ASSESSING POLICY DIVERGENCE: HOW TO INVESTIGATE THE DIFFERENCES BETWEEN A LAW AND A CORRESPONDING REGULATION

DAVID P. CARTER, CHRISTOPHER M. WEIBLE, SABA N. SIDDIKI, JOHN BRETT AND SARA MILLER CHONAIEW

Policy designs are selected to achieve specific policy outcomes. The policy process, however, contains multiple junctures when a policy’s design may diverge from its original intents. Despite this fact, few theoretically valid and methodologically reliable approaches exist to assess policy divergence as it occurs during the policy process. This article presents a method for assessing policy divergence during implementation with a comparative analysis of a legislative law and corresponding regulation. The case analysed is US organic food policy in the 1990 Organic Foods Production Act and 2002 National Organic Program regulation. The article draws theoretical leverage from Mazmanian and Sabatier’s implementation framework and methodological leverage from the institutional analysis and development framework. The analysis indicates that the designs of both policies are fairly robust with relatively minor divergence. The conclusion discusses the gains and challenges in developing a comparative approach to studying policy designs and assessing policy divergence.

INTRODUCTION

A central purpose of public policy is to address societal problems through the coordination of collective action. Among the factors that affect a policy’s likelihood for success is its design: the textual content of a policy that describes the plan for achieving desired outputs and outcomes (Schneider and Ingram 1997; Howlett and Lejano 2013). While a policy is designed to achieve specific outcomes, the extent to which a policy’s initial design is reflected in subsequent policies and actions of implementing actors depends on the degree of policy divergence that takes place during implementation and administration (Keating 2005).

Much of the literature on policy divergence compares the degree to which similar national or regional policies diverge over time (Keating et al. 2003; Keating 2005; Howlett and Rayner 2007). The policy process, however, consists of multiple junctures at which a single policy might diverge from its initial design, from formalized veto points (Pressman and Wildavsky 1973) to decisions and actions taken by street-level bureaucrats (Lipsky 1980; Elmore 1980). A central juncture at which policy design is susceptible to divergence is the translation of legislation into regulation through agency rulemaking (Huber and Shipan 2002; Kerwin and Furlong 2011). At this juncture, interest groups can, and do, use public comment periods to substantively alter proposed regulations (Yackee 2006; McKay and Yackee 2007). Furthermore, interest groups can affect rulemaking prior to the public comment period by influencing the rulemaking agenda and shaping the initial content of proposed regulations (Yackee 2012).

Determining the extent to which decisions made through agency rulemaking result in policy divergence is complicated by the ‘dependent variable problem’ – the methodological challenge of conceptualizing and measuring policy design (Green-Pedersen 2004;
Typologies of policy change (Durant and Diehl 1989; Howlett and Cashore 2013) can help distinguish how divergence occurs; however, they do not shed light on the extent of divergence or what design elements changed. This article presents one methodological solution to this problem, illustrated through a comparative analysis of a legislative law and corresponding regulation.

Assessing policy divergence between a law and regulation requires a reliable procedure for coding their content and a valid lens for diagnosing and analysing their relative strengths and weaknesses (West 2005). We draw theoretical inspiration from Mazmanian and Sabatier’s (1983) implementation framework. The implementation framework is chosen due to the empirical verification of many of the policy design attributes identified within it (Sabatier 1986). In revisiting the Mazmanian and Sabatier (1983) implementation framework, the intent is not to revitalize top-down versus bottom-up implementation research debates. Instead, we seek to contribute to the comparative study of public policy by combining the theoretical leverage of the implementation framework with methods built on the conceptual leverage of the institutional analysis and development (IAD) framework. The coding methods expand upon previous work in deconstructing policy designs (Crawford and Ostrom 1995, 2005; Basurto et al. 2010; Siddiki et al. 2011, 2012).

The comparative analysis is conducted through an investigation of the 1990 Organic Foods Production Act (OFPA) and the National Organic Program (NOP) regulation. The NOP establishes standards for the use of the term ‘organic’ within the USA to ensure uniform organic standards and encourage an organic market. The case is selected for two central reasons. First, the NOP rulemaking process drew an unusually high level of citizen response, resulting in changes to the proposed regulation to more closely reflect consumer demands (Manning 1998; Burros 2000), and offering a case in which regulatory divergence might be expected. Second, since regulation enactment in 2002, the organic food market has grown from a niche production to a global industry (Goodman 2000), highlighting the practical importance and some level of success for the Program.

This article is structured around two research questions: (1) To what extent do the designs of the OFPA law and NOP regulation adhere to the design attributes from the implementation framework? (2) How does the design of the NOP regulation diverge from the design of the OFPA? The conclusion provides answers to these questions in reference to the case study and then broadens the discussion regarding the theoretical and methodological contributions in comparing a law and its regulation.

USING DESIGN ATTRIBUTES TO ASSESS AND COMPARE POLICY DESIGNS

Conceptualizing and assessing policy design divergence requires standardized comparison criteria that not only aid in highlighting what has changed, but also indicate the extent to which divergence potentially weakens or strengthens a policy design. For such theoretical direction, we draw on Mazmanian and Sabatier’s (1983) policy design attributes. Although the Mazmanian and Sabatier framework has seen little use in the last two decades, it remains one of the premier approaches to the top-down study of policy implementation (Birkland 2011; Smith and Larimer 2013). Although necessarily limited, the top-down approach directs researchers to investigate how to design better policies to improve the likelihood of successful implementation. As practitioners struggle in writing effective public policies, there
remains a need for scholars to provide insight into constructing effective policy designs.

This article adopts Mazmanian and Sabatier’s seven design attributes and, in some cases, modifies the conceptual definitions. We add an eighth attribute taken from established public policy literature (Pressman and Wildavsky 1973; Ostrom 1990, 2005; John 1998) that suggests the importance of formal structures for adapting policy over time. We provide a brief overview of the eight attributes below and direct readers to the original sources for elaborations. For each attribute, we offer questions linking the attribute to our comparative assessment of the OFPA law and NOP regulation.

1. Clarity, consistency, and closeness of the outputs and outcomes

Originally labelled ‘clear and consistent objectives’, this attribute calls for an assessment of the desired policy results and whether the objectives are consistent and prioritized to support the attainment of such. We modify this description to focus on the outputs and outcomes stipulated in the public policy (Easton 1965; Ranney 1968; Koontz and Thomas 2012). Outcomes are intended changes in the condition of the world resulting from the policy, which are also impacted by factors outside of governmental control (Koontz and Thomas 2012). Outputs are the direct results of policy action, conceptualized as occurring at various immediate and intermediate distances towards realizing an outcome. We identify two types of outputs. ‘Transformative outputs’ are the outputs needed for linking the sequence of action stipulated in a policy. ‘Proximate outputs’ are the direct policy results assumed by designers to link to an outcome or serve as a proxy indicator of an outcome.

For example, some policies require public disclosure (proximate output) of chemicals used by industrial operations as a mechanism to generate public trust (outcome). Obviously, there remain other factors external to policy affecting public trust as an outcome. A transformative output in such a scenario might be a regulatory agency mandate that industry comply with the disclosure policy.

To assess policy outputs and outcomes, two questions are asked: (1) To what extent are the law and regulation consistent in outputs and outcomes? Here, the term consistent does not mean that outputs and outcomes are the same, but rather if the outputs of the regulation are supportive of the desired outcomes of the law, and if the regulation shares the law’s desired outcomes. (2) Are the proximate outputs close measures of the outcomes?

2. Adequate causal theory

Whereas outputs and outcomes relate to the goals of public policy, causal theory refers to the means – the sequence of activities formulated in the policy that, presumably, lead to achievement of the outputs. This sequence of activities is linked internally by transformative outputs, and leads to proximate outputs. An activity within a causal theory may support the attainment of a transformative output, thus linking to a different set of activities. Similarly, sequences of activities linked by transformative outputs may support the attainment of a proximate output and, possibly, an outcome. Our treatment of causal theory aligns with Mazmanian and Sabatier’s (see also Ranney 1968; Pressman and Wildavsky 1973); however, we operationalize the theory based on IAD concepts as described in the next section.

We adopt Mazmanian and Sabatier’s assessment criterion for gauging the adequacy of a causal theory: To what extent do policy activities reasonably link to support the attainment of policy outputs and outcomes?
3. Consistency of the government agency mission with policy objectives and outcomes
The missions and cultures of government agencies can be sympathetic or unsympathetic to a law’s objectives, and thus a law can be delayed or altered if assigned to an agency uncommitted to the law’s goals.
We assess this category through the question: To what extent is the mission of the implementing agency congruent with the policy’s objectives?

4. Adequate allocation of financial resources
Implementation requires financial resources to fund planning and operational processes, and finance administrative staff and other personnel.
We assess this category directly: Were there adequate financial resources allocated to the implementing agency for policy implementation and administration?

5. Hierarchical integration within and among implementing organizations
Hierarchical integration reflects the extent to which a government agency controls the decisions generating outputs. This involves identifying veto points where those subject to regulations can stall policy output attainment, and distinguishing the incentives that encourage compliance. Veto points are situations in the causal theory that the implementing agency might not fully control, such as when an actor interferes with or fails to comply with activities required to produce policy outputs. Inducements and sanctions are the incentives that an agency might use to encourage or coerce compliance with the policy and overcome veto points, and generally require monitoring and enforcement to be effective (Ostrom 1990).
We assess this category through three questions: (1) Do the implementing agencies have the authority to achieve the transformative and proximate outputs? (2) Are there adequate inducements and sanctions to ensure compliance? (3) Are there adequate directives for monitoring and enforcement?

6. Decision rules by implementing agencies
Decision rules come in two forms. First, decision rules stipulate the criteria or evidence required to make a decision – referred to as the burden of proof – which may or may not encourage judgments that are favourable to the outcomes of the policy. For example, the burden of proof is different for an inspector charged with assessing compliance if she/he must detect leaks from an industrial operation versus if the industry must prove the absence of leaks (Wright 1977). Second, decision rules stipulate decision-making procedural criteria, for example consensus, majority vote, or decision by an agency director. A central consideration is striking a balance between lenient decision rules (susceptible to capture or poor decision-making) and overly rigid decision rules (susceptible to gridlock) within a given context (March 1994).
We assess this category through two questions: (1) To what extent is the burden of proof needed to make decisions sympathetic to the objectives of the policy design? (2) To what extent are the decision-making rules (e.g. majority vs. consensus) likely to support the objectives of the policy design, given the context and policy outputs and desired outcomes?

7. Formal access by outsiders
Access by outsiders refers to formal opportunities for political supporters to aid in the implementation process, such as through an advisory board or by assigning a decision rule to a supportive elected official.
We assess this category through the question: To what extent does the policy design offer formal access to political supporters outside of the implementation agency?

8. Adaptability of the policy
We add an eighth design attribute referencing a policy’s formal adaptability. Often, policy designers will incorporate formal procedures by which an administrative agency can adapt a policy to the local context or after learning during implementation. For policy designers, the goal is to allow for adaptation by an administrative agency to better achieve the policy outcomes.

We assess this category through the question: To what extent does the policy design enable adaptation by the implementing agencies for achieving the policy outcome(s)?

AN INSTITUTIONAL APPROACH TO DATA COLLECTION
In this section, we present the methods for deconstructing policy designs as found in public policies, categorizing the various components and then reconstructing these components to facilitate a comparative analysis of the policy design attributes reviewed in the prior section. Methods for analysing the eight design attributes are based on concepts and procedures drawn from the IAD framework (Crawford and Ostrom 1995, 2005; Basurto et al. 2010; Siddiki et al. 2011, 2012). These methods allowed for systematic analysis of each policy document while at the same time aiding in policy design attribute operationalization. The approach is presented in three steps, discussed in conjunction with the design attributes. More detailed coding procedures are available from the authors upon request.

Step 1: Dissecting the public policy
The first step begins with dissecting the public policy into single rule statements that require, forbid, or permit action by one or more individuals under specified conditions. These rule statements serve as the primary units for subdividing, coding, and analysing the policy. Rule statements are further dissected into five categories. First, the entity that has responsibility for taking action is coded as the ‘attribute’. The attribute can be an individual or a collective in the form of an organization. Second, rule statements often show prescriptive force in the form of ‘must’, ‘may’, or ‘must not’; these are coded within the ‘deontic’ category. Third, the action word, usually the verb, is coded as the ‘aim’. Fourth, the spatial, temporal, and procedural circumstances under which the rule applies are coded as the ‘condition’. Fifth, any sanctions or inducements that create incentives for compliance with the rule statement are coded as an ‘or else’.

For example, a rule might be written: ‘The organic farmer must provide access to open fields for all livestock or pay a $500 fine.’ In this sample statement, ‘the organic farmer’ is the attribute, ‘must’ is the deontic, ‘provide’ is the aim, ‘access to open fields for all livestock’ is the condition that describes the procedures for applying the rule, and ‘or pay a $500 fine’ is the incentive for compliance.

Step 2: Classifying the rules
The second step takes the rule statements and classifies them by functional purpose (termed the ‘rule typology’ within the IAD literature) and by levels of decision-making. Our intercoder reliability tests indicate greater than 90% agreement in placing rule statements into the functional categories.

1. Rules that establish outputs and outcomes. Public policies stipulate goals coded as outputs and outcomes. Rule statements that relate outputs and outcomes are ‘scope rules’.

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For example, OFPA scope rules outline the general objectives of a programme enforcing national organic standards. In addition to scope rules, some outputs and, especially, outcomes are found in policy preambles.

2. Rules that establish a position and boundaries for entering and exiting the position. Policy instructions involve positions for individuals or organizations whose behaviour is targeted for influence. Rule statements that establish positions are coded as ‘position rules’. Rule statements that describe the credentials an individual must possess to enter a position, and the required actions the individual takes to enter or exit the position, are coded as ‘boundary rules’. For example, the NOP regulation requires an individual or organization that wishes to become an accredited organic certifier to possess adequate experience with organic practices to carry out associated duties and submit an application and pay accreditation fees. In assessment of the design attributes, position and boundary rules establish the position categories that fulfil actions stipulated in the policy. Boundary rules are central to assessing decision rules made by (a) the USDA when determining if a certifier is to be accredited; and (b) accredited certifiers when determining if an operation is to be certified as organic.

3. Rules that grant and limit authority and discretion relative to a position. Rules that assign and limit authority and discretion to a position come in three functional forms. The first refers to channels of communication, coded as ‘information rules’, that require, forbid or permit the information communication from a sender to a receiver. The second refers to the means by which collective decisions are made, coded as ‘aggregation rules’. The third captures any other rule that grants or limits a position’s authority or discretion unrelated to information flows or decision processes, coded as ‘choice rules’.

These three functional rule categories help assess components of hierarchical integration and indicate the nature and complexity of decision rules. Decision rules that do not involve aggregation rules are made by a single individual, such as a certifier’s decision to certify an organization as organic. Such decision rules provide the benefit of the efficiency of a single decision-maker with no need to argue divergent perspectives or to reach consensus. Decision rules that involve aggregation rules are collective choice rules, which may benefit from higher levels of perceived legitimacy if decision processes are consensus or majority based.

4. Rules that sanction and induce behavioural discretion or action. Some rule statements offer explicit incentives in the form of sanctions and inducements and are coded as ‘payoff rules’. Payoff rules are often rule statements with an ‘or else’ component. Payoff rules are used to code inducements and sanctions, components of hierarchical integration.

5. Rules that permit policy adaptation. Some public policies offer instructions about how rules can be changed or adapted to different contexts. For example, state laws that ban smoking in public buildings often include rule statements stipulating that local governments may create more stringent laws. Rule statements that offer formal procedures for policy adaption are coded as ‘collective choice rules’. Collective choice rules refer to the eighth attribute on formal policy adaptability.

In the OFPA, for example, the Secretary of Agriculture and the National Organic Standards Board (NOSB) must determine procedural rules of organic standards practices according to criteria specified in the Act. Such statements are coded as collective-choice rules for creating new standards. In the NOP regulation, the NOSB must determine whether to allow or prohibit certain substances on an ongoing basis, according to regulation criteria. These statements are coded as collective-choice rules for policy adaptation.
Step 3: Portraying causal theory with target action situations

Rule statements rarely operate independently. Instead, they generally operate in configurations. Step 3 involves clustering rule statements that generate the same outputs into ‘target action situations’. Statements within target action situations are linked such that an activity in one statement may be required for or follow from an activity in another statement. Through target action situations, policy designers seek to influence behaviour towards the attainment of policy outputs.

A target action situation is an adaptation of the IAD framework’s ‘action situation’ concept. ‘Action situations’ refer to actual settings in which two or more individuals interact towards an output and outcome. Action situations, as defined by the IAD framework, are structured by the seven functional rule categories discussed previously. In our analysis, the emphasis is on action situations as defined ‘on paper’, as in public policies. This distinction is important, for although policies are designed to influence the actions of individuals in target action situations, whether the rules outlined in the policy become the guiding rules in the operational realm is subject to other influencing variables including the implementation process, the actions of administrators, and policy acceptance of the target population. Thus, the concept of target action situations is an artificial construct that is created by the researcher to arrange and configure the coded rule statements from Steps 1 and 3.

An example of such a target action situation is the initial organic certification of a farmer. In this target action situation, the farmer interacts with certifier personnel towards one of two outputs – certification or denial of certification (or the farmer exits the situation and stops pursuing certification). Rules configured around the ‘farmer initial certification’ target action situation include: the farmer must pay certification fees (boundary rule), the certifier must conduct a review of the farmer’s certification application (choice rule), and the certification inspector must relay all relevant inspection notes to both the certifier and farmer (information rule).

Just as rule statements can be configured into target action situations, target action situations themselves can be linked. Target action situations include an output that serves as either a proximate output for an outcome, or a transformative output linking to another target action situation. In the above example, the farmer moves out of the initial certification target action situation through the transformative output ‘certification granted’, and into a different action situation with a rule configuration related to the continued operation of an organic farm. From the target action situation ‘organic food production’, the intended output – farmer compliance – links to the desired outcome of consumer confidence in organic standards. To identify target action situations, researchers: (1) identify a transformative or proximate output; (2) cluster the rule statements that were written to influence the achievement of the output; and (3) describe the activities as defined in the target action situation.

Supplemental forms of data collection

Some of the design attributes required data beyond policy document coding. We supplemented the coding with two additional data forms. First, ten interviews were conducted during the winter of 2012/13 with actors involved in the US organic industry, including certified organic farmers, accredited organic certifiers, NOP personnel, and personnel from trade organizations (e.g. Accredited Certifiers Association and the Northeast Organic Dairy Producers Association). These interviews were not specific to a comparison of NOP regulation and the OFPA; however, discussions with interviewees informed the content
of this article and helped check the validity of coding interpretations. Interview respondents were asked procedural questions about organic certification and accreditation, and past and current challenges in the implementation of the NOP. Responses were reviewed inductively for themes, and themes that crosscut interviews were identified. Additionally, secondary sources were used to answer the questions posed in relation to the eight design factors. We used newspaper sources and USDA budget documents to identify OFPA funding allocations from the legislature, and collected USDA NOP funding data from USDA annual budget summaries. We interpreted the mission of the USDA’s Agricultural Marketing Service to assess consistency with the OFPA stipulated outcomes.

CASE ILLUSTRATION: IMPLEMENTATION OF THE OFPA AND THE NOP

Organic products are traditionally contrasted with ‘conventional’ agricultural products and are noted for production practices that restrict the application of synthetic materials (Vos 2000). In the USA, organic food gained public notice in the 1960s and 1970s, when, influenced by publications such as Rachel Carson’s *Silent Spring* (Carson 1962), a growing suspicion of detrimental impacts resulting from conventional farming practices motivated consumer interest (Vos 2000; Baker 2005). A particularly influential factor in garnering public and governmental support for national standards was a 1989 ‘60 Minutes’ special on Alar, a chemical commonly used on apples, highlighting concerns that Alar had the potential to cause cancer (Baker 2005, p. 1). An overnight increase in organic food sales following the airing of the special highlighted a relatively limited supply of organic foods and ‘a patchwork of inconsistent or nonexistent laws … threatening the meaning and value of the organic food label’ (Baker 2005, p. 1). At the time, organic product claims were supported by dozens of incompatible private, non-profit certification programmes and 22 state organic statutes (Amaditz 1997).

To develop national organic standards, Congress passed the OFPA as a part of the 1990 Farm Bill. The Act had three goals: to establish national standards governing organic food marketing; to assure consumers that organic products meet a consistent standard; and to facilitate organic food interstate commerce. While the OFPA was largely considered a success for the organic foods movement (Amaditz 1997), political controversy was ignited in 1997 with the release of the NOP ‘Proposed Rule’ (i.e. regulation). The Proposed Rule was met with record citizen response (Manning 1998). A central source of disapproval was the allowance of three practices – produce irradiation, municipal biosolids (sewage sludge) use as fertilizer, and genetically modified organisms. The ‘big three’, as the practices were referred to, represented what one comment declared: ‘precisely the elements the organic consumer is trying to avoid’ (Shulman 2003). Chief among the complaints was that the Proposed Rule failed to follow the recommendations of the National Organic Standards Board (NOSB) – a body established to make recommendations on the practices comprising organic standards.

In total, the USDA received 275,603 public comments on the Proposed Rule, with a majority expressing disapproval (Bleifuss 1998). US Secretary of Agriculture Dan Glickman responded by emphasizing that, according to the OFPA, organic standards were not intended to judge the quality or safety of organically farmed products and the big three were safe practices with important roles in modern agriculture (Masterson 2000; Pollan 2001). Further, Glickman noted the NOP was intended to encourage an organic market, requiring organic food producer and customer support and confidence. Referring to the
Proposed Rule as an ‘exercise in democracy’, he promised to make changes to the Rule that would better reflect organic community desires (Manning 1998).

In 2000 the USDA presented a ‘Final Rule’ that explicitly forbade the use of the big three in the production of any product to be labelled ‘organic’ under the NOP. In general, the Final Rule was positively received by organic food consumers, producers, and advocates (Burros 2000). Allowing time for organic operations and certifiers to adjust their practices for compliance with the NOP regulation, the Rule was enacted in 2002.

Since the adoption and enactment of national organic standards, available evidence suggests that the NOP has had considerable success in encouraging an organic market. Between the years 2002 and 2010, domestic sales of organic food grew from $9 billion to $26.7 billion (OTA 2011). From 2009 to 2010 the sector grew 8 per cent – eight times the growth of the broader food industry (Reuters 2011). As of 2012, 17,750 organic ventures operated in the USA, a 240 per cent increase since 2002 (NOP 2012). These indicators, in part, underlie the comparative analysis presented below, and the overall motivation to explore design divergences and robustness in the pursuit of policy outcomes.

RESULTS
We assess the OFPA and NOP regulation according to eight design attributes, and determine the extent to which the NOP regulation diverges from OFPA directives. This section presents a comparative analysis as structured by the modified Mazmanian and Sabatier design attributes. Results are presented for each policy, respectively, and divergences between the policy designs are provided. A general assessment of the extent to which each policy exhibits the design attributes and differences between the policies is presented in table 1. As discussed further in the conclusion, the results indicate relatively robust designs underlying both the OFPA and NOP regulation and little policy divergence.

Clarity, consistency, and closeness of the outputs and outcomes
The OFPA intended output is national organic standards, composed of an organic certification programme, certifier accreditation programme, peer review panel, organic standards board, and a national list of allowed and prohibited substances. Consistent organic standards (output) link to the Act’s explicit desired outcomes: consumer confidence in organic standards and organic product interstate commerce. The overall objectives are, therefore, restricted to encouraging an organic foods market. Limited in scope, the outputs and outcomes are clear, exhibit considerable goal alignment, and are without intra-objective tensions.

Although the NOP regulation does not explicitly state intended goals or desired outcomes, interview responses indicate that the Program adopted the desired outcomes of the OFPA. NOP regulation outputs create a linkage from the Act’s output – organic standards – and the stated desired outcomes. Central regulatory outputs include the certification of applicant operations, accreditation of certification organizations, and the continued compliance of both certified operations and certifiers. By encouraging, monitoring, and providing incentives for certifier and operation compliance, NOP regulation outputs support the achievement of the Act’s identified outcomes.

Adequate causal theory
As stated above, the OFPA causal theory seeks to encourage consumer confidence and facilitate interstate trade of organics (outcomes) through organic standards in the form of
<table>
<thead>
<tr>
<th>Attributes</th>
<th>OFPA assessment</th>
<th>NOP regulation assessment</th>
<th>Differences between the OFPA and the NOP regulation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Clear and consistent objectives</td>
<td>High</td>
<td>High</td>
<td>The NOP regulation incorporates the intermediate outcomes – certifier and certified operation compliance – linking OFPA outputs (national organic standards) to desired outcomes (consumer confidence and interstate commerce in organic products).</td>
</tr>
<tr>
<td>Adequate causal theory</td>
<td>High</td>
<td>High/moderate</td>
<td>The NOP regulation elaborates mechanisms to encourage certifier and certified operation compliance, including incentives, sanctions (non-compliance notices, accreditation/certification suspension or revocation), and conflict resolution mechanisms (mediation/appeals). The regulation weakens the causal theory by not requiring periodic residue testing.</td>
</tr>
<tr>
<td>Officials’ commitment to statutory objectives</td>
<td>Moderate</td>
<td>High/moderate</td>
<td>Structuring national standards within a new programme helps alleviate the tension between the exclusion of ‘conventional’ production and handling practices and the USDA’s traditional support and promotion of certain technologies such as genetic engineering.</td>
</tr>
<tr>
<td>Allocation of financial resources</td>
<td>Low</td>
<td>Low/moderate</td>
<td>Although both the Act and Program were initially underfunded, Program funding has increased considerably in recent years.</td>
</tr>
<tr>
<td>Hierarchical integration</td>
<td>High/moderate</td>
<td>High/moderate</td>
<td>The regulation outlines the requirements, incentives, and sanctions of regulatory target populations – accredited certifiers and certified operations. A potential limitation is auditing of certifiers once every five years, contrasted with a yearly inspection of certified operations.</td>
</tr>
<tr>
<td>Decision rules of implementing agency</td>
<td>Moderate</td>
<td>High/moderate</td>
<td>The regulation specifies the decision rules pertaining to Program accreditation of certifiers, certifier certification of operations, and decisions related to certification and operation sanctions for non-compliance. A potential weakness is a lack of decision rules pertaining to sanctioning non-compliance.</td>
</tr>
<tr>
<td>Formal access by outsiders</td>
<td>Moderate</td>
<td>Moderate</td>
<td>The regulation adopts the access points outlined by the OFPA – assignment of NOSB members and the publishing of proposed regulation changes. Additionally, the regulation allows individuals to report suspected violations of the regulation, prompting USDA inspection for non-compliances.</td>
</tr>
<tr>
<td>Adaptive capacity over time</td>
<td>High/moderate</td>
<td>Moderate</td>
<td>The regulation adopts the adaptive mechanisms called for in the OFPA. Operationally, however, the Program has failed to realize a key mechanism – the Program peer review panel.</td>
</tr>
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a national programme (output; see figure 1). The Program is to define and enforce national organic standards through accreditation of public and private certifiers, certification of operations (producers and handlers), a peer review panel to advise the programme, and a National Organics Standards Board to provide expert input and guidance. The central potential fault of the theory – multiple competing certifiers from the public and private sectors – is addressed in the Act with organizational neutrality requirements.

As displayed in figure 2, the NOP regulation operationalizes the causal theory initiated by the OFPA. The regulation’s causal theory seeks to encourage consumer confidence and facilitate interstate trade of organics (outcomes) by incorporating inter-Program outputs identified in the previous design attribute – operation certification, certifier accreditation, and the compliance behaviours of certifiers and certified operations (outputs). The theory relies on a combination of incentives, sanctions, and resolution mechanisms (appeals and mediation) to encourage compliance.

An example of this is operation certification, found in the middle of the figure. Once engaged in organic food production (production and handling target action situation),
FIGURE 2 Causal theory of the NOP regulation
operator non-compliance may result in suspension or revocation of certification, or engagement in appeals to certifier decisions or mediation. Theory robustness, therefore, relies on whether the different compliance mechanisms are appropriately and consistently applied. The NOP regulation causal theory is weakened by allowing for, but not requiring, testing organically labelled products for prohibited substances, and unannounced inspections.

Consistency of the government agency mission with the policy objectives and outcomes
The marketing objectives of the OFPA fit well within the USDA’s promotional arm. Objective conflicts not taken into account by the Act are the exclusion of agricultural technologies which the USDA supports and promotes, such as genetically modified foods. This became evident shortly after the Proposed Rule was released, in which the ‘big three’ were permitted practices. Agriculture Secretary Glickman reflected the conflict when he said that the three practices had ‘important roles to play in agriculture’, but conceded that ‘they neither fit current organic practices nor meet current consumer expectations about organics’ (Pear 1998, p. 1).

Adequate initial allocation of financial resources
Implementation of the OFPA was delayed for several years because Congress failed to appropriate the necessary resources (Riley 1993; Sugarman 1997). For several years after the Act’s enactment, yearly NOP funding was between $1 and $2 million, consistently inadequate for the tasks laid out for the Program (Martin 2007). This resulted in limited staffing, hindered Program attempts to carry out responsibilities, and delayed Program action. In recent years, funding has increased substantially to roughly $13 million, a change noted in interviews to be associated with improved performance.

Hierarchical integration within and among implementing organizations
Implementing agencies need sufficient authority to overcome veto points that delay implementation. This authority often comes through the ability to create behavioural incentives with sanctions or inducements, and monitoring to apply punitive sanctions. The OFPA restricted potential veto points by assigning the duty of establishing national organic standards to a single agency – the USDA. The potential for additional veto points was introduced by parts of the OFPA, which allowed for additional agency (such as the Environmental Protection Agency) input. A weakness of the hierarchical integration of the Act is that it lacks any incentives or sanctions directed at the Secretary of Agriculture to ensure compliance with the Act’s objectives.

The NOP regulation is hierarchically integrated through incentives directed at influencing certifier and certified operations’ behaviour. Both certifiers and operations benefit from inclusion in the Program – certifiers through accreditation and collection of certification fees; operations through organic certification and access to the organic foods market. Sanctions include suspension or revocation of accreditation/certification. A weakness in the regulation is that although the sanctions appear sufficient to overcome veto points, monitoring is variable. The regulation requires NOP audits of accredited certifiers once every five years, a time during which the actions of the certifier may impede the Program from realizing its desired outputs and outcomes. Certifiers are required to
inspect operations more frequently – once a year. The regulation also allows for unan-
nounced inspections in addition to the yearly requirement, but stops short of mandat-
ing them.

**Decision rules by implementing agencies**

Policy decision rules can support rigid interpretation of policy by aligning the burden of proof and consensus rules with the policy outputs and outcomes. Central decisions in the OFPA include establishing the NOSB and NOSB development of organic practices and a national list of allowed and prohibited substances. The decision rules for NOSB establish-ment are specific; however, NOSB decision rules leave the Board with limited guidance in developing organic standards and a national list of allowed and prohibited substances. Consensus rules set a fairly high bar for NOSB decisions, requiring a two-thirds Board vote. The null position of the Board – that is the basic assumption or premise that they view a decision from – required by the OFPA aligns the burden of proof with the intended outputs and desired outcomes of the Act. For example, the Board’s null position regarding synthetic materials is that they are not allowed under organic standards, and the burden of proof is on an individual to convince the Board of the necessity to add a synthetic material to the national list.

Important decision rules in the NOP regulation are related to certifier accreditation, operation certification, and applying sanctions for non-compliance. The null positions in decisions regarding accreditation and certification align the burden of proof with the intended outputs and desired outcomes of the Act, as applicants for accreditation or certi-fication hold the burden of proof to demonstrate that they meet accreditation/certification standards. Potential weaknesses in the decision rules include the ability for an individual to make final accreditation or certification decisions, as opposed to multiple individ-uals through consensus or majority. The possible problems introduced by a single decision-maker are systematic decision errors, a lack of counter perspectives, and biases unchecked by peers. A single decision-maker, however, may increase the responsiveness and speed at which decisions are made. Decision rules related to sanctions are less clear; although the regulation allows for different levels of sanctions including accredita-tion/certification suspension or revocation, it provides little guidance on deciding which level to apply and when.

**Formal access by outsiders**

The OFPA allows for two central outsider access points. The first requires the NOSB mem-
ers to include a distribution of organic food advocates. The second requires publication of a proposed rule outlining organic standards in the Federal Registrar for public com-ment – an access point for both supporters and opponents of the Act. The NOP regulation adopts both OFPA access points: NOSB member assignment and publishing proposed changes to the rule. Additionally, the regulation allows individuals to report suspected violations to the NOP, prompting USDA inspection for non-compliance.

**Adaptability of the policy**

OFPA and NOP regulation adaptive mechanisms are displayed in figure 3. The OFPA establishes a structure prohibiting changes in the general framework of a national organic programme created according to the Act, but allows for adaptability through two collective-choice bodies: the NOSB and the peer review panel. In determining acceptable organic practices and the national list of allowed and prohibited substances, the NOSB
permits adaptation to new information. The peer review panel allows for adaptation based on learning regarding key parts of the Act, such as the certifier accreditation process. Finally, the Act allows states to create their own standards that are more stringent than national organic standards.

The NOP regulation formally adopts the Act’s adaptive mechanisms. Operationally, however, the Program has failed to realize a key mechanism – the peer review panel. Consequently, the central mechanism for adapting the regulation is the NOSB. Interview responses indicate that as a mechanism for change, the NOSB is incremental and undesirably slow.

CONCLUSIONS

With the study outlined in this article we sought to contribute to the policy divergence literature through a comparative analysis of a law – the OFPA – and its regulation – the NOP regulation, and an assessment of policy design divergence. Mazmanian and Sabatier’s implementation framework design attributes provided the structure for the assessment, and the policy document coding methods were based on the IAD framework (Kiser and Ostrom 1982; Ostrom 1986, 2005). We conclude by addressing the research questions posed in the introduction and discussing the approach’s limitations and potential.

The first research question was: To what extent do the designs of the OFPA law and NOP regulation adhere to the design attributes from the implementation framework? The law and the regulation were each assessed moderately or highly for most of the design attributes, the exception being allocation of financial resources. As such, we conclude that based on
the criteria offered by Mazmanian and Sabatier, both policies are supported by relatively robust designs.

The second research question was: How does the design of the NOP regulation diverge from the design of the OFPA? Overall, little policy design divergence is indicated. The most notable divergence between the NOP regulation and the OFPA is that the Act stipulates that national organic standards require certifiers to periodically conduct residue testing of certified products to ensure compliance with the Act. Additionally, testing results are to be made publicly available along with certification documents. The NOP regulation, in contrast, allows but does not require periodic testing and states nothing about making test results public. Finally, consistent with the OFPA, the NOP regulation includes the formation of a peer review panel to advise the NOP regarding Program operation and to suggest improvements to the Program. To date, however, the Secretary of Agriculture and the Agricultural Marketing Service have yet to establish a panel, and interview responses indicate that the NOP receives formal input solely from the NOSB.

Interpreting these results requires recognition of the limitations of relying on Mazmanian and Sabatier’s implementation framework. Sabatier (1986) criticized the framework for its inability to account for policy change. In an attempt to address this limitation, this study included an additional attribute related to rules that enable policy adaptation. Additionally, there remain general limitations of a top-down approach, including underestimating the influence of indirect policy actors and street-level bureaucrats (Sabatier 1986; Meier and McFarlane 1995). We agree with these criticisms but contend that such limitations do not negate insight provided by the framework. The implementation framework should be viewed as another tool and all tools are necessarily limited but offer theoretic leverage given the appropriate context and application.

Additional limitations are introduced by the institutional approach applied. Focusing on rules may lead to an emphasis on institutional structure at the risk of discounting other important policy influences, such as politics (May and Jochim 2013). While the inclusion of supplemental interviews attempted to temper this bias, it is nonetheless recognized as a limitation, and this article is understood to provide a partial, though we argue valuable, assessment of US national organic policy. Second, the emphasis on written rules diverts attention from a long recognized lesson in the institutional literature: the rules that guide actual behaviour quite often diverge from written policies (North 1990; Ostrom 1990, 2005). We contend that analysis of written policies is valuable because the written policies are the products of policy designing efforts and explicitly and implicitly codify the values, intentions, assumptions, and biases of policy designers.

Despite these limitations, we argue that the approach presented here offers a promising contribution in addressing the ‘dependent variable problem’ (Green-Pedersen 2004; Howlett and Cashore 2013) noted in the introduction: the challenge of conceptualizing and measuring policy design. Theoretical development often depends on methodological development. In this article, Mazmanian and Sabatier’s implementation framework was used in conjunction with innovative IAD framework coding techniques. The combination balances the constant tension between reliability and validity in the measurement and assessment of policy design.

As noted earlier, existing literature suggests that regulatory designs are influenced by interest group action and agency preferences and mission, at various stages of the rule-making process (McKay and Yackee 2007; Kerwin and Furlong 2011; Yackee 2006, 2012). This study asked a question not often addressed: does rulemaking lead to divergent policy designs? The case study suggests that, in this instance, the regulation’s design mostly
aligns with the design of the law. This integrative theoretical and methodological approach provides a way for future systematic assessment of other rulemaking processes to develop a better understanding of the potential discrepancy between a regulation and the associated laws. Future research can build on such studies by combining the comparative approach offered here with other methods to better understand when regulatory designs diverge from legislation, why, and what theoretical and practical implications result from such divergence. Finally, beyond the study of policy design divergence resulting from the rulemaking process, other areas ripe for exploration include the assessment of policy design divergence across venues or between levels of government, measuring divergence in a single policy design over time, or comparing policy design divergence across contexts. Generally speaking, the approach offers a way forward for producing generalizable knowledge on the interaction of policy designs and policy processes, and resulting policy design divergence.

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