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The Paradox of Regulatory Discretion

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The Paradox of Regulatory Discretion

Despoina Mantzari and Francesca Pia Vantaggiato

Regulatory authorities in the utilities sector typically employ economic evidence and analysis to make expert discretionary judgements under uncertainty. However, economic analysis does not provide clear answers regarding policy outcomes. This exposes regulators to environmental uncertainty (i.e., uncertainty regarding the reactions of other actors in the institutional system to their decisions). When environmental and policy-outcome uncertainty are high, discretion takes center stage. Will regulators pursue the course of action suggested by economic analysis and their expert judgement, or not? What explains this choice? To answer these questions, we carry out a comparative analysis of three British regulatory authorities in the utilities sector: the Office of Communications (Ofcom), the Office of Gas and Electricity (Ofgem), and the Water Services Regulation Authority (Ofwat). We consider key sectoral and organizational characteristics, namely the extent of market competition and statutory discretion. We rely on interview evidence and documentary analysis and a principal-agent framework. Our analysis reveals a paradox: when environmental and policy-outcome uncertainty are high, higher regulatory discretion is associated with a reduction in the importance of the role of economic expertise in regulatory decisions. Our findings call for a normative reflection on the role of expertise in regulated sectors.

Keywords: Expertise, uncertainty, principal-agent, regulation, judicial review, discretion.

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I. INTRODUCTION

Like all bureaucracies, independent regulatory authorities (IRAs) face considerable uncertainty, both with respect to their environments (Milliken, 1987) and with respect to the consequences of their decisions (Krause, 2003). In the realm of economic regulation, including in utilities regulation, the discipline of economics is the cornerstone of regulatory decisions, providing for evidence-based decision-making that is meant to reduce uncertainty (O'Toole and Meier, 2003) and lead to credible and predictable regulatory policy (Majone, 1997). However, economic analysis is not always capable of reducing uncertainty to acceptable levels. Then, the regulator has a discretionary choice to make: either pursue the course of action that they deem appropriate, even though its consequences are uncertain, or not pursue it. What explains their choice? How do utility regulators make discretionary judgements under uncertainty? This article addresses these questions in comparative perspective, focusing on the use of economic expertise in three UK IRAs: the Office of Communications (Ofcom),¹ the Office of Gas and Electricity (Ofgem),² and the Water Services Regulation Authority (Ofwat).³ We rely on evidence derived from regulatory decisions and court judgments as well as nine semi-structured elite interviews with regulatory economists working for Ofgem, Ofcom and Ofwat.

The sources of uncertainty in the regulation of public utilities (Crampes & Laffont, 2016) arise either from the information asymmetries existing between the regulated entity, who possesses knowledge of its costs and operations, and the regulator (Laffont & Tirole, 1986), or because of the very nature of utilities regulation, which is characterized by some as long-term contracting in the context of uncertainty (Williamson, 1976). To date, however, little attention has been paid to exploring the use of regulatory discretion when economic analysis does not provide conclusive

support to a regulatory decision. Schrefler (2013) represents a notable exception and suggests that regulators use their expertise differently depending on a given issue's complexity and the level of conflict it triggers in the policy arena. Schrefler (2013) tests her framework on the case of the British regulator Ofcom by examining several decisions having different levels of conflict and complexity.

In this paper, we complement and advance Schrefler's (2013) analysis in three ways. Firstly, we adopt a comparative approach across regulators of different sectors. Secondly, we narrow the focus to cases where uncertainty is high and redefine policy conflict and complexity as different types of uncertainty: environmental uncertainty (Milliken, 1987) and policy outcome uncertainty (Krause 2003), respectively. Thirdly, we consider sectoral and organizational variables that predict how regulators will use their expertise in response to uncertainty. With respect to sectoral variables, we consider the level of retail competition that exists in the market the regulators oversee; with respect to organizational variables, we consider the extent of the regulators' formal statutory discretion.

To conceptualize the institutional environment of regulatory authorities, we rely on the principal-agent (P/A) theoretical framework of analysis, borrowed by political science from economics (Pollack, 2002; Thatcher & Sweet, 2002). The framework envisages legislators and/or government as principals, who delegate statutory discretionary powers to bureaucratic agents (in this case, independent regulatory authorities) to undertake certain tasks. Therefore, P/A explains the act of delegation. However, P/A theory can also help frame the relationship between principals and agents post-delegation: regulators/agents have incentives to leverage their expertise to deviate from the preferences of the principals and further their preferred policy agendas (Weingast &

Moran 1983); thus, setting boundaries on bureaucratic discretion is one of the most important concerns of agency design (Calvert, McCubbins et al., 1989; Epstein & O'Halloran, 1994). Legislators can either control agents directly or put in place institutional constraints to tame their discretion and to flag agency wrongdoing (Epstein & O'Halloran 1994). These constraints include a third set of institutional actors, so-called “ongoing controls” (e.g., regulatees and courts) (Epstein & O'Halloran 1984; McCubbins & Schwartz 1984).

In our analysis, we compare the choices made by IRAs facing high environmental uncertainty and different oversight mechanisms (or “ongoing controls”). We operationalize ongoing controls with reference to the appeal processes against regulatory decisions. Appeal routes vary depending on the nature of the issue at hand, and also differ significantly for each of the regulated sectors. Furthermore, a number of appeal bodies with dissimilar expertise in regulatory matters (e.g., the specialist Competition and Markets Authority [CMA], the specialist Competition Appeal Tribunal [CAT], and the generalist High Court) and entrusted with varying standards of review (e.g., judicial review, statutory review, and statutory appeal) are involved in scrutinizing regulatory decisions (Mantzari, 2016). The statutory remit is relevant to our discussion as it guides the regulators' exercise of discretionary power. For example, a wide statutory remit, where the regulator has a plurality of objectives to serve, may enlarge the scope of discretion and invite more discretionary trade-offs as a result (O'Toole & Meier, 2003).

Our findings show that when economic analysis does not eliminate or reduce uncertainty to acceptable levels, regulators overseeing competitive retail markets (e.g., Ofcom) and possessing broad discretion face pressing “ongoing controls” (e.g., constant threat of legal challenge by regulated entities) and may consequently decide not to pursue a given decision/enforcement action,

fearing loss of reputation and possible sanctions by the principals (in line with Schrefler, 2013). In contrast, regulators overseeing noncompetitive retail markets and possessing low discretion (e.g., Ofwat) face lighter “ongoing controls” and leverage their economic expertise towards their principals in order to further their preferred policy options (supporting the propositions in Weber 1978). Finally, regulators with broad discretion but overseeing moderately competitive markets (e.g., Ofgem) appear to make decisions that downplay their expertise and comply with the principals’ preferences because they fear principals’ sanctions (see Calvert et al., 1989).

Our analysis shows that the strength of the “ongoing controls” may result in regulatory authorities using their discretion to determine to what extent economic analysis should play a role in their decisions, depending on the threats they perceive from their environment. Thus, our findings entail a paradox: when uncertainty is high, the higher the regulatory discretion, the lower the ability to employ it.

The article is structured as follows. Section II discusses the theoretical framework and main hypotheses of the study; Section III the methodological approach taken; Section IV sets the scene for the empirical analysis and briefly explores the institutional context of the UK utility regulators; Section V discusses the main findings of the empirical study; and Section VI concludes.

II. THEORETICAL FRAMEWORK AND HYPOTHESES

The normative justification for delegation of authority to IRAs is that they rely on technical analysis and expertise rather than political considerations in their decision-making processes (Franchino, 2004). Regulatory expertise is meant to provide evidence-based decisions (Majone, 1997) able to reduce the uncertainty that is endemic to utility regulation (Crampes & Laffont, 2016). There are many sources of uncertainty in regulatory analysis, ranging from how to interpret the very mandate of the regulatory authority (Gallie, 1955) to how to remedy information asymmetries (Simon, 1955), while resolving ambiguities in meaning and causality (Abbott, 1997). Regulators assume rational behavior on the part of the consumers (Elster, 1994), an assumption which is often not matched by reality (Price & Pham, 2009). Often, expert analysis fails to provide conclusive support to a regulatory decision.

Uncertainty does not end within the walls of regulatory offices; it also pertains to the consequences of regulatory decisions in the real world. These comprise both the potential impact of regulatory decisions on consumers and firms and the perceptions and preferences of other actors in the institutional environment. Policy theory calls the first type of uncertainty “policy outcome” uncertainty (Krause, 2003; O’Toole & Meier, 2003), which concerns the consequences of regulatory decisions in the real world. The second type of uncertainty is defined as “effect uncertainty” (Milliken, 1987), which concerns the behaviour of other actors in the institutional system who have a legitimate claim to intervene in the decision. For clarity, we use the term “environmental uncertainty,” rather than “effect uncertainty,” throughout.

The delegation literature usually focuses on the internal dimension of the organization, as well as on the following question: “Given uncertainty, what approach does the regulator follow in order to arrive at a decision?” In contrast, we focus on the external dimension. We leave the internal process of arriving at a decision unscrutinized and assume that regulators possess adequate expertise. If the necessary and appropriate steps in regulatory analysis have all been taken but policy outcome uncertainty remains relatively high, the regulator has a choice to make: make the decision that they deem more appropriate (and we assume that this decision will be based on their expert analysis, given that expertise is the key to their legitimacy) or not. We ask: “what explains their choice?” We argue that the answer resides in the external environment of the regulatory authority.

Where expertise fails, discretion takes center stage. Regulatory authorities are usually provided with statutory discretion concerning the interpretation and fulfilment of their mandates. Surprisingly, however, the literature has paid little attention to how regulators use their discretion when deciding whether or not to pursue the course of action dictated by economic analysis. Schrefler (2013) represents a notable exception: she suggests that regulators use their expertise differently depending on the interaction between the complexity of the issue at hand and the level of conflict in the political/regulatory arena. The level of conflict is reflected in the formal arrangements and power distribution between the agency and its principal(s), particularly with respect to control mechanisms and sanctions (McCubbins, Noll, & Weingast 1987; Hall, Scott, & Hood 2000). Disagreement on the policy issue between principal(s) and agents indicates a high level of conflict. The complexity of the issue is understood as a continuum, ranging from policy issues that the regulators can easily address with their expertise to complex problems for which

existing knowledge does not provide any solution, or where the medium- and long-term consequences of possible policy approaches are unknown or risky, generating uncertainty (Morgenstern, 1997; Schrefler, 2010).

Schrefler (2010) predicts that when both the level of conflict and complexity are low, regulators will make instrumental use of their expertise and make decisions relatively easily. When the level of conflict is high but the policy issue is not technically complex for regulators, regulators will leverage their expertise to address it in their preferred way. When the issue at hand is complex and conflict is high, regulators will refrain from making decisions, fearing the reputational damage that would follow a mistake. In particular, stringent oversight mechanisms (e.g., legal review) constrain regulatory decision-making and are likely to push the agency into adopting strategic behaviors to cope with its external environment. In Schrefler (2010), which focuses on one regulatory authority (the British telecommunications and media regulator, Ofcom), this strategic behavior consists of symbolic use (or non-use) of expertise (i.e., the regulator refrains from making decisions that could cost them embarrassment in court).

Schrefler (2010) relies on principal–agent (P/A) theory to conceptualize the relationship between government and regulator. P/A theory is a theory of delegation derived from transaction cost economics that is widely used in the literature to explain the political decision to delegate decision-making authority to independent agencies (Carpenter & Krause, 2014; Gailmard & Patty, 2012; Schillemans & Busuioc, 2015). It is premised on a public choice view of delegation—that is, on the notion that actors (both politicians and regulators) act strategically. There are several reasons

why P/A theory is suitable for our inquiry: it explicitly refers to and relies upon expertise to justify the act of delegation and to achieve specific outcomes, and it comprises other actors in the institutional environment whose mandate is to constrain regulatory discretion. Therefore, the PA framework is able to account for the effect of uncertainty linked to these other actors' behavior and uncertainty in terms of outcomes. Even after delegation, the principals' efforts to monitor and tame regulators' discretion become a constant feature of their relationship: principals remain concerned with taming regulatory discretion, while agents remain concerned with the principals' ability to curtail their powers and/or resources.

Whenever regulators are unable to resolve all uncertainty within the internal regulatory decision-making process, but remain convinced of the necessity of action, they take into consideration the effects that moving forward with their decision would have in their environment. Regulators will be concerned not only with the actual potential impact of their decisions on consumers and firms but also with the perceived potential impact of their decisions by the principals. Therefore, P/A theory is useful for conceptualizing and understanding how and whether the regulator-agent uses expertise strategically as a means to contain oversight and monitoring from the principal.

Weber (1978) depicted the relationship between political masters and bureaucrats as asymmetric due to expertise: authority is located on the principal's side, but the informational advantage belongs to the regulators, who can leverage this advantage to expand their discretion. However, the P/A literature portrays the relationship between political masters and bureaucrats as not necessarily skewed in favor of the expert who controls knowledge. By setting appropriate

incentives, principals can effectively control agents and tame their discretion (McCubbins & Schwartz, 1984). Therefore, regulators will eventually comply with the preferences of their political principals in order to avoid adverse consequences (Calvert et al., 1989). In this way, principals exert “latent control” on the agents by virtue of their ability to affect, among other things, their powers and jurisdiction.

The P/A framework has been applied to understand delegation of authority to independent regulatory authorities (IRAs) in the context of the regulatory state in Europe (Thatcher & Sweet, 2002). The United Kingdom pioneered the delegation of discretionary powers to IRAs in Europe (Graham, 1995). In the 1980s, the privatization reforms of the Thatcher government in the United Kingdom introduced private capital into utility sectors, accompanied by the establishment of IRAs. Tasked with regulating utility sectors guided by efficiency criteria rather than electoral concerns, IRAs would ensure the financial viability of the sectors, mandate cost-reflective tariffs, and improve quality of service (Majone, 1997). Over time, competition would ensue, and *ex ante* regulation would become lighter or disappear entirely (Littlechild, 1983). Today’s evidence is that regulation has not disappeared; rather, regulators face increasingly complex challenges given the pace of technological innovation and the multiplicity of regulatory objectives that they need to satisfy. In the United Kingdom and elsewhere, the competitive transformation of utilities was accompanied by rules concerning, amongst other matters, access to infrastructure networks and price regulation. As a result, the role of economics in utility regulation became prominent, and expert economists were called upon to bring their knowledge and tools to bear on regulatory decision-making (Schrefler 2010).

IRAs have multiple principals and are subject to stringent oversight mechanisms. As mentioned, the P/A framework portrays the relationship between politicians and administrative agencies as one of (strategic) control: politicians fear that agencies will make decisions that deviate from the politicians' preferences, and seek to control them (Bawn, 1995; Moe, 1990). Therefore, when delegating authority, principals strive to minimize agency losses (i.e., the extent to which agency decisions deviate from their preferences), while not overly constraining the agency (Bawn, 1995; Moe, 1990). An overly constrained agency will lack the flexibility necessary to face unexpected issues, follow sectoral innovation, and tackle uncertainty. It follows that regulators who are most likely to face unexpected issues and technological innovation will be granted broader discretion. In contrast, regulators who regulate sectors where the pace of technological innovation is lower should be granted lower discretion. This is, indeed, what happens across different sectors of economic regulation. In the United Kingdom, and around the world, telecommunications regulators normally have broader discretion than regulators of energy and water sectors (Coen, 2005).

At the same time, technological advances influence the extent of competition in different regulated sectors. A suitable indicator of competition is the number of companies active in the market (Belloc et al., 2013). In sectors where competition is high, government plays a very limited role in industry regulation. Instead, regulatees scrutinize regulatory decisions and are quick to challenge them in court if they undermine their interests. In sectors where competition is low, government plays a bigger role in regulation and can influence or directly approve regulatory decisions. Thus,

regulatory decisions will be influenced or vetted by political principals, who exert direct, rather than latent, control (Calvert et al., 1989).

We expect that, when faced with “policy outcome” and “environmental” uncertainty, regulators will use their expertise strategically depending on the extent of competition in the market they oversee (which predicts the type of oversight mechanism to which they are subject) and on how much discretion they possess. Namely, regulators overseeing highly competitive markets (e.g., telecommunications) and possessing broad discretion will evaluate whether pursuing a certain decision/enforcement action is worthwhile, given that regulatees may challenge their decisions legally. In court, regulatees will leverage their superior knowledge of their own costs against the regulators (Coen 2005). Losing in court may tarnish the regulators’ reputation. The natural consequence of this is that regulators become averse to the risk of legal challenge and consequently resort to symbolic use (or non-use) of their expertise (Schrefler 2013). In our empirical analysis, this corresponds to Ofcom. In the case of regulators overseeing less competitive markets and possessing narrow discretion, the interaction of high environmental and policy outcome uncertainty should, according to the literature, lead regulators to comply with the preferences of the principals to avoid negative consequences (Pollock, 2002). This should correspond to the case of the water sector in the United Kingdom. We also examine the case of a regulatory authority possessing broad discretion despite overseeing a market where competition is lower than in telecommunications: this corresponds to the British energy regulator Ofgem. We do not formulate expectations concerning their use of economic expertise and derive these inductively from the data.

III. METHODOLOGY

This contribution combines doctrinal, theoretical, and empirical analysis. It focuses on three case studies, drawn from the enforcement activity of each of the three British utility regulatory authorities. For each IRA, the analysis delves into cases of regulatory decision-making on issues showing high complexity and generating high uncertainty, for which conflict in the policy arena was high. In the case of the communications regulator, Ofcom, the case study is related to the use of economics in termination rates disputes.⁴ In the case of the energy regulator, Ofgem, the case study is related to the use of economics in introducing competition to the retail energy market and the reregulation thereof.⁵ Finally, in the case of the water regulator, Ofwat, the case study is related to the use of neoclassical economics in introducing competition to the non-domestic market.⁶

We complement and triangulate analysis of legal judgments with evidence gathered through nine semi-structured elite interviews with regulatory economists. Specifically, we interviewed four experts at Ofcom, two experts at Ofgem, and three experts at Ofwat. The purpose of the qualitative review of the cases was not to describe in detail the use of economics in any specific case, but rather to gain a broad view of the role of economic evidence in support of discretionary assessments. Instead, the interview questions revolved around the interviewees' perceptions of the usage of economic expertise in the regulatory process, the role of uncertainty in decision-making, the limits of their discretion, and the role of other policy actors (e.g., regulatees, legislators, and consumers) and third institutional actors (e.g., courts) in the regulatory process.

The range of interviewees was balanced to involve economists in various positions within the agencies. Interviewees for this research were selected on the basis of their seniority and/or their role in each regulatory authority. Face-to-face, audio-recorded interviews were conducted “on the record” between June 2017 and December 2017, and then were transcribed. Interviewees received the interview protocol before the interviews and expressed both their written and oral consent to the interview being recorded and used to inform this research. Interviewees were asked questions about their interpretation of the extent of their regulatory discretion and subsequent questions about how they would characterize the interplay between their discretion and uncertainty in the fulfilment of their tasks, and to provide examples. We complied with all interviewees’ requests to keep certain pieces of information off the interview record. Interviews were conducted under promise of anonymity. The transcripts were manually coded. The coding was designed to identify the sources of uncertainty perceived by regulators and their response to uncertainty. Interviewees were given ample scope to self-direct their contributions within the context of a framework of prepared questions and issues for discussion deriving from the case studies.

IV. THE UK UTILITY REGULATORS IN CONTEXT

We selected three cases for our comparative analysis: the British regulator for Telecommunications and Media (Ofcom); the British regulator for Electricity and Gas (Ofgem) and the British regulator for Water (Ofwat). These three IRAs oversee different types of markets and possess varying degrees of discretion. Specifically, Ofcom oversees a very competitive market and possesses broad discretion; Ofgem oversees a market with intermediate levels of competition, and possesses broad discretion (although its decisions must take into account Ministerial

guidance); and Ofwat oversees a retail water market with no competition regarding household consumers and possesses narrow discretion (its decisions having to be approved by the relevant Ministry). We decided to compare three IRAs from the same country in order to hold the socioeconomic and political context constant and to ensure comparability along the dimensions of interest. In the next three paragraphs, we briefly outline the key duties, responsibilities, and discretion of each of these three regulatory authorities.

A. OFCOM

Ofcom is responsible for regulating the television and radio sectors, fixed-line telecoms, mobile phones, postal services, and the airwaves over which wireless devices operate.⁷ It was established under the Office of Communications Act 2002 and operates under a number of Acts of Parliament and other statutes. These include the Communications Act 2003, the Wireless Telegraphy Act 2006, the Broadcasting Act 1990, the Digital Economy Act 2017 and the Postal Services Act 2011. The regulator enjoys a broad statutory remit. Its primary duty in carrying out its functions is “to further the interests of citizens in relation to communications matters”⁸ and “to further the interests of consumers in relevant markets, where appropriate by promoting competition.”⁹

It is thus clear that Ofcom should not solely promote the interests of consumers, but also those of citizens. Nonetheless, it is not always easy to define such terms unambiguously. One way to distinguish the consumer interest from the citizen interest is to attach the latter to noneconomic objectives that the regulator “must secure” or “have regard to” in performing its duties. Those include “plurality considerations, the impartiality of broadcasting news,”¹⁰ and “the needs of persons with disabilities, of the elderly and of those on low incomes.”¹¹ Consumer interests, on the other hand, relate to economic objectives, such as efficiency maximization and the promotion of consumer choice. With respect to the latter, Ofcom must ensure that consumers can make informed

choices from a range of good quality services at a reasonable price, whilst being protected from physical, psychological or financial harm.¹²

B. OFGEM

Ofgem was set up by the Utilities Act¹³ in 2000 as a nonministerial department following the merger of the previously separated Office for Electricity (Offer) and Office for gas (Ofgas). It operates under the direction and governance of the Gas and Electricity Markets Authority (GEMA), which makes all major decisions and sets the policy priorities of the economic regulation of the electricity and gas industries in Great Britain. The Utilities Act 2000 was intended to replace the various duties of the regulator by a new single competition-based primary duty: to protect the interest of consumers, where possible by promoting effective competition. Subsidiary duties were also included with respect to the elderly, people with disabilities, and people with chronic illness, whereas the Secretary of State was given new powers to issue guidance on social and environmental objectives to which regulators were required to have regard.¹⁴ However, two factors considerably increased Ofgem's uncertainty concerning its mandate (Gallie 1955) as well as "environmental uncertainty": (1) the broadening of the regulators' statutory remit in subsequent years to include sustainability,¹⁵ security of supply¹⁶ and affordability considerations,¹⁷ absent clear guidance on how trade-offs should be achieved; and (2) the sharing of the "policy space" with the relevant Ministry (at the time), the Department for Energy and Climate Change (DECC).

C. OFWAT

Ofwat was created by the Water Act 1989 and is responsible for the regulation of the water and sewerage industries in England and Wales. Its main overarching duties are to protect the interests of consumers, wherever appropriate by promoting competition, to ensure that the functions of

water and sewerage companies are properly carried out and to ensure that the companies are able to finance their functions by securing reasonable returns on their capital. Since 2005, Ofwat has had a duty to contribute to the achievement of sustainable development. The Water Act 2014 placed a new “resilience” duty on the water regulator to highlight the importance of the long-term resilience of water and wastewater systems in light of environmental pressures and population growth. Furthermore, it created new powers under which the Secretary of State (i.e., the Department for Environment, Food and Rural Affairs [Defra]) may publish a statement setting out strategic priorities and objectives for Ofwat to guide how it regulates water services in England.¹⁸

Together with the strategic policy statement, Ofwat is required to have regard to its Principal’s (i.e. Defra) Social and Environmental Guidance, which seeks to provide the regulator with guidelines concerning key environmental and social policies to which the Government expects it to contribute when discharging its statutory functions.¹⁹ The UK government has set out two high-level priorities for Ofwat in reviewing business plans: (1) to ensure long-term resilience, particularly given the substantial risk of drought in some regions; and (2) to protect customers by balancing resilience and affordability.²⁰ Finally, the Water Act 2014 introduced more competition in the retail market for nonhousehold water and sewerage services.

V. ANALYSIS AND FINDINGS

In this section, we examine the use of economic expertise in cases involving high environmental and policy outcome uncertainty for each IRA. For each case, we outline the issue, the sources of uncertainty facing the regulator, the role played by other policy actors (e.g., government, regulated

entities, and courts), and the final outcome of the case. We rely both on case law and empirical evidence gathered through interviews with experts at each IRA.

In the case of Ofcom, we show that, when uncertainty is high, the high risk of legal challenge leads the regulator to only make decisions that they are sure would withstand court scrutiny. This implies that nonaction is also a regulatory decision, corresponding to nonuse of expertise in Schrefler's typology (2013) and suggesting that the regulator prefers not to pursue the course of action dictated by economic analysis, even when deemed worthwhile, if doing so carries too great a risk of legal challenge. Ofgem faces a lower risk of legal challenge, because of the more limited extent of retail competition in the energy market. However, Ofgem possesses broad regulatory discretion and statutory remit. This motivates closer monitoring of regulatory conduct by the principals (Epstein and O'Halloran 1984). Hence, if the results of the economic analysis are inconclusive, or leave room for challenge, the regulator may decide not to act or may make a decision based on the manifest preferences of the principals, who otherwise will take the matter into their own hands, divesting the regulator of its powers. In contrast, Ofwat possesses less discretion and is less worried about legal challenge by regulatees, who are monopolists in their regional markets. This regulator has a more direct relationship with government. For this reason, this regulator is able to wield its expertise towards the principals in order to expand its own arena of discretion (Weber 1978).

A. SCENARIO 1: OFCOM

While Ofcom enjoys a broad statutory remit in advancing its regulatory objectives, it faces considerable "state uncertainty" (Milliken 1987) due to the fast-paced nature of the electronic communications sector. "State uncertainty" is mostly reflected in the trade-off between static and

dynamic efficiencies that Ofcom is routinely required negotiate. Unlike static efficiency, which is concerned with the most efficient combination of existing resources at a given time, dynamic efficiency occurs over time and is strongly linked to the pace of innovation within a market and improvements in both the range of choice and the quality of the products. As one interviewee explained:

We are often grappling with understanding the difference between a static benefit and a dynamic benefit, and that is probably a matter of regulatory judgement, how you view that, because the dynamic benefits of certain interventions are by definition uncertain. A more difficult evidence, for example, if you took something like innovation, innovation unambiguously has a benefit to consumers, but actually it is easier said than evidenced. We have proposed, for example, that British Telecom (BT) should provide dial fibre to its competitors so they can use those electronics to create services, because we believe that would create innovation. It's much harder to say what that innovation is; if we knew what innovation was we would not be regulators, we'd be business people. And yet that benefit is part of our cost-benefit analysis, because it clearly imposes a cost on the industry. . . . So, quite often we are balancing investment incentives to get the innovation (Ofcom 1).

“State uncertainty” is not the only type of uncertainty facing Ofcom. The plurality of actors involved in media and telecommunications increases the prospect of “policy outcome” uncertainty. The 2011 market review of the wholesale mobile voice call termination is a case in point.²¹ Voice call termination is a service, provided by the intended recipient's mobile communications provider to the originating communications provider, that is necessary for mobile and fixed communications providers to connect their customers with recipients on different mobile networks. For this service,

operators impose a wholesale charge known as “mobile termination rates” (MTRs). These have been subject to regulatory control on the grounds that without control the significant market power exercised by operators would be detrimental to competition and to consumers. Ofcom was of the view that this price control should be based on either the so-called Long Run Incremental Cost (LRIC) or LRIC+. The fundamental difference between the LRIC and the LRIC+ is that the former is intended to cover the terminating operator’s direct costs of terminating a call, whereas LRIC+ is intended to make a contribution to the terminating operators’ fixed and common costs, such as the costs that are involved with running a network. Economic theory suggests that access prices should ideally reflect the marginal costs of an efficient network operator (REF), and thus LRIC was regarded by the regulator as a better approximation of marginal costs that would result in lowering mobile termination rates. However, Ofcom could not make its decisions on the sole basis of efficiency considerations. In line with its statutory duties, Ofcom was required to consider the benefits and detriments of each of these two pricing methodologies (i.e., their distributional implications) against its broader policy objectives. For example, the interests of dynamic efficiency or the protection of vulnerable consumers—the latter being a specific social group that Ofcom has a statutory duty to protect—favored the adoption of LRIC+, while the interests of competition pointed towards pure LRIC. Ofcom eventually reasoned that a pure LRIC approach would confer the greatest possible benefits on consumers. But, as explained by one of the interviewees involved in the case, when producing the body of economic analysis supporting the decisions, the threat of appeal was an important factor guiding the type of economic evidence produced:

We thought, well, this is an area where economic analysis should have something to bring to the table, and we commissioned some econometric analysis to try and get under the skin

of the problem . . . what would happen to prices, what would happen to demand, because that seemed to be the obvious way to address this question, and what we found was . . . econometric analysis is very interesting, but ultimately was not definitive. It came up with a range of estimate for the elasticity of demand. . . . The trouble was the range, the confidence interval around the parameters estimates were so big that . . . if this estimate was actually at one end of the range rather than the other, it kind of flips the result, so we were left with a situation where the econometrics did not give us anything we could rest a decision on. And in parallel to the econometric work, we were having discussions with the industry, and the industry [feared losing revenue], and because our econometric analysis didn't give us a kind of conclusive, opposite argument that we could say "No, we don't think that's right, and we have the actual analytical evidence-based to back that up," we didn't feel we could push our argument further. . . . That was frustrating, but it was interesting to see the evolution of the . . . starting off from a presumption, let's do something, let's be bold and innovative and then over time going actually, hmm, let's roll back from that. (Ofcom 1)

The interviewees noted that the analysis itself was not an easy economic exercise leading to a predictable outcome (Ofcom 1, 2, 4). Environmental uncertainty (related to the pace of technological innovation and the growth of broadband traffic data) and "policy outcome uncertainty" (related to how the adopted methodology would impact mobile network operators and consumers) interacted to constrain the regulator. Both types of uncertainty directly influenced Ofcom's use of economic expertise, because of the presence of "ongoing controls" and in particular the threat of appeal (Ofcom 1, 4). Hence, while economic evidence and analysis was produced, legal advice was critical to the final decision adopted by the regulator (Ofcom 4). As one interviewee conceded, economic analysis "does not say, 'Oh well, the right answer is this,

there cannot be another right answer.’ In almost any real-world circumstance, there’s a range of possible decisions, or views” (Ofcom 2).

To better appreciate this point, it is important to explore the nature of “ongoing controls.” Until very recently, Ofcom’s licensing decisions under the Communications Act 2003 were subject to an appeal on the merits before the CAT by any party affected by the decision. This full appeal on the merits was due to the requirement of the EU Framework Directive on electronic communications.²² The significance of appeal on the merits cannot be overstated. Contrary to the ordinary courts, the CAT’s bench combines legal and nonlegal expertise in areas such as economics, business, and accountancy, allowing the tribunal to exercise its self-proclaimed “profound and rigorous scrutiny”²³ over all aspects of Ofcom’s decisions. In fact, among all the regulators examined here, Ofcom is the most frequently challenged in courts. On the one hand, this is due to the shorter regulatory period set for price controls in the sector (three years versus five years for the other two regulators); on the other hand, the multiplicity of market players active in this sector renders almost every regulatory decision susceptible to creating winners and losers. This in turn presents a strong incentive for companies to challenge Ofcom’s decisions:

We have the appeals process, merit appeals, which can be really very, very onerous and have actually driven a huge amount of complexity in the policy formulation. And actually, in terms of the staffing, we have a lot of people because the actual policy projects now have to be *so* thorough, because they are forensically challenged by stakeholders, both pre-court, but as soon as we move to statement they are invariably challenged in court. . . . There’s all the work associated with the proceedings themselves, but actually because we have to be so thorough so that we are more secure in the legal process, we have to probe. . . . My

assessment is we do even more work at the policy stage as well to buttress our position, because we have to be sure that what we are doing is correct and right and that we have looked through all the evidence very thoroughly. (Ofcom 1)

On the positive side, merits appeals can be seen as a means to clarify the wide statutory remit enjoyed by Ofcom and instil greater rigour in the regulatory decision-making process. On the other hand, the appeals system can be strategically deployed by market-players with deep pockets. Both affect the regulator's use of economic evidence. As one interviewee explained:

We are not necessarily risk averse, but we are cautious about recognizing the threat of litigation, that we do need to have a robust case for us to proceed, particularly if we are proceeding in the face of industry opposition. Had it been the case that part of the industry wanted the change, and others didn't, then we might have said well, actually . . . that may be something worth exploring.

I don't think regulators like to be seen to try something that does not work and then they have to withdraw it. I am not entirely sure where that comes from, you'd have thought if we put in place a remedy that is not working then we should take it off, but there is a reputational aspect to that. (Ofcom 3)

Such concerns as well as considerations relating to the length of an appeal and the high costs of continuing litigation in these fast-moving markets recently led to a relegation of Ofcom's decision to a judicial review standard.²⁴ In the future, the specialist Competition and Markets Authority (CMA) and the Competition Appeal Tribunal (CAT) will both be required to review telecommunications appeals "having regard to judicial review principles," rather than, as in the

previous regime, “on the merits.” A further appeal on point of law can be brought to the Court of Appeal on behalf of a party or anyone else with sufficient interest.²⁵

In sum, high “policy outcome uncertainty” translated into high “environmental uncertainty” (i.e., how regulatees would react). Although central to the decision-making process, economic analysis was eventually downplayed in the face of legal considerations and the need to avoid litigation. As per Schrefler (2013), reputational concerns inform Ofcom’s decisions to a wide extent.

B. SCENARIO 2: OFGEM

In the aftermath of privatization, prices for electricity and gas fell. Beginning in 2000, however, prices began to increase. By 2007–2008, there was a major concern about the competitiveness of the industry,²⁶ with Energywatch, a body representing consumers, and Ofgem’s fiercest critic, arguing that energy markets were failing consumers and that the then competition watchdog, the Office of Fair Trading (OFT), should step in. Littlechild (2019) offers a detailed documentation of the prevailing political climate at the time that led to a series of unsuccessful interventions aimed at re-regulating the retail energy market. He argues that there was a “reduced involvement of economists in senior roles at Ofgem” (Littlechild 2019, 126) that led *inter alia* to economically uninformed retail energy market policies against the experts’ consensus and advice. These were the nondiscrimination obligations for energy suppliers adopted following the Energy Supply Probe²⁷ in 2009 and the simplification of tariffs introduced in light of the Retail Market Review initiated in 2010.²⁸ Both had attracted wide criticism from the academic community at the time of their introduction and were scrutinized in great detail by the CMA (Hviid and Price 2012; Littlechild 2014).

Regarding the nondiscrimination obligations, these prevented energy suppliers from charging different prices in different regions, as well as from charging different prices for customer groups using different payment methods. The basis for the interventions was the protection of vulnerable consumers, given that these consumers were less likely to take advantage of new entrants' offers or benefit from better prices offered to direct debit customers. Ofgem reckoned that the price differentials that always existed between more and less active customers were "unfair." The regulator failed to adequately explain why the nondiscrimination obligations were appropriate and gave little consideration to the potential downsides. Crampes and Laffont (2016) report that in various policy reports, Ofgem had expressed doubts regarding nondiscrimination measures, indicating "policy outcome" uncertainty. In the end, however, the regulator implemented these measures, which created unintended consequences for consumer empowerment and the development of competition; the policy prevented a competitive market by pursuing equality of outcome—that is, the imposition of a "fair" outcome that was different from what a fully competitive market would have generated. Criticism from the academic community was fierce:

There is a considerable body of economic analysis and literature which indicates that prevention of such price differences is likely to harm competition in the market; and there is little evidence that it will necessarily help vulnerable customers (Waddams 2009).

During the second wave of interventions associated with the Retail Market Review, Ofgem removed such obligations and introduced instead measures aiming at the simplification of tariffs ("simpler choices" component). Tariff simplification was premised on the findings of behavioral economics regarding consumers' cognitive limits, and it aimed to facilitate consumer switching. However, Ofgem used little economic analysis or empirical evidence in support of its claim that

the number and complexity of tariffs was a major determinant of customer engagement and switching. Nor did it acknowledge the possibility that its prior regulatory interventions might have reduced the number of active customers. Hence, tariff simplification had the opposite effect on consumer engagement: it restricted consumer choice, adversely impacted the competitive process, and reduced consumer welfare. The upshot was that prices increased for all consumers.

Ofgem eventually referred the energy market to the CMA for an in-depth market investigation in 2014, following a joint OFT/OFGEM assessment of the state of competition in the energy market in Great Britain.²⁹ This notoriously broad tool granted by the Enterprise Act 2002 enables the CMA to look at any competition issue connected with the supply or acquisition of gas and electricity in Great Britain, including both retail (households and microbusinesses) and wholesale markets, so as to decide whether any existing market failures result in an adverse effect on competition (AEC). If one or more AECs are to be found, then the CMA must determine whether it should take action itself to remedy the AEC, and/or whether it should recommend actions to be taken by others (such as the government or the regulator).³⁰ A broad range of remedies can be imposed, ranging from structural remedies (i.e., divestiture), to license modifications, price controls, informational remedies, and recommended actions.³¹ In the case of the energy market, these included, among others, a return to price cap regulation.

The CMA report states that Ofgem's interventions in the retail energy market were based less on thorough economic analysis and more on concerns that the principals would intervene and take powers away from the regulator:

Two of Ofgem's most important decisions in recent years (neither of which we consider to have benefited customers)³² were taken against a backdrop of DECC taking powers—or

stating its readiness to take powers—to implement changes in primary legislation in the event that Ofgem did not act. We do not know how material this context was in influencing Ofgem, but the coincidence of DECC’s and Ofgem’s actions risked creating the perception of a lack of independence on the part of Ofgem.³³

This view was also shared by one of the interviewees:

There is a feeling that we paid too much [attention] to that [political] environment in the past. Hopefully, we are more focused now on the statutory objectives and not think[ing] too much about second-guessing what is going on externally. (Ofgem 1)

Acutely aware of the broader institutional context in which Ofgem operates, the CMA notice of possible remedies further remarked that “it is neither realistic nor credible for DECC always to refrain from exercising its discretion over elements of policy, and we note that it is always possible that DECC and Ofgem disagree on a particular policy.”³⁴ While DECC is in principle responsible for setting policy, “Ofgem inevitably takes decisions which develop further these policy objectives and go beyond mere implementation.”³⁵

The preceding analysis brings to the fore the shifting boundaries between the expert regulator-agent and its political principal—the Ministry—when various sources of uncertainty are present. In this case, Ofgem faced “policy outcome” uncertainty, as the rationale for nondiscrimination clauses was unclear, together with “state” uncertainty in terms of how to reconcile multiple conflicting statutory objectives (Helm, 2012; Talus, 2013). The uncertainty surrounding the reactions of the principals in the event that Ofgem did not implement the nondiscrimination clauses eventually led Ofgem to comply with their preferences.

In conclusion, the interaction between the P/A dynamic and uncertainty led the regulator to downplay economic expertise in order to address the principals' expressed preferences. It was the threat of the principals' sanctions that played a determinant role in the regulatory stance adopted, rather than the threat of legal challenge. In other words, environmental uncertainty regarding the principals' reactions superseded "policy outcome" uncertainty concerning the consequences of nondiscrimination clauses on consumers and the market.

Eventually, however, the retail market review undermined the reputation of the regulator, with implications for its perceived legitimacy and authority (Majone, 1997). This may, in turn, explain Ofgem's more assertive stance with respect to the implementation of the price cap remedy for all household energy consumers on poor value tariffs—a heated political and policy debate that culminated in the enactment of the UK Domestic Gas and Electricity (Tariff Cap) Act.³⁶ Specifically, the Act puts in place a requirement that Ofgem set an absolute price cap on standard variable tariffs (SVTs) and default tariffs (i.e., a rate above which no energy supplier can charge) (Ioannidou & Mantzari, 2019). Ofgem argued that the cap on SVTs necessitated legislative action because of its wide remit and distributional implications. As one interviewee mentioned:

I think it would be uncomfortable if technocrats were making substantial redistributive decisions, but I do think it can be useful for us to lay out evidence based on that and provide the information to make that decision. (Ofgem 2)

In contrast, the government had previously suggested that Ofgem did possess the requisite powers to implement a wide-ranging price cap. Therefore, we may interpret the episode concerning price cap regulation as signaling that Ofgem, by demanding legislative action in this area, was prepared

to adopt a stronger stance towards the environmental uncertainty surrounding its regulatory actions.

C. SCENARIO 3: OFWAT

Compared to its counterparts in the telecommunications sector, Ofwat is less vulnerable to ongoing controls. This is due to the fact that unlike its counterparts, it regulates a more consolidated, vertically integrated market. Unlike the telecoms and electricity and gas markets, the water industry has remained vertically integrated since it was privatized in the late 1980s. This has meant that, in most instances, within each company supply area, the same company has provided the entire service from source to tap (and the reverse on the wastewater side). Therefore, there are fewer players in the retail water sector compared to telecoms and energy, and Ofwat emerges as the regulator least appealed in courts.

On April 1, 2017, the government approved a recommendation, made in the Cave review of competition in the England and Wales water industry, that the nonhousehold retail arms of water companies should become legally separated from their other business activities. However, opening the domestic market to competition still lacks consensus and governmental approval. Thus Ofwat has a narrower statutory remit compared to Ofcom and Ofgem, as it oversees a nonhousehold retail market with low degrees of competition and a household market characterized by lack of competition. Compared to other regulators, Ofwat operates under more direct principal guidance.

As one interviewee observed: “There is this sort of influence of the Ministry which you have to get buying into it; they have to issue a commencement order, guidelines; that is different from the

other regulators” (Ofwat 1). Commencement orders are a form of Statutory Instrument designed to bring into force the whole or part of an Act of Parliament that for whatever reason the Parliament does not wish to put into effect immediately upon Royal Assent. The gradual opening of the market to competition, deriving from the Water Act 2014, depends on such commencement orders. For example, in Ofwat’s recently published 2019 price review of the sector, the regulator envisages a bilateral market in water resources in which retailers will contract directly with upstream providers of water resources, with an access charge paid to the network business (competition in the market). However, such a market depends on government activation of the relevant provisions of the Water Act.³⁷

Ofwat is slightly different from other regulators in the sense that in some areas it needs approval by the Ministry in order to do things. It got approval to open up competition at the retail level for nonhouseholds, [but] it has not yet got approval to do that for households. There have been attempts, [and] some cost-benefit analysis done, [but] the government is not too convinced, [and] it has postponed the decision. It’s basically driven by government. I think if it was for us, we would extend it, because that would work better in the bilateral market: retailers would have a bigger share of customers with stronger incentive to go and look for resources. (Ofwat 1)

Because of these institutional and market characteristics, there are limited circumstances in which firms can challenge the regulator in courts; though recent challenges against Ofwat’s price determinations before the CMA in the Bristol Water case,³⁸ as well as the so-called Albion saga,³⁹ should not be underestimated. Both cases involved complex econometric modelling and uncertainty concerning the results of the models on the regulated companies.

The Bristol Water case⁴⁰ concerned an appeal to the CMA against Ofwat's price control determination. Bristol Water was concerned about the difference between its business plan and Ofwat's final determination in relation to the appropriate level of wholesale costs required to deliver the agreed outcomes. Reducing bills to the degree proposed by Ofwat would have meant that the company would not have enough funds to invest and run its business. Bristol Water argued that the resilience duty required long-term planning to address supply challenges, and, in any event, it needed to invest in a reservoir, which would be invaluable in the case of a drought. At the heart of the dispute lay Ofwat's econometric modeling. Bristol water claimed that Ofwat had relied too much on the latter and did not consider whether the reduction suggested was achievable in practice. The CMA scrutinized in great detail the econometric evidence and modeling supporting Ofwat's decision and ultimately substituted these with its own model. It argued that if resilience concerns were pressing, Bristol Water should have been able to demonstrate that additional supplies would be needed, as well as when they would be needed.

Similarly, in the Albion saga, Ofwat's economic determinations came under intense scrutiny, this time by the expert CAT. The litigation concerned the lawfulness of the price offered by Dwr Cymru (DC), an incumbent water undertaker, for the partial treatment and transmission of nonpotable water through a pipeline to a paper factory. Albion, a new entrant in the market, claimed that the price quoted to it by DC for "common carriage" across part of DC's network (the Ashgrove system) was excessive and gave rise to a margin squeeze, in violation of Chapter II of the Competition Act 1998.⁴¹ Following an investigation, Ofwat found that the common carriage price was justified in their application of the retail-minus pricing methodology (ECPR methodology). Albion appealed to the CAT against Ofwat's nonprohibition decision, arguing that DC had abused its dominant position by 1) demanding excessive prices and 2) by causing a margin

squeeze. The CAT upheld the appeal finding that the undertaking had engaged in margin-squeeze practices. The tribunal delivered a number of judgements on this matter, scrutinizing several aspects of the regulatory decision in great detail, including the relevant “imputation test.” Crucially, the CAT ruled on the appropriateness of the ECPR test to determine margins and any alleged squeeze, ultimately rejecting the use of the ECPR: “[I]t cannot be assumed that [the incumbent’s] upstream price is reasonable. . . . [t]he margin squeeze in question cannot be justified on the basis of an ECPR approach which is itself unsound.”⁴²

In point of fact, Ofwat appears aware that changes in its environment may affect the regulatory authority, *inter alia* via the threat of litigation. In the words of one interviewee:

There are lots of checks and balances in terms of when we make decisions; we can be held to account. Either company can refer our decisions in the context of cases—to the CAT for judicial review or in cases of price determination to the CMA—so we are very alert to the fact that we are not making these decisions alone, without prospect of a review. What would a reasonable person interpret [as] our duties, or whatever particular party—there’s plenty of cases that tell you how what’s reasonable would be interpreted. We have pushed the boundaries on some of those things. Certainly when we have looked at certain cost measures or how to apply cost of capital in particular cases, we have said we think that the case law is not necessarily the right starting place, given what happens in our sector is different. (Ofwat 3)

Importantly, the interviews and the case law suggest that, while possessing the least discretion and overseeing a sector lacking retail competition, Ofwat is the only regulator that did not downplay economic analysis in order to shield itself from its principals; on the contrary, Ofwat has wielded

its expertise towards politicians so as to promote the opening of the household retail market to competition and therefore expand its arena of discretion. As one interviewee explained:

I suppose there's this very ambitious goal to drive the sector forward, and with that it means that actually with policies coming in from the economics background, there's that ambition of developing the policy and basically looking at what the economic evidence can suggest, and then you have an equal force coming from the legal side of things. (Ofwat 2)

In response to the uncertainty stemming from the competitive transformation of the nonhousehold water market, Ofwat invoked its economic expertise. As one interviewee explained:

It depends what the uncertainty is; if we are uncertain about what the extent of entry will be, it just means we take that into account when we design access pricing and the other regimes that go around that to try and make them robust to the extent of entry. (Ofwat 3)

Another interviewee gave further support to this statement by arguing that when one compares Ofwat to its counterparts, Ofwat "is willing to take more risks." "The message from the Chairman recently," the interviewee added, "has been we may want to try new things, make mistakes; if you make mistakes we accept that it is a potential outcome" (Ofwat 1). However, the interviewee conceded that if Ofwat "gets challenged, it may change its mind about that [i.e. relying strongly on economic analysis]" (Ofwat 1).

Although limited in number (albeit significant in nature), the appeals against Ofwat's decisions along with the transformation of the retail water market may in the near future render the regulator more susceptible to the threat of litigation. For example, the introduction of codes put forward by the Water Act 2014 governing agreements between incumbent undertakers and

water supply and sewerage licensees wishing to compete to provide water and sewerage services in the new market also include regulations governing appeals to the CMA against a decision by Ofwat to make or not to make a revision to the code. Defra suggested an appeals approach similar to the adversarial, quasi-judicial procedure that exists for the energy sector, although the Government limited the right to appeal only to an undertaker or licensee in possession of a water supply and sewerage license.⁴³

In sum, the opening of the market to competition will render Ofwat more vulnerable to ongoing controls. The cases of Ofcom and Ofgem suggest that this may lead to a reconsideration of the relative weight of economic expertise in Ofwat's decisions, as these will have to take into account the reputational impact of litigation losses. In other words, the potential opening of the British domestic water market to competition represents a source of high "policy outcome" uncertainty.

VI. DISCUSSION AND CONCLUSIONS

Expertise is the main characteristic and the main asset of regulatory authorities; it underpins the regulators' legitimacy to make regulatory policy (Franchino, 2004). Moreover, regulators face environmental uncertainty in terms of how the institutional environment around them changes and what the actions and reactions of other actors will be (Galaskiewicz, 1985). This paper explored the effect of uncertainty on how regulators use their discretion concerning reliance on economic expertise when making decisions in the context of the principal-agent relationship they maintain with legislators and government.

The P/A framework is traditionally used to explain the act of delegation (Coen and Thatcher, 2008;

Gilardi, 2007; Lavertu and Weimer, 2009); however, P/A is useful for conceptualizing the relationship between principals and agents even after delegation has taken place. Far from arguing that the relationship between regulators and other policy actors is exclusively confrontational, we contend that P/A, by emphasizing strategic behavior, enables us to understand how regulators use their expertise strategically when faced with policy issues displaying high complexity and provoking conflict in the policy arena (Schrefler, 2013)—that is, when they face issues characterized by what we term environmental (Milliken, 1987) and policy outcome uncertainty (Krause 2003).

In order to make decisions, regulators consult extensively with other actors (Coen, 2005), including regulated entities (Pagliari and Young, 2016), civil society (Prosser, 1997) and government itself (Egan, 1998). However, our analysis does not examine the various stages of the regulatory decision-making process; rather, we gathered and examined evidence on its outcomes whenever expertise fails to reduce uncertainty to levels that are acceptable to the regulator. Acceptable uncertainty levels are those that shield the regulator from the threat of legal challenge by regulated entities and from government interference. Thus, we focus on the final stage of the regulatory decision-making process, when, despite thorough analysis, uncertainty predominates both with respect to the potential outcomes of regulatory decisions and with respect to the likely reactions of other actors in the regulator's environment. In those cases, discretion takes center stage, and the IRA needs to make a choice: pursue the course of action suggested by its analysis and substantive knowledge of the sector (i.e., its expertise), or not pursue it. What explains this choice? In this paper, we began answering this question by comparatively examining how three British IRAs deploy their economic expertise when faced with high environmental and policy outcome uncertainty given two key variables: the level of competition in the markets they oversee

(a structural variable) and the level of discretion they possess (an organizational variable).

Based on the literature (Schrefler, 2013), we expected that high levels of competition and discretion would lead regulators to resort to symbolic or even non-use of expertise. We formulated this expectation by considering that regulators with higher discretion are those most exposed to the “ongoing controls” put in place by principals to influence agency decisions. Ongoing controls consist of third institutional actors, such as regulated entities and courts, that flag agency wrongdoings (Epstein and O’Halloran, 1984). In particular, regulatees may initiate legal action against regulators if they perceive their decisions as damaging to their interests. However detailed and accurate the regulators’ economic analysis, the informational asymmetry between regulatees and regulators renders the latter exposed to the risk of being found wrong in court. Losing in court can tarnish the regulators’ reputation, suggesting that they have overstepped the boundaries of their discretion, and can potentially invite the principals’ intervention. Hence, if the regulator finds that their economic analysis does not sufficiently reduce uncertainty concerning policy outcomes, they may then decide not to act at all. The case of Ofcom lent support to this expectation.

Based on Calvert et al. (1989) and Pollock (2002), we expected that regulators with narrow discretion who oversee noncompetitive markets would make decisions that comply with their principals’ preferences in order to avoid sanctions. Our case study of Ofwat, however, does not lend support to this expectation. Rather, Ofwat appears to rely strongly on economic expertise to make even contested decisions, and to wield its expertise towards the Ministry in order to promote retail market competition in the household water sector. We suggest that this derives from the informational asymmetries existing between regulators/bureaucrats and the government (Weber, 1978; Weingast and Moran, 1983): the regulator, holding knowledge, is able to leverage it to

achieve its preferred outcomes. Lower discretion implies lower ongoing controls and more direct monitoring by political principals. In this case, regulators have the upper hand in the information asymmetry, because they possess superior knowledge compared to the principals. This, in turn, allows them to leverage their expertise against the government by promoting regulatory actions that expand their discretion.

Finally, we had formulated no expectation concerning an IRA possessing broad discretion but overseeing markets with limited competition, as is the case with Ofgem. Empirical evidence derived from regulatory decisions, the case law, and interviews showed that this regulator is less exposed to the constant threat of legal challenge by regulatees, but is more exposed to government interference in its decision-making. In the case study selected, Ofgem faces both considerable “policy outcome” uncertainty and high environmental uncertainty, as principals threatened to curtail its remit. Eventually, the regulator downplayed economic expertise in order to comply with the principals’ preferences and thus avoid sanctions, in line with Calvert et al. (1989). We explain this outcome as the result of the quite odd combination of broad discretion and Ministerial oversight characterizing the sector: the broad statutory discretion of the regulator and the low threat of legal challenge incentivize the principals to interfere in regulatory decision-making more often compared with cases in which the Ministry has more direct control over the IRA (e.g., Ofwat).

Our analysis reveals a paradox: in contexts of high policy outcome uncertainty, regulators with higher discretion eventually downplay the role and weight of economic expertise in their decision-making. This is not to say that economic analysis is not performed; rather, regulators, having considered the extent of policy outcome and environmental uncertainty they face, eventually decide not to rely on the results of economic analysis to guide their decision-making on a given

issue; rather, they make decisions that are strategically motivated by a desire to protect the organization from reputational losses or sanctions.

The implications of our findings concern both the exercise of regulatory discretion and the consequences of downplaying economic expertise in the regulatory decision-making process. On the one hand, the analysis suggests that the most effective way to constrain regulatory discretion is to provide ample margins of it. On the other hand, it suggests that ongoing controls that are too stringent may have an arguably undesirable side effect: stifling regulatory innovation. The senior regulatory officials interviewed for this research have voiced this concern, mentioning the excessive resources being devoted to legal challenges that may distort the focus of regulatory activity. This applies not only to Ofcom—the regulator most exposed to legal challenge—but also, increasingly, to Ofgem and Ofwat.

Technological advances in these sectors require innovative regulatory techniques and approaches. A tendency to favor the status quo, or even the regulatees' or the government's preferences, runs counter to regulatory authorities' very *raison-d'être*: the provision of unbiased, evidence-based decision-making. The reputational concerns emerging from our assessment seem to derive from the conflation of the notion that decisions need to be evidence-based with the notion that they can be devoid of unintended consequences. As the policy literature and practice convincingly show, this is, unfortunately, impossible. Appropriate constraints on regulatory discretion imply appropriate expectations concerning the regulators' role in policymaking; this needs to include the flexibility to respond to pressing contemporary challenges in network industries affecting millions of consumers in the United Kingdom and elsewhere.

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ENDNOTES

¹ Office for Communications. Ofcom was established by the Communications Act 2002 and operates under a number of Acts of Parliament and other statutes. It is responsible for regulating the TV and radio sectors, fixed-line telecoms, mobile phones, postal services, and the airwaves over which wireless devices operate.

² Office for Gas and Electricity Markets. Ofgem was set up by the Utilities Act in 2000. It is charged with implementing the Gas Act 1986, the Electricity Act 1989, the Utilities Act 2000, the Competition Act 1998, the Enterprise Act 2002, the Energy Acts of 2004, 2008, 2010, 2011 and 2013, and the relevant EU legislation, as well as the administration of a number of environmental projects on behalf of the government.

³ The Water Services Regulation Authority. Ofwat was established by the Water Act 2003 and is responsible for the regulation of the water and sewerage industries in England and Wales.

⁴ See Great Britain, Ofcom. 2010. *Determination to resolve a dispute between BT and each of Vodafone, T-Mobile, H3G, O2, Orange and Everything Everywhere about BT's termination charges for 0845 and 0870 calls.*
https://www.ofcom.org.uk/data/assets/pdf_file/0026/82961/final_determination.pdf.

⁵ See, e.g., Great Britain, Ofgem. 2018. *Ofgem launches probe into energy supply markets.*

[https://www.ofgem.gov.uk/publications-and-updates/ofgem-launches-probe-energy-](https://www.ofgem.gov.uk/publications-and-updates/ofgem-launches-probe-energy-supply-markets)

[supply-markets](https://www.ofgem.gov.uk/publications-and-updates/ofgem-launches-probe-energy-supply-markets). See Great Britain, CMA. 2016. *Energy Market Investigation: Final Report.*

<https://assets.publishing.service.gov.uk/media/5773de34e5274a0da3000113/final-report-energy-market-investigation.pdf>.

⁶ See, e.g., Great Britain, Ofwat. 2018. *Residential Retail Market.*

[https://www.ofwat.gov.uk/regulated-companies/future-markets/extending-retail-](https://www.ofwat.gov.uk/regulated-companies/future-markets/extending-retail-competition-to-households/)

[competition-to-households/](https://www.ofwat.gov.uk/regulated-companies/future-markets/extending-retail-competition-to-households/)

⁷ Communications Act 2003 and Office of Communications Act 2002, s 1.

⁸ Communications Act 2003, ss 3 (1) (a).

⁹ Communications Act 2003, ss 3 (1) (b).

¹⁰ See, e.g., Communications Act, ss 3(2) (c) and (d) and 3(4) (a).

¹¹ Communications Act ss 3(4) (i).

¹² Communications Act 2003, ss 3(5).

¹³ Utilities Act 2000, s 1.

¹⁴ Utilities Act 2000, ss 9, 10, 13 and 14.

¹⁵ For example, following the enactment of the Climate Change Act 2008, Ofgem’s principal objectives were amended by virtue of the Energy Act 2008 to include the protection of “existing and future consumers”; see Energy Act 2008, s. 83.

¹⁶ The Energy Act 2010 amended the principal objective to clarify that the interest of consumers should be taken as a whole, including their interests in the reduction of greenhouse gas emissions and ensuring security of supply.

¹⁷ As a result of the EU Third Energy Package 2009, additional consumer protection measures were included and a greater emphasis was placed on protecting vulnerable consumers.

¹⁸ Great Britain, Department for Environment, Food, and Rural Affairs. 2017. *The Government’s Strategic Priorities and Objectives for Ofwat—Presented to Parliament Pursuant to Section 2A of the Water Industry Act 1991*. https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/661803/sps-ofwat-2017.pdf.

¹⁹ Great Britain, Department for Environment, Food and Rural Affairs. 2013. *Defra’s Social and Environmental Guidance to Ofwat*. https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/243444/9780108512261.pdf.

²⁰ See (n 18).

²¹ Great Britain, Ofcom. 2011. *Wholesale Mobile Voice Call Termination*
http://stakeholders.ofcom.org.uk/binaries/consultations/mtr/statement/MCT_statement.pdf

f. See further, Great Britain, Ofcom. 2012. *Disputes between each of Sky, TalkTalk, Virgin Media, Cable & Wireless and Verizon and BT regarding BT's charges for Ethernet Services—Determinations and Explanatory Statement*
https://www.ofcom.org.uk/data/assets/pdf_file/0027/55539/ethernet_fd.pdf.

²² See Directive 2009/140/EC of the European Parliament and of the Council of 25 November 2009 amending Directives 2002/21/EC on a common regulatory framework for electronic communications networks and services; 2002/19/EC on access to, and interconnection of, electronic communications networks and associated facilities; and 2002/20/EC on the authorization of electronic communications networks and services, [2009] L337/37.

²³ *Hutchison 3G v OFCOM* [2008] CAT 11, at para. 164.

²⁴ Digital Economy Act 2017 (Commencement No 1) Regulations 2017 (2017 S.I. 675), s. 87.

²⁵ Communications Act 2003, s. 192.

²⁶ See Great Britain, Select Committee on Business and Enterprise. 2008. *Energy Prices, Fuel Poverty and Ofgem*. Eleventh Report of Session 2007–08, Volume I, p. 5.

²⁷ Great Britain, Ofgem. 2008. *Ofgem Launches Probe into Energy Supply Markets*.

<https://www.ofgem.gov.uk/publications-and-updates/ofgem-launches-probe-energy-supply-markets>.

²⁸ Great Britain, Ofgem. 2010. *Retail Market Review*.

<https://www.ofgem.gov.uk/electricity/retail-market/market-review-and-reform/retail-market-review> (accessed March 30, 2020).

²⁹ Great Britain, OFT/Ofgem. 2014. *State of the Market Assessment*

<https://www.ofgem.gov.uk/gas/retail-market/market-review-and-reform/implementation-cma-remedies/state-competition-energy-market-assessment>.

³⁰ Enterprise Act 2002, s. 134(4).

³¹ Enterprise Act, s. 161 and Schedule 8.

³² These were the introduction of the simpler choices component of the RMR reforms in 2013 and of Standard Licence Condition 25A in 2009, prohibiting regional price discrimination.

³³ See (n 5), para. 304.

³⁴ Great Britain, CMA. 2015. *Notice of Possible Remedies*. para. 117.

³⁵ Great Britain, CMA. 2016. *Energy Market Investigation. Provisional Findings*. Para. 11.65.

³⁶ Domestic Gas and Electricity (Tariff Cap) Act 2018 (c. 21).

³⁷ Great Britain, Ofwat. 2017. *Delivering Water 2020: Consulting on our Methodology for the 2019 Price Review*. <https://www.ofwat.gov.uk/wp-content/uploads/2017/07/Delivering-Water-2020-Consulting-on-our-PR19-draft-methodology-2.pdf>

³⁸ Great Britain, CMA. 2015. *Bristol Water plc Price Determination*.

³⁹ The Albion saga is long and complicated. Emphasis is placed primarily upon the following judgments: [2008] CAT 31 (hereinafter, “Albion unfair pricing judgment”); [2006] CAT 23 (hereinafter “Albion Main Judgment”) [2006] CAT 36 (“Albion Further Judgment”); 2008 EWCA Civ 536 (hereinafter “Albion Court of Appeal judgment”); [2009] CAT 12 (hereinafter ‘Albion Remedies’).

³⁹ *BSkyB v Competition Commission* [2008] CAT 25, at para. 61.

⁴⁰ See (n 42).

⁴¹ Albion was granted an inset appointed under Section 6 of the Water Industry Act 1991.

⁴² Albion Main Judgment, at para. 873.

⁴³ Great Britain, Defra. 2015. *Water Supply and Sewerage Licencing Regime: Standard Licence Conditions and the Approach to Secondary Legislation*. [<https://consult.defra.gov.uk/water/water-supply-and-sewerage-licensing-regime/>].