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Inter-governmental institutions as promoters of energy policy diffusion in a federal setting

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ABSTRACT

This article is about diffusion processes behind the innovation of sub-national energy policy measures in a federal system. Typically for the federal political system in Switzerland, the elements of the energy policy field are shaped by the principle of subsidiarity. The aim is that cantons promote innovative problem solutions and regionally adapted implementation. For this reason, policy differences between cantons are large and create a need for coordination. More concretely, I will analyze the impact of inter-cantonal institutions on different innovations in the field of energy policy. The research question is approached with an event history analysis on three different innovative measures in the Swiss cantons from 1990 to 2007. A more comprehensive picture of diffusion in one policy field is drawn with this approach. The main contribution of this paper is the finding that intergovernmental institutions promote diffusion in one policy field only for measures with certain characteristics. The internal determinants are therefore not a sufficient explanation.

1. Introduction

Comparable to the domain of environmental policy, the field of energy policy is highly topical in times of discussions on the shortage of energy and peak oil. In light of the financial crisis that has evoked economic stimulus packages, states allocate large amounts of money to programs that promote renovations with the aim of rationalizing energy consumption and promoting the use of renewable energy in the building sector. Due to communication among governmental units, such energy policies often feature similar characteristics.

That states adopting each others' policies is not a new phenomenon. This aspect, however, was underestimated in the analysis of policy-making for a long time. However, during the last three decades, policy diffusion has increasingly gained attention in various policy fields and on several levels. As one of the first scholars analyzing diffusion in federal states, Walker (1969) defined policy adoption as a function of internal determinants and external factors. Scholars have accumulated evidence of different diffusion effects (Berry and Berry, 1992; Mintrom, 1997), while recently the study of the mechanism behind this process dominates the agenda (Dobbin et al., 2007; Gilardi et al., 2009; Meseguer, 2005; Shipan and Volden, 2008; Volden et al., 2008). The puzzle I am trying to solve with this paper is the impact of institutions on the process of policy diffusion, focusing on the diffusion of three measures with different characteristics in the field of energy policy.

There are several studies focusing on the diffusion of technical innovations within one country; this process is usually observed either at the level of the end-consumers of energy (Fuglseth, 2008; Nasser et al., 2008) or the producers (Madlener, 2007; Wüstenhagen et al., 2003). Likewise, the impact of energy policy instruments is a popular object of research (for examples see Rieder and Walker, 2009). Policy innovation in the field of energy policy, however, is a topic that has not been studied extensively, either in the federal setting of the United States or in Switzerland (for an exception, see Chandler, 2009).

Due to the extensive responsibilities of the cantons, the Swiss federal system is a particularly rich context for the study of policy diffusion. Commonly, tasks are specified and executed by the cantons, although framework laws come from the federation. As a result, cantons have different legislations. While the first canton introduced an energy law thirty years ago, others did not emphasize this topic until recently or have not done so at all. Due to the interdependences and influences from different levels, cantons are required to cooperate. Institutions play a crucial role in different forms of cooperation and coordination.

To explain diffusion in the field of energy policy, three measures with a clear variance in one dimension will be tested. This paper therefore contributes, on the one hand, to the clarification of the role of diffusion in a federal system and, on the other hand, it fills the gap in our understanding of the intergovernmental institutions' role in the diffusion process.

Swiss federalism with its peculiarities is reviewed in the next section of this paper. Building on this, I will shed light on Swiss energy policy and cantonal energy policy in particular. Section 4

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narrows the discussion of policy diffusion in federal states with a special focus on the role of institutions in this process, and it elaborates the hypothesis. In Section 5, the data structure and the method of choice are explained, while in the following section the results are discussed. The paper is concluded with an outlook and a discussion on the gaps of this research.

2. The Swiss federal system in general

The Swiss constitution delegates considerable legal and political autonomy as well as significant influence on decision making at the federal level to the cantons. One of the central peculiarities of the Swiss political system is the competence on the cantonal or communal level that leads to policy designs that are specific to the socioeconomic, demographic and political prerequisites in the cantons. As a consequence, policies are tailored to the circumstances in the respective unit. This cantonal independence is strengthened with fiscal sovereignty. Independent from federal bounds, cantons possess competences for policy innovations in several fields. Basically, the federal government enacts framework laws, while implementation is a matter of cantonal legislation (Kissling-Näf and Wälti, 2007).

This so-called "implementation by federal delegation" can be shaped in different ways. For some policies where the federal framework law is narrow, cantons execute clearly defined tasks. In other fields, the cantons can actively participate in the formulation of detailed laws in their own legislation as well as in the consequence of delegation in this principal-agent constellation. The principal has very little information and control over how decisions are implemented at the agent level (Sager and Rüfli, 2005). Hence, the cantons act not only as implementing but also as programming agencies. The latter can lead to the above-mentioned tailored legislation, or to diversity among the cantons.

Given that in some policy fields in Switzerland where 26 legislatives elaborate measures, a comprehensive picture is often missed. Several aspects are responsible for the different outcomes and the priority of the implementation. They result from the different values and interests of the involved actors as well as from programmatic specifications (Faganini, 1991; Vatter, 2007). Additionally, internal factors such as large disparities among cantonal administrations in terms of financial, legal and human resources influence the process of implementation and legislation differently. For the general introduction, policy-specific characteristics like overly complex procedures, excessively detailed federal legislation and insufficient attention to specific regional contexts are responsible for the grade of implementation.

Horizontal coordinating institutions are often created to approach such difficulties. The most pronounced forms of institutionalized cooperation between cantons are the inter-cantonal conferences of directors. With the growing number of political tasks and interdependences between the cantons, there is an increase in need for such coordination. These conferences exist in different fields, and as consultative bodies they serve as a platform to exchange experiences and to share and coordinate tasks among cantonal directors or cantonal specialized officials. Apart from these two types of conferences on the federal level, there are several similar institutions on the regional level. In many cases, these regions represent a more functional space in comparison to the historically shaped cantonal borders.

3. … and energy policy in particular

Analogous to most policy fields in Switzerland, the legislation in the energy policy domain is multilayered. While the security of the energy supply is a joint task of both the federation and the cantons, the former is responsible for research and the security of atomic reactors. The cantons are in charge of the economical and rational use of energy and the use of renewable energies in the building sector. Electric power companies in Switzerland have the legal form of public–private partnerships, where the cantons are majority shareholders and/or delegate people to the board of executives. The cantons, therefore, play a central role in the production of electricity and its composition.

Until the early nineties, only a small number of cantons enacted a cantonal energy law or passed policy innovations in this domain. While the first cantonal energy law was enacted in 1979, currently not all cantonal legislations contain an energy law. The catastrophe in Chernobyl and the Brundtland Report led to a more sensitive handling of environment and energy questions by the cantons. However, the energy consumption in Switzerland has increased more than 20% since 1990. The fact that little less than a third of the overall consumption was incurred in buildings is what underlines the relevance of this policy field.[1]

Several different measures concerning energy-saving and renewable energies were introduced in the building sector by the cantons in the last twenty years. To examine the questions at stake, the three following measures are considered: maximum portion of non-renewable energies (further called *minimum requirements*), new regulations on insulation (further called *insulation*) and a limitation of electricity consumption for large-scale consumers (further called *electric energy*).

The three selected measures are part of the model regulations (MuKEn) that were introduced in 2000 by the Inter-cantonal Conference of Energy-Directors (ICED), supported by the Conference of Cantonal Energy Officials. This latter body meets on a more regular basis and is at the disposal of the ICED. The model regulations are designed to achieve a wide harmonization of technical aspects in cantonal legislation on a voluntary basis. These regulations are based on cantonal experiences and the standards set by the professional associations (mainly the Swiss association for architects and engineers, SIA). Especially the agents from the cantons with an active energy policy took leading roles in the elaboration of the model regulations. This set of proposed regulations was enacted with a single majority decision of the ICED. Cantons cannot be forced to implement them either by the federation or the ICED. According to the opinion of experts in the field, the adoption of these model regulations provides a reference for legitimacy in the processes of legislation in the cantons.[2]

The *minimum requirement* measure includes maximum limits for the use of non-renewable energies in newly constructed buildings. It demands that not more than 80% of the permissible energy used for heating and hot water may be covered with non-renewable energies. It is up to the canton or to the constructor how the remaining fifth is covered. In the building sector, such a measure is nothing extraordinary. This measure requires that builders develop the knowledge of alternative solutions. As a consequence additional training is needed.

The new regulation on *insulation* targets the shell of buildings. This proposal includes new limits for the building shell and a new method of calculating the insulation density. This new approach includes the size of the outer shell of the building in the method of calculation. Insulation is generally seen as the key for the rational use of energy in buildings.

The measure of *electric energy* consumption of large-scale consumers is chosen as the third measure and focuses on larger buildings that do not serve as residences. The goal of this module is

[1] Figures are taken from the energy statistic of the Swiss Federal Office of Energy (SFOE).

[2] Expert interviews were conducted from February to June 2010 in the frame of the second phase of this research project.