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Better by design: Rethinking interventions for better environmental regulation

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HIGHLIGHTS

- A typology of environmental policy and regulatory instruments has been refined through interviews with UK policy makers.
- Factors affecting policy makers' choices of instrument are identified.
- Direct regulation is considered necessary in many areas, to reduce environmental risks and tackle poor performance.
- Co-regulatory approaches may offer advantages for managing uncertainty, developing evidence and refining objectives.
- Policy makers' skills for effective design of policy and regulation are examined.

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ABSTRACT

Better regulation seeks to extend existing policy and regulatory outcomes at less burden for the actors involved. No single intervention will deliver all environmental outcomes. There is a paucity of evidence on what works why, when and with whom. We examine how a sample (n = 33) of policy makers select policy and regulatory instruments, through a case study of the Department for Environment, Food and Rural Affairs (Defra), UK. Policy makers have a wide range of instruments at their disposal and are seeking ways to harness the influence of non-governmental resources to encourage good environmental behaviour. The relevance of each influence varies as risk and industry characteristics vary between policy areas. A recent typology of policy and regulatory instruments has been refined. Direct regulation is considered necessary in many areas, to reduce environmental risks with confidence and to tackle poor environmental performance. Co-regulatory approaches may provide important advantages to help accommodate uncertainty for emerging policy problems, providing a mechanism to develop trusted evidence and to refine objectives as problems are better understood.

1. Introduction

Around the world policy makers, who design and implement policy and regulation, face the challenge of choosing among a range of policy and regulatory instruments to achieve their governments' environmental and economic objectives, pursuing 'clean' or 'dirty' development paths as their economies grow (Esty and Porter, 2005). The term 'regulation' is used here in its broadest sense to include all forms of social control, including those that harness wider social forces beyond government, including the influence of businesses and other actors in society (Gunningham and Sinclair, 1999). 'Instrument' is used to refer to a component part that makes up regulation, such as licensing, taxes or public information campaigns. Instruments include traditional direct regulation typically based on licensing and inspection, economic instruments such as taxes and subsidies, approaches intended to change behaviour through better information provision, approaches negotiated between government and industry, relying on industry self-regulation, and seeking to increase knowledge and capacity. Variants exist within each of these broad categories (Table 1).

Direct ('command and control') regulation has been associated with significant improvements in environmental conditions in industrialised nations. However, concern that direct regulation may inhibit innovation and international competitiveness has led governments to seek alternative approaches to achieving environmental objectives (see, e.g. BIS, 2012). Governments have sought to improve the implementation of regulation using a risk-based approach, targeting regulatory effort towards the greatest risks (e.g. Gouldson et al., 2009; Pollard et al., 2004, 2008; Hampton, 2005). Commentators have also observed a shift from 'government' to 'governance' as governments seek to harness the influence of wider social forces to influence the behaviour of individuals and businesses (Gouldson, 2008; Jordan et al., 2005) by sharing responsibilities for managing public risk and associated costs. In practice, instruments rarely operate in isolation; instead forming a complementary mix that influences behaviour through different levers across multiple actors.

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Table 1
Typology of policy and regulatory instruments (Taylor et al., 2012).

Type	Variant
Direct 'command and control' regulation	Ambient pollution requirements
	Input restrictions and output quotas
	Non-transferable emissions licences
	Technology controls
	Zoning/location controls
Economic instruments	Taxes and subsidies
	Tradable rights
	Payments
Information based instruments	Targeted information provision
	Naming and shaming/faming
	Registration, labelling and certification
Co-regulation and self-regulation	Voluntary regulation
	Covenants and negotiated agreements
	Private corporate regulation
	Private professional regulation
	Self-regulation
	Civic regulation
Support mechanisms and capacity building	Research and knowledge generation
	Demonstration projects and knowledge diffusion
	Network building and joint problem solving

In Europe, the European Commission has a long-established programme for regulatory reform across member states and in recent years has sought to further the ambitions of the 'better regulation' agenda towards 'smart regulation' (European Commission, 2010). The Organisation for Economic Co-operation and Development (OECD) similarly has promoted regulatory reform across its members (OECD, 2008). Emerging economies experiencing rapid industrialisation and economic growth are also tackling the challenge of designing effective regulatory frameworks to deliver sustainable development. For example, China has recently announced its Plan for Energy Conservation and Emission Reduction for the 12th Five-Year Plan Period (Ministry of Environmental Protection, People's Republic of China, 2012), which includes strengthened pollution controls and reduction targets for specific sectors, as well as the promotion of environmental management labels for vehicles.

In England, the Department for Environment, Food and Rural Affairs (Defra) develops environmental policy and regulation across multiple policy domains. Regulation is implemented by a network of regulatory agencies including the Environment Agency (EA) and regulators in local government. Programmes of work that drive regulatory reform have been pursued by successive governments in the United Kingdom of Great Britain and Northern Ireland (UK) over recent decades. The current 'Red Tape Challenge' (Cabinet Office, 2012a) seeks to reduce regulatory burdens through a process in which policy makers, politicians and the public scrutinise existing legislation to identify 'what should be scrapped, what should be saved and what should be simplified'. Simultaneously, the UK government is aiming to reduce government spending while devolving more decision-making to a local level, including through voluntary civic action (Department for Communities and Local Government, 2011).

Policy makers and regulators face the challenge of selecting suitable instruments to encourage green growth (OECD, 2011), reduce regulatory burdens, support wider government fiscal and social objectives, and maintain or improve environmental quality. However, they are hampered in their pursuit of 'evidence based policy' (Solesbury, 2001) by a lack of evidence on which policy and regulatory instruments work, why, when and with whom (Taylor et al., 2012). Our research seeks to help address this gap by answering the following research questions for a sample of policymaking practitioners: (i) What types of policy and regulatory instrument can policy makers choose between?; (ii) Which factors influence the effectiveness of these instruments in practice?; (iii) How do policy makers select instruments to deliver better policy and regulation?; and (iv) What does this imply for the skills and tools required by policy makers?

Answers to these questions are likely to set a richer context for the Red Tape Challenge programme for environmental policy and regulation and inform a route map by which a revised mix of interventions, of lower burden, can be designed and defended.

2. Methods

2.1. Rationale

The research used a case study approach (Yin, 2009; Summerill et al., 2010) using semi-structured interviews with policy makers to gather qualitative data. This interview approach allows open discussions to reveal nuances of policymaking practice without straying too far from the research objectives. Cycles of coding were used to elicit results from this data.

2.2. Selection of interviewees

The case of a single government department (Defra) was studied. Defra has primary responsibility for English environmental policy development across a wide range of policy domains, and may be considered a critical case (Yin, 2009) for testing theories of environmental policy practice. Interviewees (Table 2) were senior policy makers selected to provide insight into the practices within their policy domain. It should be noted that policy makers in the UK government often circulate between policy domains during their career, so some interviewees drew on wider experience. In line with Yin's (2009) rationale for single case study research, the aim was not for statistical generalisation, rather, to determine whether established theory provides correct propositions for this critical case, or whether alternative explanations are more relevant, challenging or extending theory.

2.3. Collection of data

Semi-structured interviews (33 individuals in 28 meetings) were conducted to collect narrative during September and October 2011, and lasted between 30 min and 1 h. Interviews were conducted using open-ended questions, structured around research questions examining the range of policy and regulatory interventions available to policy makers, their experience of effective and ineffective policy

Table 2
33 policymakers were interviewed in 28 interviews across a range of policy domains.

Policy domain	Number of interviewees
Exotic animal disease control	1
Climate change adaptation planning	1
Sustainable consumption and production	2
Local environmental control	2
Farming Regulation Task Force	2
Biodiversity	1
Food	2
Marine strategy	1
Common fisheries policy	1
Peat and Soils	1
Contaminated land	1
Food and Environment Research Agency (FERA)	1
Noise	1
Chemicals	3
Marine licensing	1
Livestock and livestock products	1
Cross-cutting	1
Water in the environment	1
Water quality	1
EU negotiation coordination	1
Landscape and forestry	1
Crops and Agricultural Products	1
Flood risk management	2
Animal welfare	1
Waste management	2