulation beyond direct compliance costs. For example, the 1997 *Report* cites EPA's *Environmental Investments: The Cost of a Clean Environment*, noting that “the true social cost of regulations aimed at improving the quality of the environment is represented by the total value that society places on the goods and services forgone as a result of resources being diverted to environmental protection. These costs include ... the more indirect consumer and producer surplus losses that result from lost or delayed consumption and production” (OIRA, 1997, p. 24). The “preferred measure of cost” is defined as opportunity costs. The 1997 *Report* includes further discussion about how surplus losses are affected by changes in demand and substitution of goods, which may confound the effects on welfare from a regulation. Overall, costs are viewed as “benefits forgone” (OIRA, 1997, p. 18).

The 1998 *Report* contains less extensive discussion of the broader cost issues, although some of the same topics from the 1997 *Report* are reiterated. In addition, it includes an explicit discussion of the general equilibrium effects of regulation, focusing on the specific models used to estimate the social welfare costs from regulation. This discussion emphasizes that estimates of these costs are significantly larger than direct compliance costs, suggesting that many RIAs underestimate the real cost of regulation (OIRA, 1998, pp. 23–24).

In conceptual terms, the discussion of costs in the 2000 *Report* is quite similar to that of prior ones, with one interesting addition. A section titled “What Key Concepts Do I Need to Know to Estimate Costs?” lists the important components of opportunity cost: compliance, administrative, consumer and producer surplus

losses, discomfort or inconvenience, and loss of time. The section states that agencies “should include these effects in [their] analysis and provide estimates of their monetary values wherever possible” (OIRA, 2000, p. 73). The 2000 *Report* also includes a section on the effects of regulation on small businesses, noting that regardless of size, all firms must bear certain fixed costs – for example, transaction and administrative costs – associated with regulation. As a result, small businesses bear a disproportionate share of regulatory cost. In support of this point, the *Report* cites a study by Hopkins (1995), which reports that regulatory costs per employee decline with firm size (OIRA, 2000, pp. 32–33).²⁷ The section also notes, though, that this result does not show whether the net benefits of a rule would increase with a reduction in regulatory burden for small firms.

3.3.2 Bush administration

Relatively broad discussions of costs appear in two *Reports* issued during the Bush years (2003 and 2006). The 2003 *Report* contains a discussion of opportunity cost as the forgone net benefit of a particular product. It also includes a section titled “Other Benefit and Cost Considerations,” which is substantially similar to the treatment in the 2000 *Report* (OIRA, 2000, p. 73; OIRA, 2003, pp. 134–36). The cost discussion in the 2006 *Report* is somewhat different, focusing on how the European Commission measures net administrative costs. The *Report* reviews the Commission’s methodology, including the model it uses to measure such costs, and refers to the requirement to consider such cost in the European Commission RIA guidelines (OIRA, 2006, pp. 83–84).

In addition, the Bush administration *Reports* continue to provide a separate section addressing the effects of regulation on small businesses. The *Reports* note that small and medium-sized enterprises are the ones that bear the most significant administrative costs, citing additional studies by Crain and Hopkins (2001) and Crain (2005) sponsored by the Small Business Administration’s Office of Advocacy (OIRA, 2006, pp. 20–21; OIRA, 2007, pp. 26–27). The 2004 *Report* also cites an additional study by Dean et al. (2000), indicating that environmental regulations act as barriers to entry for small firms (OIRA, 2004, p. 54).²⁸ Finally, the

²⁷ This study was sponsored by the Office of Advocacy of the Small Business Administration.

²⁸ In his 2006 paper, discussed below, Harrington sharply criticizes the statistical modeling of the Crain and the Crain and Hopkins findings that regulatory costs are higher for small and medium-sized businesses. As far as we can determine, no reference to this critique is made in any discussion of the small business issues across any of the *Reports*, despite the fact that the Harrington paper is cited (in the 2010 *Report* and subsequently) in the discussion of retrospective analysis (see below for discussion of this point, p. 64).

Bush administration *Reports* issued after 2002 no longer contain the caveat that these results do not address the net benefits of the regulation of small businesses.

3.3.3 Obama administration

As in prior years, *Reports* issued during the Obama administration make many references to the costs of regulation, as well as including the usual one or two sentences reporting that a significant goal of the executive order process “is to promote quantification of both benefits and costs.” However, in contrast to the treatments in the earlier years, we could find no substantial consideration of transaction costs, welfare loss, or other broad cost issues in the *Reports* issued during the Obama administration. The exception is a footnote in the 2011 *Report*, citing an unpublished paper by Harrington (2006), which notes that “cost estimates are primarily focused on compliance expenditures, and thus exclude important cost categories such as employee training; management attention; discouraged innovation and investment; tax distortion effects, as well as the costs of rent-seeking (unproductive behavior undertaken by firms and individuals to influence regulatory decisions) (OIRA, 2011, p. 56).” Notwithstanding the footnote, we conclude that the emphasis on costs beyond direct compliance expenditures is somewhat greater during the Clinton and Bush administrations than during the Obama administration.

The Obama administration *Reports* continue to cite the Office of Advocacy studies on the effects of regulation on small businesses included in earlier *Reports*, but with the addition of a study by Becker et al. (2012) presenting more mixed results in an assessment of the effects of air pollution rules on small businesses (OIRA, 2012, pp. 39–40). The Obama administration *Reports* conclude that the evidence in the literature on this subject is “preliminary, inconclusive, and mixed.” At the same time, the *Reports* note that it is clear that some rules will have adverse effects on small businesses, and it is appropriate to provide flexibility to address these cases (OIRA, 2010, p. 33; OMB, 2012, p. 34).

3.4 Intergenerational discounting

Across the 15 *Reports*, three major statements address the treatment of the discounting of future benefits and costs. The 2000 *Report* presents the Guidelines to Standardize Measures, which specify that agencies should use a discount rate of 7%, as provided by OMB Circular A-94, *Guidelines and Discount Rates for Benefit-Cost Analysis of Federal Programs* (OIRA, 2000, pp. 65–66). It also states that

agencies could develop a sensitivity analysis (if it could be justified) and notes that agencies often use the social rate-of-time preference – a discount rate of 3% – as an alternative scenario for sensitivity analysis. For intergenerational analysis, the 2000 *Report* specifies that agencies should continue to use a 7% discount rate, possibly supplemented with a sensitivity analysis using a lower rate-of-time preference to address equity issues (OIRA, 2000, p. 67).

The 2003 *Report* provides for the use of two discount rates – 3% and 7% – for the discounting of future benefits and costs, as set out in OMB's new *Circular A-4*. Agencies could also provide additional sensitivity analysis where alternative higher or lower discount rates could be justified (OIRA, 2003, p. 151). For intergenerational analysis, the 2003 *Report* reiterates the position that agencies should use discount rates of 3% and 7%. The *Report* notes that agencies could address issues with intergenerational equity separately and further suggests that agencies might also consider a sensitivity analysis using a lower rate, ranging from 1 to 3%, in addition to presenting net benefit estimates using discount rates of 3% and 7% (OIRA, 2003, p. 153).

The Obama administration has retained *Circular A-4*, including the guidance that agencies should use discount rates of 3% and 7%. However, the 2010 *Report* presents the social cost of carbon estimates, initially developed by an interagency working group, the results of which are highly sensitive to the assumptions used in the intergenerational analysis, based on discount rates of 2.5%, 3%, and 5%, with 3% serving as the central estimate (OIRA, 2010, pp. 53–54).²⁹ The 2011 *Report* reiterates, however, the approach in *Circular A-4* as part of a presentation of the Agency Checklist for regulatory analysis by stating that agencies should use discount rates of 3% and 7% and might consider further sensitivity analysis using a lower but positive discount rate (OIRA, 2011, p. 149, app. 1).

Arguably, there has been reasonable consistency across administrations on the issue of discounting, with some evolution in the treatment of this issue across administrations. The 2003 *Circular A-4* formally embraces the use of two discount rates – 3% and 7%. In addition, one might judge the use of the 2.5% rate in the Obama administration's analysis of the social cost of carbon, as well as the exclusion of the 7% rate for the social cost of carbon, as a move to increase the weight given to benefits realized by future generations, particularly as regards the damages from global climate change. Although the revised approach can be linked, in part, to advances in the literature – notably, an important paper by Newell and Pizer (2003) – it may also reflect a different philosophy about the importance of protecting future generations from climate change.

²⁹ The first release of these estimates was by the Interagency Working Group on Social Cost of Carbon (2011).

3.5 Information disclosure

The use of information disclosure as an explicit regulatory tool – a topic sometimes linked more recently with the field of behavioral economics – is mentioned repeatedly in the *Reports* issued during the Clinton and Obama administrations and is given less attention during the Bush administration. The early Clinton-era *Reports* focus on disclosing health or other consumer-related information about products being sold in the market, including safety labels on drugs or food and fuel efficiency labels for cars.

During the Bush administration, the early *Reports* cite several prompt letters from the OIRA administrator, urging agencies to adopt specific information disclosure measures (OIRA, 2002, pp. 21–23).³⁰ In addition, the 2003 *Report* addresses information disclosure as a regulatory instrument in the appendix presenting the *Circular A-4* guidelines (OIRA, 2003, pp. 126). The 2003 *Report* discusses a broader concept of disclosure, going beyond the labeling approaches presented in the Clinton-era *Reports* to include government publication of data (e.g. emissions data or worker safety data for manufacturing plants), telephone hotlines, and public interest broadcasts, which might be adopted in place of traditional regulation. The *Circular A-4* guidelines also identify some of the potential costs of information disclosure: the misinterpretation of information, the value of other information displaced by the required disclosure, and the additional resources expended (overinvested) to address the issue identified by the disclosure. The remaining *Reports* issued by the Bush administration are largely silent on information disclosure.

The *Reports* issued during the 4 years of the first Obama administration renew the topic of information disclosure for products sold in the market – such as food and drug labels – as part of a broader discussion of “behaviorally informed” approaches to regulation. This discussion also points to the use of public databases – such as EPA’s Toxics Release Inventory program, which provides information on releases of toxic pollutants from manufacturing plants – to achieve regulatory goals (in this case, the reduction in the use and discharge of toxic pollutants). Further, the draft 2012 *Report* highlights an OIRA memorandum

30 The 2002 *Report* cites prompt letters to the US Food and Drug Administration (FDA) requesting completion of a final consumer labeling rule for trans fatty acid content in foods and to EPA encouraging the adoption of several steps to improve the utility of data available on the environmental performance of industrial facilities. The 2001 *Report* also cites OIRA’s prompt letter to the FDA on consumer labeling of trans fatty acids in foods (OIRA, 2001, p. 45).

on Informing Consumers through Disclosure, which advocates a broader government role in informing consumers through smart disclosure to improve the operation of markets. This discussion recognizes the importance of providing information in an effective way to avoid the problems with confusing information. It also suggests the importance of the salience of the disclosure and of using a “default” design (or starting points) that helps to overcome consumer inertia (OMB, 2012, pp. 76–80.)

Overall, it appears that the use of information disclosure as a regulatory instrument designed to encourage behavioral change is emphasized more in Democratic than Republican administrations (Table 2). This is particularly the case in the Obama administration, where the *Reports* find a broader role for information disclosure rules to improve economic performance beyond the more traditional role of addressing specific, significant instances of market failure arising from asymmetric information.

3.6 Use of cost-effectiveness analysis to complement standard treatment of mortality benefits

Like benefit-cost analysis, cost-effectiveness analysis (CEA) provides a systematic framework for evaluating alternative options that achieve a stated regulatory goal. Guidelines for doing regulatory analysis generally recognize the potential role that CEA can play in providing information on regulatory alternatives. For example, the 2000 *Report* issued by the Clinton administration includes a section indicating that agencies might consider the use of cost-effectiveness analysis – in place of a net benefits analysis – where it is difficult to monetize benefits (OIRA, 2000, p. 67). In 2003, the Bush administration took a further step in its *Circular A-4* revision of guidelines for regulatory analysis by requiring that agencies include a CEA as part of an analysis of major rules addressing health and safety risks (OIRA, 2003, pp. 126, 143). The 2003 *Report* sets out the rationale for this requirement, noting that CEA offers an alternative analytical approach to inform decision makers faced with “difficult [to] value tradeoffs” (OIRA, 2003, p. 128). Other *Reports to Congress* during the Bush administration make only passing references to cost-effectiveness analysis – for example, as part of the response to comments section. The 2006 *Report* contains some discussion of cost-effectiveness analysis as part of a comparison of OMB and EU guidance on regulatory analysis (OIRA, 2006, pp. 82–88). The 2008 *Report* includes a short discussion of cost-effectiveness analysis as part of a discussion of the elements that ought to be

Table 2 Use of information disclosure as a regulatory tool.

	Clinton II			G. Bush I			G. Bush II			Obama I					
	1997	1998	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
Is there an emphasis on information disclosure as a tool of regulation?	X	X	X	X	X	X						X	X	X	X
Is information disclosure discussed more broadly than in terms of product labels?						X						X	X	X	X

included in using a scorecard to evaluate the quality of regulatory analysis (OIRA, 2008, pp. 20–21).³¹

Although the 2009 *Report* is silent on cost-effectiveness analysis, the 2010 and 2011 *Reports* during the Obama administration return to a discussion of the issue. They note that some agencies develop CEA estimates using the *life saved* metric – an approach consistent with *Circular A-4*. These *Reports* also include a tabular presentation of the *net cost per life saved* for major regulations intended to improve public health and safety. The 2010 and 2011 *Reports* observe that using CEA avoids the need to assign monetary values to reductions in mortality risk and “can provide useful comparisons and encourage a more efficient use of scarce resources by identifying the alternative that achieves the same risk reduction at a lower cost” (OIRA, 2010, pp. 25–26; 2011, p. 51). Beyond a discussion of CEA and a table arraying the cost per life saved, the 2011 *Report* highlights the importance of analyzing the gains in life expectancy because the estimated reductions in mortality risk may include cases in which life expectancy is extended by only a few weeks or months. The 2011 *Report* notes that, in such cases, *Circular A-4* allows the use of life-years as an alternative measure of the reduction in mortality risk (OIRA, 2011, pp. 71–72).

Although these two recent OMB *Reports* provide “cost-effectiveness” estimates for the cost per life saved of agency rules, the 2011 and 2012 *Reports* replace the *Circular A-4* mandate requiring CEA for rules addressing health and safety with the recommendation that “... agencies should consider the use of cost-effectiveness analysis for regulations intended to reduce mortality risks.” (OIRA, 2012, p. 63) With this shift, at least one agency is no longer preparing a cost-effectiveness analysis as a part of its RIAs.³² This change has the effect of maintaining the focus on mortality reduction per se, rather than on extensions to life expectancy.

The clearest interpretation of these differences is that, despite the broad acceptance across the political spectrum for the use of CEA as a means of complementing benefit-cost-analysis, in practice, somewhat of a shift in emphasis away from CEA has occurred during the Obama years. The mandate for CEA originally

³¹ Some commenters on the draft OMB *Reports* suggest that OMB establish a formal scorecard for the evaluation by OMB of the quality of agency RIAs. The 2008 *Report* discusses the possibility of establishing such a scorecard as a way of improving the analysis of regulations; no further discussion of a scorecard approach appears in subsequent *Reports*. However, the 2011 *Report* includes an Agency Checklist for agencies to use in preparing their RIAs: the checklist was provided with the goal of promoting the link between careful analysis and open government (OIRA, 2011, pp. 53, 147–51).

³² During the Bush administration, EPA had a somewhat mixed record, preparing a CEA for 7 of the 14 economically significant health and safety rules issued, as required by *Circular A-4* (Fraas & Lutter, 2011). In contrast, none of the economically significant health and safety rules issued by EPA during the Obama administration provides a CEA.

articulated in 2003 has been replaced in the draft 2012 *Report* with the softer “should consider the use” language.

3.7 Economic growth

As part of the 2000 Regulatory Right-to-Know Act, OMB was required to include an analysis of the impacts of federal regulation on economic growth.³³ Beginning in 2000, this section has undergone several significant changes.

From the outset, the *Reports* consistently make the point that gross domestic product (GDP) is not a complete measure of the full effects that regulation has on welfare or well-being. This discussion – usually included in the section on economic growth – focuses on the potential inconsistencies between the two concepts, as well as giving a brief review of the supporting literature. However, beginning in 2010, the *Reports* include some additional discussion that not only reviews the potential relationship between GDP and well-being, but also cites some of the empirical and theoretical studies proposing potential alternatives for broader measures of the welfare effects of regulation.

The first discussion of the relationship between regulation and growth in 2000 is quite limited. It cites only two studies, an Organization for Economic Cooperation and Development (OECD) paper focusing on the effects of US deregulation of the economic regulatory agencies on GDP and a literature review of the effects of environmental regulation on manufacturing (OIRA, 2000, pp. 34–35). Both studies suggest that regulation has a negative effect on the economy. This limited treatment of the issue is repeated in 2001 and 2002, the first 2 years of the Bush presidency (Table 3).

The 2003 *Report* does not discuss the issue, but the 2004 *Report* presents six studies that provide a comparison relating economic structure across countries with economic performance and well-being (OIRA, 2004, pp. 38–43). The 2004 *Report* focuses on the suggestive evidence from these six studies that countries with greater “regulatory freedom” or smaller regulatory burdens generally have better economic performance. Two of the studies – by the Heritage Foundation/*Wall Street Journal* and, separately, by the Fraser Institute in Vancouver, British Columbia – indicate a correlation between broad indices of economic freedom (inherently subjective measures) and growth in per capita GDP and other measures of well-being. Two studies sponsored by the OECD report that countries

³³ This discussion was not required for the 1997 and 1998 *Reports* (Section 645 of the Treasury, Postal Services and General Government Appropriations Act, 1997, and Section 625 of the Treasury and General Government Appropriations Act, 1998).

Table 3 Regulation and economic growth.

	Clinton II		G. Bush I				G. Bush II				Obama I				
	1997	1998	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
How many of the studies cited are negative?	NA	NA	2	2	2	2	NA	4	6	6	6	3	5	6	7
How many of the studies cited are positive?	NA	NA	0	0	0	0	NA	0	0	0	0	0	1	1	4
How many of the studies cited are focused on aggregate economic performance?	NA	NA	1	1	1	1	NA	4	6	6	6	3	0	1	1
How many of the studies cited are focused on specific sectors or regions?	NA	NA	1	1	1	1	NA	0	0	0	0	0	6	6	10

with less restrictive regulation (or greater regulatory reform) showed better economic performance (e.g. higher productivity and greater investment in research and development) over the 1990s. The *Report* also cites two World Bank studies that suggest a negative correlation between the extent of regulation and economic performance: one of them develops objective measures of regulatory burden and reports an inverse correlation between regulatory burden and better economic performance (e.g. higher labor productivity and employment); the other reports a direct correlation between regulation of entry into markets and regulation of labor markets.

The 2004 *Report* notes that the World Bank measures of regulatory burden in particular – but also more generally the measures used across all of these studies – are more heavily weighted to represent the burden associated with economic regulation (e.g. entry and licensing requirements) rather than social regulation. But, the *Report* argues, “it is important to point out that these findings may hold for social as well as economic regulation. Both types of regulation, if poorly designed, harm economic growth as well as the social benefits that follow from economic growth” (OIRA, 2004, p. 42).

Subsequent Bush administration *Reports* (2005, 2006, 2007, and 2008) present largely the same information, augmented by a discussion of several additional papers that reinforce the findings from the studies reviewed in the 2004 *Report*. Overall, the OMB *Reports* under the Bush administration focus primarily on studies that relate the level of regulation to GDP growth and other related outcomes such as well-being. All of the studies they cite find a negative relationship between regulation and the economic welfare measures identified in the studies.

During the Obama administration, the section of the *Reports* on economic growth changes significantly. The 2009 *Report* drops all discussion of the Heritage Foundation/*Wall Street Journal*, Fraser Institute, and World Bank studies and shifts the focus from aggregate measures of economic performance to the effects of social regulation on specific sectors, industries, or regions. The 2009 *Report* identifies six specific studies that looked at the effect of air quality rules on various measures of economic activity, considering such economic measures as firm productivity, plant births, and job creation (or loss). Only one of these studies reported a positive effect. The 2010 *Report* discusses a similar set of studies. The 2011 and 2012 *Reports* add five more studies that suggest positive economic effects of regulation and one that suggests a negative effect.

The 2010 *Report* also includes additional discussion at the beginning of the economic growth section that reviews some of the empirical and theoretical studies proposing potential alternatives for measuring the welfare effects of regulation. The discussion includes studies on the relationship between reported levels of well-being or “happiness” and variables such as relative

income or age. These papers explore the extent to which objective measures of economic performance, like GDP growth, capture welfare gains and a sense of well-being, such as improvements in environmental quality. This discussion expands substantially in the 2011 *Report*, which also describes efforts to collect systematic data on well-being at both the Census Bureau and the US Bureau of Labor Statistics. The 2012 *Report* follows the same format and includes the same studies cited in 2011, adding a discussion of several more papers. Although the increased emphasis on the uncertainty in the linkage between regulatory burden and economic measures versus well-being reflects recent trends in the economics literature, it may also indicate the current administration's preference for a discussion of the effects of regulation in terms that go beyond traditional economic measures.

3.8 Wages/employment and regulation

Although the impacts of federal regulation on wages and employment are not considered in the first several *Reports*, the Regulatory Right-to-Know-Act (2000) requires an evaluation of these impacts. From 2000 to 2002 and 2004 to 2009, the relevant section includes a quite general discussion of the effects of regulation on wages, without any real in-depth analysis of the existing literature.³⁴ The 2010 *Report* discusses the effects of labor and economic regulation on employment and wages but includes no discussion of the effects of environmental or social regulation. The 2011 and 2012 *Reports*, however, while noting the difficulty of assessing the impacts, include a robust discussion of the relationship between environmental regulation and employment or wages. Specifically, for the first time, citing a paper by Morgenstern et al. (2001), these *Reports* identify the three sources of potential beneficial and adverse impacts that regulation could have on employment: demand effects (expected to be negative), cost effects (expected to be positive), and factor-shift effects (ambiguous). They also look at issues related to investment and plant location.

Given the depth of the recent economic downturn, it is not surprising that the employment issue has surfaced only in recent years. Thus, it is not plausible to link the discussion of the topic to the political party in power. However, a closer look at the empirical studies cited indicates somewhat of a greater focus in *Reports* issued during the Obama administration on those analyses that

³⁴ The 2003 *Report* includes no discussion of the effects of regulation on employment or wages.

find negligible impacts or even a positive relationship between regulation and employment – several of which were published during the Bush years – and a de-emphasis of the literature that finds a negative relationship.

3.9 Retrospective analysis

The issue of retrospective or ex post analysis of regulation has been raised since at least the 2003 *Report*, sometimes under the rubric of validation studies. The 2004 *Report* reviews a paper by Harrington, Morgenstern, and Nelson (2000) that assembled all the retrospective studies available at the time, mostly on regulations issued by EPA and the Occupational Safety and Health Administration (OSHA) –based on a “convenience” rather than a “representative” sample – and compares the cost estimates with the prospective or ex ante analyses conducted in the RIAs. The *Report* notes that the Harrington et al. study found that the ex ante estimates of total cost tend to exceed ex post costs, although the per-unit abatement costs are about as likely to be overestimated as underestimated. The *Report* notes that the higher ex ante versus ex post cost estimates could be attributed in part to the reduced scope of the rules as actually implemented and in part to unanticipated technological changes that firms were able to adopt, especially with rules in the sample providing flexibility through market-based incentives. The *Report* also discusses the issues associated with determining the actual cost burden for a rule.

The 2005 *Report*, titled *Validating Regulatory Analysis*, carries the issue further by devoting a full chapter to the topic. The *Report* states that validation studies are useful in several ways: “they can assist policy makers in determining how much weight to give to benefit–cost information compared to other kinds of information in the regulatory process. ... [They] can also help pinpoint ways to improve the accuracy of benefit–cost estimates in the future [and they] ... can help identify specific rules that are ripe for regulatory reform, since their benefit–cost balance may be more or less favorable than originally expected” (OIRA, 2005, p. 42).

Noting that the draft 2005 *Report* had reproduced abbreviated summaries, conclusions, and/or abstracts from a variety of ex post studies on the issue, and noting also that the draft *Report* had sought public comment on this body of literature, the bulk of the discussion in the 2005 *Report* is devoted to an internally developed ex ante/ex post comparison of a sample of 47 regulations assembled by OIRA, covering five different federal agencies.

On the basis of the internal OMB analysis, the 2005 *Report* (OIRA, 2005, p. 48) highlights several points:

- “[T]he most robust pattern is that the agency analyses in the sample tend to overestimate the benefits of rules and the benefit–cost ratios. ... This pattern is consistent with a prediction in public-choice theory that organizations seek to generate information that is favorable to their actions.”
- “[T]he costs of regulations are slightly more likely to be overestimated than underestimated. This pattern, though weaker than the pattern found for benefits, is consistent with economic theory suggesting that regulated entities, when allowed the flexibility, will innovate and find less expensive ways to comply with rules than can be anticipated by agencies when rules are developed. In addition, in some cases regulations are not enforced *ex post* to the same degree assumed by the *ex ante* analysis. In this case an *ex post* study would likely find that incurred costs (as well as benefits) were overstated. However, if the regulation was not enforced because it was not economically or technologically feasible, the RIA may have actually underestimated costs.”
- “Our finding that the benefit–cost ratio is more likely to be overestimated than underestimated differs from a finding reported by a team of analysts from Resources for the Future. They found that *ex ante* ‘unit cost per benefit’ (the inverse of our ratio) is overestimated about as often as it is underestimated.”

Some discussion of retrospective analysis has reappeared every year, up to and including the 2012 draft *Report*. In some years, the *Report* reiterates all or parts of the litany of issues initially articulated in the 2005 *Report*. The 2009 *Report* and all subsequent ones refer to a range of specific retrospective studies and generally encourage agencies to conduct retrospective studies of major rules, although they provide no specific guidance. The 2011 *Report* calls for the creation of “a continuing culture of both prospective and retrospective evaluation,” saying that “a possible approach involves randomized controlled trials, in which regulatory initiatives are used in some domains but not in similarly situated others, thus allowing a careful analysis of their effects” (OIRA, pp. 63). The 2011 and 2012 *Reports* cross-reference a pair of executive orders that urge agencies to conduct retrospective analyses, although neither executive order establishes specific requirements or guidelines for conducting them.

The first revisiting of the *ex ante/ex post* comparisons originally reported in the 2004 and 2005 *Reports* occurs in the 2011 *Report*, which refers to an “incipient literature on the practice of regulatory ‘look back’” (OIRA, 2011, p. 64). For the first time, the 2011 *Report* cites the unpublished 2006 study by Harrington, which explores an expanded sample of 61 rules from the same five agencies covered in the 2005 *Report* and for which benefit–cost ratios could be compared *ex ante* and *ex post*. Reference is made to the Harrington finding that both benefits and costs were overestimated “with about equal frequency.” Reference is also made to Harrington’s general conclusion that, although both costs and benefits turned out to

be lower than prospective estimates, there was “no bias in estimates of benefit–cost ratios” (OIRA, 2011, p. 65).

In subsequent text, the 2011 *Report* reiterates the detailed results from the 2005 *Report* based on its sample of 47 studies and the conclusion that benefits are overstated more often than costs are overstated. At the same time, the 2011 *Report* notes that “at least from this study, it does not appear correct to conclude that agencies have systematically underestimated the ratio of benefits to costs, or that the benefits of rules usually turn out to be higher than anticipated” (OIRA, 2011, p. 66).

How does one interpret the consideration of retrospective analysis in the various *Reports*? First, it seems clear that both Republican and Democratic administrations support the idea of retrospective analyses, the importance of ex ante/ex post comparisons, and the need for more research in the area. Second, although it initially reported the Harrington et al. (2000) findings suggesting that total costs tended to be overestimated whereas per-unit cost calculations were relatively accurate, the Bush administration then conducted an internal study – which found that benefits were overestimated more often than costs – and devoted an entire chapter to the issue. But the subsequent 2007 and 2008 *Reports* do not report the findings based on the expanded sample in Harrington’s subsequent study (2006), which suggested the opposite result. Third, the Obama administration did report the results of the Harrington (2006) study, albeit not until 2011, and did issue what is arguably a modest qualification of the findings of the 2005 *Report*. Overall, we conclude that the Bush administration was more comfortable with the notion that RIAs overstate benefits relative to costs, whereas the Obama administration is more comfortable with the finding of no apparent bias in the estimates of benefits versus costs.

4 Conclusion

Discerning regulatory philosophies in a complex federal system is a challenging task. Nonetheless, based on our review of all 15 OIRA *Reports to Congress on the Benefits and Costs of Federal Regulations* issued since 1997, we identify relatively clear cross-administration differences in five broad areas: the role of OIRA as a gatekeeper versus advocate for public comment as a means to improve in agency rulemaking; the relative emphasis on difficult-to-measure benefits versus a more conservative treatment of benefits and a greater concern for the costs of regulation; the focus on information disclosure; the treatment of intergenerational benefits; and the linkage between environmental, health, and safety regulation and employment and broader economic activity. Although there are additional subtleties to the argument, it seems fair to say Republicans generally want to exert greater control over the regulatory agencies than Democrats, and they worry less about difficult-

to-measure benefits and more about uncounted costs. Further, Republicans see more negative consequences of regulation for the broader economy while Democrats tend to embrace what they sometimes interpret as positive consequences.

Especially inside the Washington Beltway, these differences can loom large. But how important are they, really? Do these differences support the view that benefit-cost analysis as implemented by the federal government is simply an easily manipulated means of producing analytic results that support different political views? We do not think so. Rather, we see a relatively strong embrace by both political parties of the core benefit-cost elements of E.O. 12866. This is not to say that all regulatory decisions are made robotically on the basis of cost–benefit analysis or that administrations do not seek to torque the analysis of individual rules. In fact, benefit-cost analysis is only one (albeit an often important) element in regulatory decisions. From administration to administration, only one-third to one-half of major rules actually demonstrate positive net benefits. For the remaining rules, benefits or costs are not monetized or, in a few cases each year, the rules have net costs.

Overall, we find grounds in the *Reports* for optimism about the integrity of economic tools used in regulatory decision making. The cross-administration differences we identify appear to reflect relatively modest shifting across political parties on issues where reasonable people may disagree. A signal contribution of the requirement for economic analysis of regulation has been to provide a shared framework and discipline to the analytic process. We believe the present review confirms both the utility and the integrity of this approach, while identifying areas where economic research can find a receptive audience among policymakers. Going forward, we encourage other analysts to review a broader set of government documents to further refine the differences in perspective across administrations.

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