



Original Articles

The policy diffusion of environmental performance in the European countries



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ABSTRACT

The implementation and the diffusion of environmental policy is a hotspot in European ecosystem management. Policy diffusion meets the need of the harmonization principle in which the EU countries must converge towards the same targets. In the light of this, the paper aims to explain the main determinants of the environmental diffusion policy, allowing countries to converge on a common base. We outline the achievements of the environmental policy objectives of the countries by using the Environmental Performance Index, a widely accepted index used at the international level. By using a dyadic dataset on 15 European countries, we highlight the economic and institutional determinants pointing out successes and failures of policies adopted. The findings reveal that the economic variables play most important role in the diffusion process of environmental policy.

1. Introduction

Rapid industrialization and urbanization have led to serious environmental problems. Since the 1960s environmental issues arose as an important goal in policy adopted across the globe, and today sustainability of human activities has become a priority for most of the countries. There is a vast literature on the relationship between economic growth and environmental sustainability (Almeida et al., 2017), but a gap still remains to be filled in the ex-post analysis of factors influencing the implementation of environmental policies. From a political point of view, the issue of environmental sustainability is highly relevant, as it should reflect differences in social and cultural values of local communities-including both environmental and community health aspects (Gudes et al., 2010; Arbolino et al., 2018a). Environmental quality is seen as a very important asset particularly in the developed countries, while it is unfortunately given a lesser importance in some of the developing countries, due to the different natural resource values perceived from the local populations assigns different weights to the environment (Aquilani et al., 2018).

In developed countries, nowadays the quality of the environment is a key factor in policy and decision making, particularly in the transport sector, because of mobility-related activities are deemed to be a main source of air pollution (Arbolino et al., 2017). The EU is one of the biggest greenhouse gas (GHG) emitters in the globe-taking third place

behind China and the USA (Liobikienė and Butkus, 2017). For this reason, in 2007 the EU member state governments adopted the 2020 package, comprising three targets for cutting greenhouse gas emissions, raising renewables in energy consumption, and increasing energy efficiency for the year 2020. Another main EU agreement involving the environment is the Paris document ratified on the 5th of October 2016 regarding global average temperature-so called Paris Climate Agreement.

Even if policy makers have implemented numerous green policies to mitigate pollutants, the effectiveness of such policies represents a contested matter (Szopik-Depczyńska et al., 2017). Environment related literature highlights the importance of a coherent policy mix to obtain a sustainable economic growth (Arbolino et al., 2018b). For example, regarding the European energy strategy towards 2020, Bartolini et al. (2017) emphasize the need to prioritize among the several EU 2020 targets in order to avoid economic distortive effects. Socioeconomic divide among the EU members is a feature under reported in the Europe 2020 strategies. As noted by Fura and Wang (2017) it is difficult to achieve common goal in the EU, because of significant disparities in countries' social and economic status. Moreover, according to Kedaitis and Kedaitiene (2014), achieving targets of 2020 also depends on the economic relations between EU and external economic systems. In this context, policy diffusion can play a key role, particularly if the process is influenced by international networks aimed to trace policy ideas

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(Garrett and Jansa, 2015).

An earlier international agreement on Climate Change that is the Kyoto Protocol, adopted on the 11th of December 1997, aimed to reduce six greenhouse gases emissions over the period from 2008 to 2012. Using country-level and US state-level panel data, Almer and Winkler (2017) found very little evidence for an emission reduction. Concerns related to the sustainability of human activities suggest new policy strategies, which can also be implemented learning from previous experiences in other historical and geographical contexts (Arbolino et al., 2017). Therefore, it is highly important to carry out evaluation of the factors that can influence the national governments in the implementation of critical environmental policies. Despite of the relevance of the matter, in the economy related literature, so far little attention has been devoted to the factors determining public policies in the environmental sector. Most of the analyses, in fact, focuses on environmental performances of firms producing pollutants (Antonietti et al., 2017; Liu and Anbumozhi, 2009; Peters et al., 2017).

By focusing on the aggregate policy choice, such as the environmental one, in this paper, we aim to identify the processes that guide a country in order to implement a strategy already pursued by the target country. The analysis starts from the environmental performance of a country, by choosing to use the Environmental Performance Index (EPI) as dependent variable in our model. The EPI is formulated by environmental experts at the Yale University and Columbia University (EPI, 2016; Esty et al., 2005), and it takes into account of objectives, policy categories, and indicators corresponding to environmental health and ecosystems.

As opposed to some recent studies (Converse, 2011; Gallego-álvarez et al., 2014) using EPI to investigate the determinants of environmental sustainability as a relation between environmental performance and explanatory variables, our analysis is focused on the potential factors that are able to affect the policy diffusion process. Thus, on the basis of the theoretical literature concerning the diffusion policy, the analysis is carried out highlighting two main drivers that can influence and justify the choice of the policy makers in the decision adoption processes—economic and institutional determinants (Fink, 2013a,b; Hulme, 2005).

The paper is structured as follows. Following this introduction, the second section highlights the difference between policy convergence and policy transfer and discusses several good examples of environmental policy transfer. In the third section, we suggest economic and institutional determinants in order to describe the choice of a country to emulate a policy already implemented by another one. The fourth and fifth sections describe the methodology and provide the econometric analysis, respectively. In the final section, we discuss the findings and provide policy suggestions.

2. Policy diffusion

In accordance with Simmons and Elkins (2004) and Braun and Gilardi (2006), we define policy diffusion as a process in which policy choices of a country affect policy makers of other geographical context. Moreover, Maggetti and Gilardi (2014) pointed out that policy diffusion is the process whereby policy choices in one unit are influenced by policy choices in other units. Berry and Berry (1999) understand policy diffusion as the process by which an innovation is communicated through certain channels over time among members of a social system.

The policy diffusion topic has been deepened by several scholars that have defined the main features of it. The most relevant aspect covers the prospective that can be horizontal or vertical. The former affects subnational units, countries or international organizations, while the latter concerns the processes from subnational or supranational to the country level or vice versa. The vertical characteristic affects politicians to make their decisions interdependently-through learning, competition or emulation (Wasserfallen, 2018).

Naturally, policy diffusion leads to policy convergence, because it makes policies in a set of countries more and more similar over time.

According to the common definition of policy convergence (Bennett, 1991; Holzinger et al., 2008a), this process occurs when policies become increasingly similar during the time-or almost identical. Not surprisingly, in fact, literature on policy diffusion focuses also on policy convergence (Marsh and Sharman, 2009). Conversely, policy transfer does not necessarily lead to convergence, because policies transferred are mixed with existing policies, realizing thereby new different policy models for each country.

The theoretical literature on international political economy emphasizes the role of globalization phenomenon as an important external determinant of policy diffusion. Globalization has led in fact to an integrated international political economy and to a convergence of policies adopted worldwide (Meseguer and Gilardi, 2009). From a pure political perspective, it is very relevant to distinguish domestic determinants of policy diffusion from the international ones. International determinants have a significant impact on domestic policy making and, on its timing, reducing degree of freedom and political power in domestic political choices. For example, industrial deregulation and privatization were factors that forced most governments of developed countries to adopt policies following this trend. Obviously, the diffusion of liberalization policy increases international political convergence, as it homogenizes political choices adopted in several countries. Tax and capital market policies also push in the convergence direction, as national governments adapt their political strategies to international determinants in order to avoid loss of competitiveness of domestic economic system.

Conversely, in case that environmental policies are not related to production processes, governments adopt environmental policies implemented in other countries mainly for electoral consequences and not for economic or competitive reasons. In other words, as environmental issues and policies limit economic potentiality of domestic system, the logic of policy diffusion is likely to be not about economic results, like in market liberalization policies, but in electoral results. Alternatively, sharing policies may be explained through social domestic benefits resulting from cross-national environmental policy convergence—as in the case of policy programs developed according to the concept of ecosystem management approach. For instance, European environmental policies for the aquatic environment is a good example for this approach (Rouillard et al., 2018).

Overall, one key theoretical point is that, despite the myriad topics included in environmental literature, surprisingly little attention has been devoted to analyze determinants affecting policy diffusion phenomenon. Given the global characteristic of environmental issues, many governments share the same policies in order to harmonize environmental standards. For instance, at the EU level, one of the first examples of policy diffusion is ‘the Environment for Europe’ that decisively contributed to spread environmental policies across the member states. Another example of environmental policy diffusion is eco-labelling program adopted firstly in Germany and, subsequently, shared by the EU governments and also countries outside the EU, such as Australia, Croatia, Hungary, Korea, New Zealand. In this case, the environmental policy is directly related to production processes as it influences production costs.

Moreover, for example, in the energy sector, carbon tax policy instruments adopted firstly by Finland (1990), spread rapidly in Norway (1991), Sweden (1991), Denmark (1992) and Netherlands (1992) (Tews et al., 2003). An example of international policy diffusion in environmental sector is related to Vehicle Emission Standard started from California in 1959 and disseminated not only to the other US states, but also to Japan and the EU in the 1970s and in South Korea in the 1980s (Gerigk et al., 2015).

3. Conceptual model

Following the lead of the literature (Fink, 2013a; Hulme, 2005), we argue that the decision making process can be affected both by

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