



National University of Political Studies and Public Administration

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Multidisciplinary Doctoral School

Political Science Doctoral Field

PHD THESIS SUMMARY

The title of the doctoral thesis: Identifying patterns of public policies in Coal and Carbon Intensive Regions transitioning on socio-economic and environmental dimensions

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Bucharest, 2024

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Introduction

Currently, the subject of the Just Transition from the perspective of the mining regions at the level of the European Union represents one of the main subjects, which generates intense debates and numerous studies, considering that the coal mining industry assumes an essential component of the economy of some regions dependent on mining and, implicitly, of the respective states.

Thus, the thesis is part of the European concerns, reflected by the 17 Sustainable Development Goals, the European Green Deal, and the Just Transition. The thesis was developed within the Faculty of Political Sciences of the National University of Political Studies and Public Administration and contains original political science and sustainability contributions. The thesis makes original contributions to bringing together five mining regions of notable importance at the European Union level, with the methodological reasoning "Most Similar Systems Design." The thesis focuses on the analysis of case studies on three primary dimensions, namely, social, economic, and environmental, to identify, following the research, at least one model of public policies that emerged in the last thirty years due to the pressures of increasing decarbonization.

The difficulty of the research, which also acts as a novelty in research, consists of bringing to the fore the regions of Upper Silesia in Poland, Moravia-Silesia in the Czech Republic, Ruhr in Germany, Sulcis (Sardinia) in Italy and the Jiu Valley in Romania, which, viewed superficially, would seem completely heterogeneous, presenting particularities of a socio-economic and environmental order that would seem to have no connection. Moreover, through the analysis of the case studies, the contexts that have led either to a trajectory of regional progress in the last three decades or to a failure of the authorities in freeing the regions from the long mono-industrial characteristic are highlighted.

Therefore, the thesis intends to identify the public policy models implemented in response to the inevitable need for coal and carbon-intensive regions to create their transition processes toward decarbonization through economic, social, and environmental dimensions. Last, the thesis reflects the transitional stage in the five analyzed case studies.

Thesis structure

The thesis is structured into five main parts: "Introduction," "Bibliographic research," "Methodology," "Case studies," and "Conclusions," to which are added "Table of contents," "List of abbreviations," "Limits of research", and "Bibliography." The thesis has 269 pages, following the classic model, with chapters coagulated around central questions investigating current topics. The font used in the thesis is Times New Roman, letter size 12, with diacritics and spacing at 1.5 lines, indent two right/left, and the citation style chosen is Harvard style. The thesis includes one table, 13 figures, and ten maps.

The case studies are not at random but as a result of a research design known as the Most Similar Systems Design (Steinmetz, n.d.), which assumes that two or more case studies are similar, holding the same independent variables, except that the expectation is that the dependent variable will vary. Also, in the case of the case study of Jiu Valley, there is a distinctive and unique component assigned only in this case – it is a section dedicated to a synthesis of the interviews carried out during the years of doctoral research, as a result of the field research carried out in Jiu Valley, this being possible due to the geographical proximity.

Methodology

The research objectives foresee the identification of at least one model of public policies for each case study, revealing how the regions try to detach themselves from the mono-industrial characteristic and how they try, through the authorities, to identify innovative and sustainable policies and solutions. Moreover, a key objective is to create graphics, including maps made in the ArcMap application, that illustrate the findings for the two research questions of the thesis. The two research questions that stand at the foundation of the thesis are: *"What factors explain the variance in patterns of public policies adopted to respond to transition pressures along the social, economic, and environmental dimensions?"* and *What explains the success or the failure in meeting the objectives of regional decarbonization and decoupling the regional economy from the mining industry?*.

The intent is to explain the variance in the two dependent variables correlated with each research question. The dependent variable for the first research question is the adopted public policy model.

On the other hand, the dependent variable for the second research question is the success or failure in achieving regional decarbonization goals and the decoupling of the regional economy from the mining industry.

As an original contribution to the methodology of the thesis, a scale containing four levels was created, which better measures the degree of success or failure of the regions regarding the second research question. The scale looks like this: No success – partial success – satisfactory success – total success. Furthermore, another scale shows more clearly the impact of the independent variables in each case study. Thus, the impact can be "+," meaning positive; "++," meaning very positive; "0", noted to show neutral impact; "-," meaning negative impact; and "—," revealing a very negative impact. Last but not least, within the methodology, for a more optimal analysis of the decarbonization process, we adapted a scale used in the Tipping+ project (Mangalagiu and Lieu, 2023, p. 22). The scale adapted to fit the thesis analysis framework reads as follows: "Pre-Transformation—Fluctuation (Back-and-Forward)—Acceleration—Stabilization."

In addition, there are two types of measurements for the first dependent variable. The first is called the "Authorities' Positions," which shows which policies the authorities have supported and continue to support. This measurement is essential because we can observe, over time, that local, regional, or national authorities have supported more pro-coal or regional decarbonization policies. The second type of measurement is the 'Policy Approach'; the analysis will highlight what type of approach prevailed in the region, bottom-up, top-down, or if there was a mix.

For the second dependent variable, the type of measurement is "Change of mining sites," through which we can observe how and if the mines that were closed by the authorities were revitalized and transformed into spaces dedicated to cultural-artistic spheres if they have become spaces dedicated to museums or technological events and, essentially, new sustainable spaces. Another metric is "Variety of emerging sectors," which highlights the existence of any new sectors of economic activity capable of replacing declining mining and can decouple the regional economy from the context of mining dependency. The last measurement is the "Investments Level," which predicts the existence of public, private, or foreign investments within the region that could facilitate regional decarbonization. The investment level is categorized as minimal, moderate, or with significant impact. Indeed, a minimal impact of investments in the region indicates a failure in achieving the decarbonization goals, while a high level shows success in achieving these goals.

Each dependent variable is investigated through independent variables. For the first dependent variable, the independent variable is: "Regional particularity," which determines whether certain particularities, for example, geographical, ideological, or political, could influence the regional policy model. Thus, we can better understand why there is a specific model of public policies in the Jiu Valley, for example, and in the Ruhr, where the model differs substantially. Another independent variable is "Institutional or authority dominance", and with this, the intention is to discover which institutional entities are dominant at the regional level, regardless of whether we are talking about ministries, town halls, councils, or other institutions with decision-making powers that in the last for three decades they have influenced regional policies through their activity and decisions. Certain institutions may have more influence within the region than others.

For the second dependent variable, the independent variable is: "Level of renewable energy." - in this case, it is well known that there is a deficiency in the percentage of renewable sources in the energy mix at the level of the regions, but the variable is helpful. It is plausible on the scale of success and failure. Another independent variable is "Level of subsidies," which refers to subsidies or tax exemptions. First of all, the interest lies in how the subsidies behaved in the region, whether the government's subsidies kept companies in the region or kept the labor force at a constant level. It is essential to observe whether the subsidies have successfully attracted new companies to the region or created new jobs.

The third independent variable is "Accessibility to other regions," which is a favorable condition for attracting foreign investment. The lower the accessibility to other regions, the greater the risk of chronic dependence on coal. However, the higher the accessibility to other regions, the greater the chances of regional economic diversification and attracting additional investments, such as foreign ones. The methodology was enhanced by using concepts created by Tuohy in his article, "Models of Policy Change" (Tuohy, 2015), in which the author uses four models of policy change that differ in the magnitude and speed of change. The models are called "Big Bang," "Blueprint," "Mosaic," and "Incremental." Last but not least, the "Narratives" section (Mangalagiu et al., 2023, p. 23) involves an analysis tool that helps to compare case studies better. The section cannot be treated as an independent variable but is strictly an analytical tool that creates a more precise picture of certain aspects of the regions' past, present, and perspectives. The dominant narrative and the alternative narrative form the basis of the narratives. Most of the time, the mainstream

narrative refers to a pro-coal context, while the alternative one refers to the green narrative, promoting new low-carbon technologies through such policies.

Conclusions

First, we must also consider that the transitional process has a horizontal component because certain areas can suffer or develop due to decarbonization. The areas that stand to gain the most from applying the process are education and research and development. The champion regions for the number of students are Silesia, with 300,000 students; the Ruhr, with 250,000 students; Sardinia, with more than 35,000 students; Moravia-Silesia, with 25,000 students; and finally, the Jiu Valley, with approximately 2000 students. Over the past three decades, we've witnessed the evolving role of political parties as dominant and influential authorities. From the PNL-PSD duo in Romania, with limited policy concerns related to climate or decarbonization, to the non-alignment with the European Green Deal and eco-politics of the PiS in Poland, and the minimal role in the political debates on the coal phase-out of the AfD party in Germany, the landscape is changing. The new coalition 'Civic Coalition' is attempting to enter the political scene with greater climate ambitions, and even populist parties are becoming more nuanced in their visions, which may not always align with climate and Just Transition principles.

In thinking about success and failure, we must keep in mind that each region and, by implication, each country entered the modern era and went through the Industrial Revolution differently. With the exception of Germany, whose transition was started the earliest and had as its source a voluntary and domestic engine, all other transitions resulted from European Union impositions and funding. By aggregating all the findings identified from the analysis of the case studies, we can see that most of the time, in addition to the national government that represents the leading policy emitter, there is a second influential institution at the regional level, such as, for example in the case of Silesia, the Office Marshal of the Silesian Voivodeship, in Moravia-Silesia, the Regional Council of the Moravia-Silesia Cohesion Region, in the Ruhr, the Coal Commission, in Sulcis, the Regional Council and the Alliance for Renewable Energies from Sardinia, and in the Jiu Valley, the Petroșani City Hall.

A common point of the case studies is the predominance of the top-down policy approach in regional policies. Regarding the public policy model, there are concordances between Silesia, Moravia-Silesia, and the Ruhr, having constitutive policies due to the creation of the Katowice

Special Economic Zone, the Regional Council of the Moravia-Silesia Cohesion Region and the Coal Commission, respectively. Jiu Valley and Sulcis share the characteristics of a policy model focused on tourism, with a pronounced emphasis on decarbonization policies in the case of the Italian region. The regions consisting of Silesia, Moravia-Silesia, and the Ruhr overlap at the model level, with policy models based on innovation and technology.

Regarding the model of policy changes proposed by Tuohy, the Ruhr is the leading region with a "Big-Bang" model, followed by Silesia and Sulcis with the "Blueprint" type, and finally Moravia-Silesia and the Jiu Valley, with type "Incremental." Also, the Ruhr is the most advanced region from the perspective of the progress of decarbonization and sustainable development of the region, being placed in the "Stabilization" phase, followed by Silesia and Moravia-Silesia in the "Acceleration" phase, by Sulcis, located in the "Acceleration" phase "Fluctuation (Back-and-Forward)" and, with the slowest evolution, the Jiu Valley, in the "Pre-transformation" phase. Therefore, on the scale of the level of success, the Ruhr scores a "Full Success" compared to the other case studies, surpassing Sulcis with "Satisfactory Success" and the Jiu Valley, Moravia-Silesia, and Silesia with "Partial Success."

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