Coal phasing-out and regional development issues

How coal has shaped regional and social identities should not be overlooked while discussing the social impact of the on-going transition. Hence the need to focus on different pathways adopted by national and regional governments to adjust to the new context. While focusing on the sub-national level, this contribution aims at highlighting some of the challenges raised and to connect them to some findings from the literature dedicated to economic geography.

Dr. Gilles Lepesant,
is Senior researcher at CNRS (Centre National de la Recherche Scientifique/National Center for Scientific Research) in geography and Associate fellow at the Asian Energy Studies Centre (Hong Kong Baptist University).
gilles.lepesant@sciencespo.fr

In the EU, climate and energy policies implemented in the aftermath of the Paris Agreement have accelerated the phasing-out of coal in most of the Member States raising challenges for regional and local stakeholders to adjust to the new context. Overall, 41 regions in 12 EU Member States were reliant on coal-mining in 2016, providing jobs to about 240 000 people. A territorial approach is all the more required that phasing-out of coal does take place evenly across the EU. Whereas the number of jobs related to coal has sharply declined over the last 30 years, some areas are still heavily reliant on it without reaping the benefits of the increasing share of renewable energies in the European energy mix.

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Overall, 41 regions in 12 EU Member States were reliant on coal-mining in 2016, providing jobs to about 240,000 people (180,000 in the mining of coal and lignite and 60,000 in coal- and lignite-fired power plants) (Alves Dias et al., 2018) (Figure 6). Declining of the industry has led in several areas to long-term depopulation, high rates of structural unemployment and loss of attractiveness. Recultivation adds to the challenge as degradation of land and bodies of water as well as high levels of air pollution implies long-term significant investments. From the social point of view, coal was (or is) providing steady and well-paid jobs to their workers, as well as a sense of identity, community and pride (Bruegel, 2020). The transition can be painful when it is perceived as a threat by local communities both for the economic structure and for the regional identity. However, some research suggests that opposition from local populations might be overstated, at least in the case of Germany.

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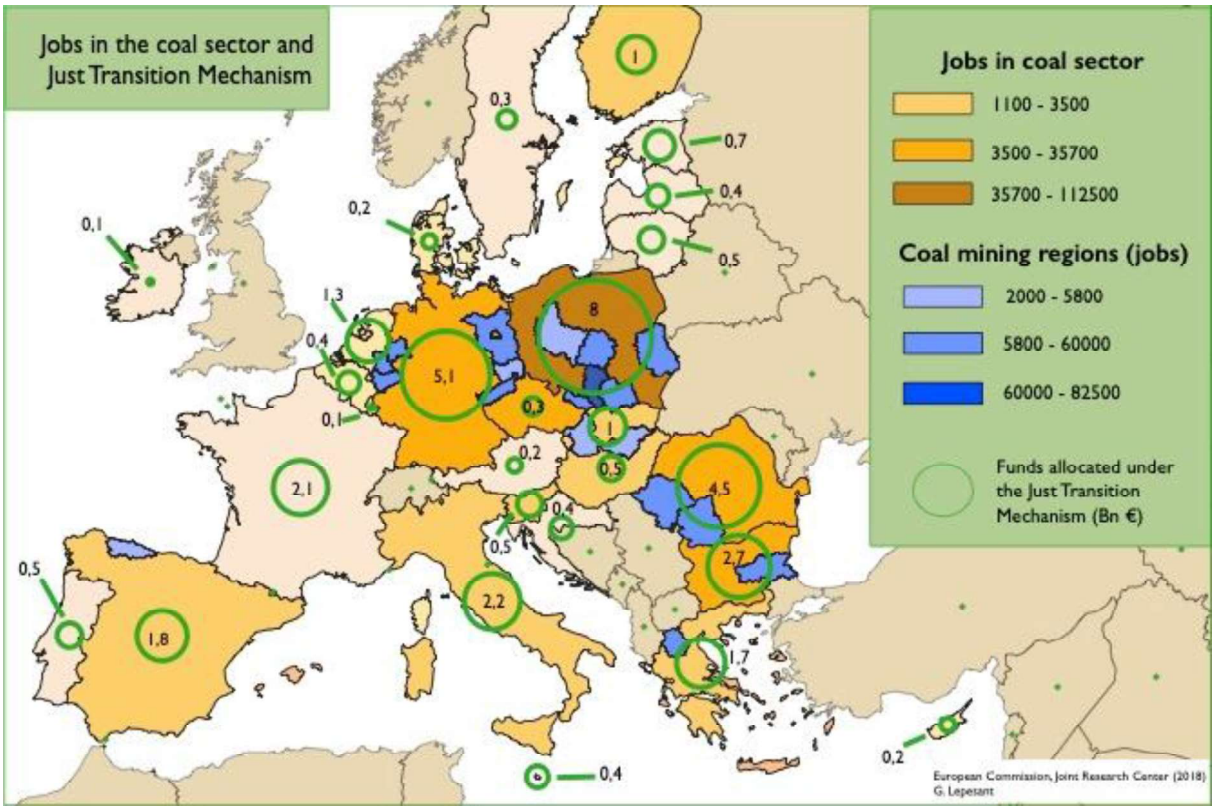

Figure 8 Jobs in the Coal Sector and Just Transition Mechanism, Source : G. Lepesant; European Commission Joint Research Center

According to Rinscheid and Wüstenhagen (2019), the German civil society would have supported a faster exit from coal. They admittedly note differences according to political affinities, ages and regions, but note that even in areas directly affected by a rapid energy transition, an earlier exit than in 2038 would be met with the support of a majority of inhabitants. How then to explain the compromise found for a phasing-out of coal in 2038 at the latest? Rinscheid and Wüstenhagen see a response in how the Commission has been set-up: few elected representatives, few citizens while employers (BGA[1]) and trade unions (IGBCE[2]) were very well represented. The balance of power was thus in favour of stakeholders keen to a lengthy transition. While involving stakeholders in the decision-making process helps to engineer a compromise, such corporatist approaches might be inadequate regarding the necessity to act decisively in the field of climate change (Breetz et al., 2018).

How affected regions will adjust to the phasing-out of coal remains a key issue since employment in coal related activities is concentrated in a few areas across the EU. Europe has accumulated a long experience of industrial crises. Globalization and automation of production have resulted in massive job losses affecting in particular the old industrial regions (Midlands, Ruhr, North-East of France). In most of the regions still reliant on coal, some similarities emerge: trade unions oppose job loses that could not be offset by gains in other sectors, business representatives are split between the support to the old and to the new economy, policymakers hesitate between short-term support to the existing sectors and a long-term vision.

1 Bundesverband Großhandel, Außenhandel, Dienstleistungen.
2 Industriegewerkschaft Bergbau, Chemie, Energie.

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European regions affected by the phasing-out of coal are benefiting from EU funds especially since the introduction of the 'Just Transition' mechanism proposed by the European Commission and starting from 2021 onwards[3]. This Mechanism[4] focuses on regions and sectors affected by the transition given their dependence on fossil fuels, including peat and oil shale or greenhouse gas-intensive industrial processes. Other funds are available (structural funds in the framework of the Cohesion policy, Innovation Fund and Modernisation Fund financed by the revenues provided by the ETS). They won't be enough to ensure a smooth transition in regions affected by restructuring.

The challenge of breaking out of locked-in paths

A key challenge relates to the capacity of regions to break out of locked-in paths by initiating new technological pathways. Old industrial regions are indeed characterized as primarily one of negative lock-in (Hassink, 2010). As highlighted by Grabher (1993), inter-firm linkages, industrial atmosphere and local political support for specific branches are key elements of a successful regional development but in times of crisis can prevent a region from breaking-out of lock-in. Grahber identifies three types of 'lock-in': functional lock-in where inter-firms networks in declining industries tend to block the diversification of the economic fabric, the cognitive lock-in where a mindset precludes imagination to move towards new development pathways, and political lock-in where dense relationships between decision-makers and business circles aim at preserving the existing structures despite the need for change (Campbell, Coenen, 2017).

A large body of literature has elaborated on the reasons why some areas prove to be resilient while others find it difficult to tackle high unemployment and loss of attractiveness and where inertia prevails. 'Stubborn obstacles to innovation' (Grabher, 1993, p.256) have been highlighted in different case studies. The evolutionary turn in economic geography has shed light on the path-dependent nature of regional development (Boschma R. and Martin R., 2010, Martin R. and Sunley P., 2006). Self-reinforcing mechanisms may indeed steer a regional effect along one path rather than another (Martin, 2010). This path-dependent nature of technological change has been theorized in the literature on socio-technical transitions, especially through the concept of 'socio-technical regimes' (Geels, 2002, Simmie, 2012). This concept has been particularly forceful to explain why energy systems might remain locked-in to fossil fuel-based technologies (Unruh, 2000). In this respect, the role of politics should not be overlooked as highlighted by Rodriguez-Posé A. (2013) in his analysis of the role of the institutions. As shown in different empirical case studies (Harfsta and Wirtha, 2011; Morton and Müller, 2016), governance issues are key in this respect.

Experiences across Europe suggest a number of pathways that regions may draw upon to escape lock-in. Some have turned to tourism (Zasavje in Slovenia), leisure, sport (Steirische Eisenstrass in Austria), others to culture (like the Guggenheim Museum built in Bilbao in the heart of a region formerly specialized in the naval and steel industry). Coal regions capacity to cope with external transformative pressures and to foster a regional structural revival will depend on their capacity to absorb shocks, to draw on the skills found in the existing industries as well as on the interplay between policy makers and business circles at different levels. Where this revival can be built upon previous industrial restructuring experiences (such as in Ruhr region) or upon an

3 Proposal for a regulation of the European Commission to the European Parliament and of the Council establishing the Just Transition Fund, Brussels, 14th January 2020 COM(2020) 22.

4 The Mechanism consists of three pillars: (1) a Just Transition Fund implemented under shared management, (2) a dedicated scheme under InvestEU, and (3) a public sector loan facility with the EIB Group to mobilise additional investments to regions concerned.

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already diversified economic basis (such as in Silesia), this process should be smoother than in areas with few alternatives left.

Conclusion

Phasing-out of coal is a historical process in the sense that coal has very much contributed to the industrial revolution and to the shaping of the European industrial geography. The challenge is now to find alternative activities in a context where the territorial logic of renewable energies follows different patterns and where the jobs they provide are not always as numerous as jobs at stake in coal related activities.

Declining of the industry has led in several areas to long-term depopulation, high rates of structural unemployment and loss of attractiveness and the transition can be perceived as a threat by local communities both for the economic structure and for the regional identity. Hence, the need to link international and European changes to regional development issues in order to better understand how European regions can adjust to the new context induced by the energy transition.

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