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Analysis

Exploring Citizen Support for Different Types of Climate Policy

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ABSTRACT

Citizen support for climate policies is considered an important criterion in climate policy-making. While there is a growing body of literature exploring factors of citizen support, most studies tend to use climate policy support as an aggregate variable, overlooking differences in support for different climate policy types. This study examines citizen support for several market-based, regulatory, and voluntary climate policies using survey data collected from a representative sample of Canadian citizens (n = 1306). Specifically, the research objectives are to (1) assess citizen support for different types of climate policies, (2) identify the key factors associated with citizen support for different policy types, and (3) explore heterogeneity across respondents based on policy support patterns. Results indicate that most regulatory and voluntary policies receive high levels of support (83–90% of respondents), while a carbon tax receives the highest levels of opposition (47%). Regression analysis identifies several factors associated with citizen support, including values, trust, and household features. However, only a few factors are consistently associated with support across policy types, including being concerned about climate change, having trust in scientists, and being female. Other significant factors are unique to different policy types. Cluster analysis identifies four distinct respondent clusters based on policy support.

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1. Introduction

Policy analysts recommend that several key criteria be considered when choosing among climate policy options (Goulder and Parry, 2008). First, the policy should be effective and efficient in order to meet greenhouse gas emission targets at the lowest cost to society. Second, the policy should be politically acceptable in a way that does not provoke strong opposition, thereby enabling its implementation and endurance. This paper explores one key component of political acceptability: citizen support. In particular, our goal is to help policy-makers understand citizen preferences and motivations behind climate policy choices in order to design climate policies that are both effective and politically acceptable.

The first objective of this study is to assess citizen support for different types of climate policies. Climate policies can be categorized based on their degree of compulsoriness, i.e. the extent to which emission reducing actions are required by government or some other external agent (Jaccard, 2006). More compulsory policies typically include regulations that mandate specific requirements for emissions or technologies, and carbon taxes that set unit charges for emissions. Less compulsory policies include voluntary measures such as educational programs and subsidies to purchase low-carbon technologies (Goulder and Parry, 2008). While carbon taxes are generally considered more efficient and effective in reducing emissions, empirical research suggests that they tend to be the least popular type of climate policy (Drews and van den Bergh, 2015). In contrast, regulatory and voluntary policies appear to receive relatively high support (Lachapelle et al., 2014). This paper aims to contribute to this line of research by assessing levels of citizen support for different types of climate policy in Canada.

The second objective of the paper is to identify individual characteristics of citizen support for different policy types. In this context, researchers look at a variety of individual characteristics. Some studies focus on psychological aspects of policy support, such as personal values and beliefs regarding causes and threats of climate change (Harring and Jagers, 2013; Lam, 2014). Others focus mostly on contextual characteristics, including economic, social, and geographic factors (Franzen and Vogl, 2013; Bernauer and Gampfer, 2013; Owen et al., 2012). However, most studies do not distinguish between policy types when studying individual characteristics of policy support. Instead, researchers tend to construct a composite index that amalgamates policies and emission-reducing actions (Dietz et al., 2007; Shwom et al., 2010; Zahran et al., 2006). As a result, individual characteristics of the support for various policy types may be overlooked. Nilsson and Biel (2008), Lam (2014), and Tobler et al. (2012) are among a few studies that examined factors of support

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for different types of climate policies. However, these studies used non-representative samples and focused mostly on psychological aspects of policy support, without accounting for contextual forces which may have unique effects across policy types. This paper employs a more comprehensive theoretical perspective—the Attitude-Behaviour-Context (ABC) framework—that combines some of the attitudinal, contextual, and socio-demographic characteristics of support (Stern, 2000). We explore how these variables might be associated with support for various policy types using a representative sample of Canadian citizens (n = 1306).

The third objective of this study is to explore heterogeneity across respondents based on climate policy support patterns. Most studies in this area tend to focus on overall associations between individual characteristics and policy support. This paper explores the degree of heterogeneity in citizen support using cluster analysis.

The study is organized as follows. Section 2 reviews the literature pertaining to public perceptions of different policy types and conceptual frameworks that can be used to describe patterns of citizen support. Section 3 describes the employed research method, including the survey sample and data analysis techniques. Section 4 presents the study results, and Section 5 discusses their relevance to the existing climate policy literature, and provides conclusions.

2. Literature Review

2.1. Understanding Types and Perceptions of Climate Policies

As noted, climate policies vary in their degree of compulsoriness (Jaccard, 2006). Compulsory policies require emission reductions via regulation of technologies or fuels, or financially penalize emissions to such an extent that many firms and households are bound to take emission-reducing actions. Regulatory policies include vehicle efficiency regulations, building efficiency standards, and renewable portfolio standards that set electricity generation requirements for industry. Policies that can significantly increase the cost of emitting include carbon taxes and emission caps with tradable emission permits (also called 'cap-and-trade'). These policies do not prescribe specific actions but compel businesses and individuals to either pay emission charges (i.e., unit charges or permit price) or invest in emission reduction technologies to lower their charges (Goulder and Parry, 2008). In contrast, non-compulsory policies encourage voluntary behaviour to reduce emissions without entailing any negative consequences for non-compliance. Some examples include subsidies to purchase low-carbon technologies, educational and informational programs, and direct government investments.

Empirical survey evidence suggests that citizen support for carbon taxes and cap-and-trade is limited, while regulatory and voluntary policies tend to receive relatively high support (Drews and van den Bergh, 2015). For example, Lachapelle et al. (2014) conducted national surveys on public attitudes toward climate policies in Canada (n = 1502, margin of error ± 2.5%) and the U.S. (n = 984, margin of error ± 3.5%) in 2013, and found that in both countries carbon tax receive the highest opposition (41% of Canadian and 71% of U.S. respondents 'somewhat oppose' and 'strongly oppose' the policy), while a renewable portfolio standard the highest support (82% in Canada and 72% in the U.S.). Similar trends are observed in Switzerland, where a national survey (n = 916) showed that citizens are more likely to approve subsidies for renewable electricity, sustainable buildings and heating systems rather than carbon taxation (Tobler et al., 2012). Studies of policy support suggest similar patterns in Asia. Lam (2014) finds that Taiwanese citizens (n = 394) prefer subsidies for renewable energy (85% 'support' and 'strongly support') over increases electricity prices (29% 'support' and 'strongly support') or implementation of a gas guzzler tax (59% 'support' and 'strongly support').

Other studies explore the role of individual characteristics in citizen support of climate policy. However, most of these studies combine all policy types into a composite dependent variable, commonly referred to as an 'index of policy support'—amalgamating or averaging responses to a variety of policy and behaviour questions (Dietz et al., 2007; O'Connor et al., 2002; Shwom et al., 2010; Steg et al., 2005; Zahran et al., 2006). In the remainder of the paper, dependent variables consisting of several policy measures are referred to as 'composite variables' or 'composite indices'. The composite indices often include (a) policies at different levels of government, (b) international agreements, and (c) actions to reduce emissions, all of which vary considerably in their nature. For instance, Zahran et al. (2006) constructed a composite variable of 'climate policy support' that included support for carbon taxes on industries and individuals, fuel efficiency regulations, and public education about climate change actions. The same scale also included climate actions such as support for the development of renewable energy sources, reduction of methane in agriculture, and the protection of coastal settlements and water supplies. While the use of composite indices can provide general insights into common factors of policy support, they may overlook potential differences in individual characteristics of support for individual policy types.

Only a few studies have examined factors of support for different types of climate policies, i.e. without the use of composite dependent variables. Nilsson and Biel (2008) studied four types of policies varying in their compulsoriness—informational programs, subsidies, taxes, and regulations. They found that support for all policy measures (other than subsidies) was positively associated with environmental values. However, the study focused primarily on the effect of values and personal norms using a non-representative sample of Swedish decision-makers in private companies (n = 236). Thus, the results might not be broadly applicable and do not account for other contextual and socio-demographic characteristics which may have unique effects across policy types. Similarly, Lam (2014) used a non-representative sample of Taiwanese citizens (n = 394) to test a psychological model of policy support focusing specifically on the beliefs of negative consequences of climate change as explanatory variables, without consideration of individual values and contextual factors. Tobler et al. (2012) studied citizen support for nine policy items, which formed two dependent variables: subsidies, and CO2 restrictions such as carbon taxes and vehicle emission regulations. Similar to these studies, Tobler et al. (2012) used a non-representative sample (n = 916) and did not account for contextual factors.

In short, previous literature exploring citizen support for climate policies has tended to focus on overall support for different policy types (without exploration of individual characteristics associated with policy support), or to identify factors for climate policy and actions in general (combined into composite dependent variables). The few studies that have taken an exploratory approach with multiple climate policies have followed a limited theoretical approach and relied on non-representative samples for data analysis. Our present effort seeks to fill this apparent gap in the literature by exploring citizen support for multiple climate policies, using a comprehensive framework (theory) to guide our selection of independent variables, applied to data collected from a representative sample of citizens (residing in Canada). We next explore several theories of citizen support for climate policy and then explain our present conceptual framework.

2.2. Exploring Citizen Support for Climate Policies

The notions of saliency and self-serving bias provide one perspective on citizen policy support. Long before climate change mitigation was a policy concern, economists suggested that support for public policies can be influenced by small groups, including those who already wield significant political power by virtue of their economic and social significance, on the one hand, and groups who face concentrated costs from specific policies focused on specific objectives like GHG reduction, on the other (Galbraith, 1952; Olson, 1971).

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