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# Does the multilevel governance of state aid encourage broadband diffusion? Evidence from three European countries

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## Abstract

EU broadband policy has been described as an example of multi-level governance (MLG) involving manifold actors across different sectors and levels of government. Whereas the extant literature has largely explored the interaction among public and private players and between national and supranational regulators in the context of the EU broadband markets, little attention has been paid to the MLG of state aid for broadband diffusion. This paper aims to fill such a research gap by employing multiple qualitative methods to explore how MLG has affected the implementation of public initiatives in support of broadband diffusion across Spain, Italy and the UK. The cross-country comparison reveals a trend towards the centralisation of public interventions, which created efficiencies in the management of state aid but raised tensions with local authorities. Therefore, the current MLG of state aid needs to be adjusted to balance the benefits of a greater coordination with the need urgency to ensure the effective and active participation of local stakeholders to the implementation of broadband projects.

## 1. Introduction

In recent years, a plurality of public actors at supranational, national and local level have intervened in the European Union (EU) broadband market (Ramos, Arcos, & Armuña, 2009). As a result, the model adopted by the EU for broadband policy can be described as an example of multilevel governance (MLG) (Simpson, 2011). This concept emphasises the multiplicity of actors at different levels involved in EU policy and provides a simplified framework to analyse a pluralistic and highly dispersed policymaking process (Milio, 2014).

Whereas the interplay between public and private actors in broadband markets has been widely researched (Gómez-Barroso & Feijóo, 2010), the interaction among different public authorities in the context of broadband policy remains largely unexplored. Some scholars have analysed the relationship between national and EU regulators, expressing conflicting views on the optimal degree of decentralisation (Montolio & Trillas, 2013; Simpson, 2011). More recently, the reliance on state aid for superfast broadband<sup>1</sup> diffusion has added a further degree of complexity to the already existing MLG of broadband markets.

Previous literature has provided mixed evidence on the effectiveness and efficiency of MLG (Hurrelmann & DeBardeleben, 2019; Milio, 2014; Papadopoulos, 2010). This paper aims to contribute to this debate by understanding the impact of MLG on the implementation of state aid programmes and the diffusion of broadband in the EU. The analysis employs multiple qualitative methods to explore the interaction between multiple actors involved in the broadband markets of three EU Member States: Italy, Spain and the UK. The comparison sheds light on the effect of MLG on the implementation of state aid programmes, and also clarifies those factors shaping the interaction between different levels of government.

With this in mind, the remainder of this paper is structured as follows. Section 2 reviews the extant research on MLG, with a focus on its application in the context of broadband policy. Following a detailed description of the methodology employed for data collection in Section 4, the three case studies are presented and analysed in Section 5. These findings are then discussed in Section 6, while Section 7 outlines policy recommendations and suggestions for future research.

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<sup>11</sup> Superfast broadband is defined as connectivity delivering a minimum download speed of 30 Mbit/s. Such speed can only be achieved by next-generation access (NGA) networks, which are partially or entirely composed of optic fibre.

## **2. Multilevel governance: a literature review**

MLG refers to systems of governance where there is a dispersion of authority between various levels of government as well as across different sectors (Daniell & Kay, 2018). The concept was first introduced by Marks (1993) to describe the decision-making processes within the EU, wherein a plurality of state and non-state actors on different levels are involved and coordinate in the governance of a series of functional problems (Jessop, 2004). The debate, however, dates back to the 1950s and 1960s when then the neo-functionalists defended supranational interests while the inter-governmentalists stressed the importance of the bargaining power of the EU Member States as a driver in the process of EU integration (Moga, 2009; Pollack, 2005).

The first generation of studies on MLG primarily focused on changes in institutional configurations and modes of policy-making (Hooghe & Marks, 2003; Scharpf, 2009). More recently the focus has shifted towards MLG's normative implications in terms of democratic quality and the direct participation of the population (Holzinger & Biesenbender, 2019; Stephenson, 2013). In particular, recent studies have emphasised the rise of regional authorities, following the progressive transfer of authority from centre-level to lower-level jurisdictions (Behnke, Broschek, & Sonnicksen, 2019; Broschek, 2015).

Such a trend is expected to facilitate the inclusion of civil society perspectives into the decision-making, thereby enhancing the quality of democracy in the EU (Dolinar, 2010; Hurrelmann & DeBardeleben, 2019). On the other hand, the coordination of multiple actors involved in the policymaking process is likely to generate significant transaction costs that may undermine the accountability and efficiency of policymaking (Newig & Koontz, 2014; Papadopoulos, 2010). In particular, Milio (2014) observed that implementation problems can emerge from administrative issues as well as institutional tensions, reflecting shortcomings in both civic society and the administrative structure of the public sector.

Consistent with the principles of MLG, the governance of telecommunications and broadband policy in the EU has been shared across multiple supranational, national and local actors (Marks & Hooghe, 1996). Since the late 1980s, the EU Parliament (EP) and the EU Commission (EC) have adopted a number of directives and recommendations that form the regulatory framework for EU broadband markets. These measures have been transposed nationally by central governments and enforced by national regulatory authorities (NRAs) or other public agencies in charge of public interventions in broadband markets (Falch & Henten, 2015).

Most regulatory and policy remedies adopted at national or local level are subject to the scrutiny of the EC. For example, NRAs must notify DG-Connect<sup>2</sup> of their decisions to ensure that national regulation is aligned with the EU regulatory framework. In 2009, the Body of European regulators for electronic communications (BEREC) was also established to assist NRAs in the implementation of the EU regulatory framework and ensure its harmonised application across the EU (Mathieu & Rangoni, 2019). Likewise, any initiative undertaken by national and local authorities in support of broadband supply must be notified to DG-Comp<sup>3</sup>, which validates the compliance of such interventions with the EU legislation on state aid (Gomez-Barroso & Feijoo, 2012).

As summarised in Table 1, the extant literature has emphasised the plurality of roles played by public actors on both sides of the broadband markets (Gómez-Barroso & Feijóo, 2010; Ramos et al., 2009; Troulos & Maglaris, 2011). Previous research has primarily explored how the interplay between public and private players has affected the development of broadband markets, providing conflicting and ambiguous evidence (Gerli & Whalley, 2018; LaRose, Strover, Gregg, & Straubhaar, 2011; Tapia, Powell, & Ortiz, 2009). Little research has been instead conducted on the interaction among the different public actors involved in broadband markets.

Table 1: Public interventions in broadband markets

	Supply-side			Demand-side
	Rule-maker	Financer	Developer	
Local	Administrative rules	Public-private partnerships Anchor tenancy	Local networks public	Subsidies to end-users E-government
National	Sectoral regulation	Subsidies Public-private partnership	Nationwide networks public	Digital literacy programmes

Source: developed by the author based on the literature review

Previous studies on MLG in broadband policy have primarily debated the optimal degree of decentralisation with regard to sectoral regulation (Longo, Iborra, & Saz-Carranza, 2014; Montolio & Trillas, 2013; Simpson, 2011). Simpson (2011) took a very strong view against any sort of decentralized intervention in the telecommunications sector, arguing that differentiated geographic regulation has enormous compliance costs for firms in terms of red tape and uncertainty. Conversely,

<sup>2</sup> The Directorate-General for Communications Networks, Content and Technology of the EU Commission

<sup>3</sup> The Directorate-General for Competition of the EU Commission

Montolio and Trillas (2013) concluded that centralisation has either an irrelevant or negative effect on broadband diffusion. Other scholars have explored the conflictual nature of the relationship between national and EU authorities in the context of telecommunications regulation, emphasising the need for supranational coordination through regulatory networks (Longo et al., 2014; Mathieu, 2016)

Empirical research on MLG in the context of state aid for broadband, however, remains limited. Many scholars on both sides of the Atlantic have explored the roles of municipalities in broadband diffusion (Gerli, Van der Wee, Verbrugge, & Whalley, 2018a; Tapia et al., 2009), but little has been said on their interaction with other public actors. Limited to Canada, Rajabiun & Middleton (2013) concluded that decentralised interventions would favour the deployment of broadband networks. Ali and Duemmel (2019), in contrast, highlighted the risks of having too many actors involved in the promotion of rural broadband.

The majority of previous studies maintained a dichotomic approach (local versus national, centralised versus decentralised), which does not capture the heterogeneity of public interventions in broadband markets. In reality the relationship between local and national authorities is more complex and dynamic. For example, some States in the US have banned municipal networks but few of the latter benefitted from public subsidies awarded by national agencies (LaRose et al., 2014). Likewise, in the EU, the role of public authorities has varied significantly across the countries and over time, with the EU institutions supporting both national and local initiatives in the Member States (Gerli, Van der Wee, Verbrugge, & Whalley, 2018b; Navío-Marco, Arévalo-Aguirre, & Pérez-Leal, 2019).

This paper aims to explore and clarify the intricate interplay that exists between public authorities in broadband market, thereby illustrating how MLG has performed in the context of state aid. In line with Milio (2014), the analysis focuses on two major dimensions affected by MLG: the implementation of public policy and stakeholder engagement. The former can be defined as the “process of interaction between the setting of goals and the actions geared to achieving them” (Milio, 2014, p. 387), while the latter reflects to what extent people, groups or organizations with a stake in the outcome of a particular policy are actively involved and participating to the policy-making process (Ali & Duemmel, 2019).

### **3. Methodology**

A multiple case study analysis was employed to explore the MLG of broadband state aid across three EU Member States (Italy, Spain and the UK), selected because of their representativeness and

comparability (Yin, 2009). The three case study countries are among the largest and richest EU Member States, yet performed differently according to the Digital Economy and Society Index of the EC (EC, 2018). The UK ranks as a high-performing country with regard to digitisation, while Italy lags behind in terms of both coverage and adoption of broadband. Spain has outperformed the other countries in terms of FTTH coverage but the diffusion of digital services remains below the EU average (EC, 2018). The cross-country comparison was designed to enhance the external validity of the case study analysis, by highlighting regularities across the EU broadband markets as well as contextual factors that affect the outcomes of MLG in each Member States (Tsang, 2014).

To further enhance the validity and reliability of the thematic analysis, multiple qualitative methods were employed (Jonsen & Jehn, 2009; Yin, 2009). As shown in Table 1 and detailed in Appendix 1, 51 interviews were conducted with representatives of local and national authorities, broadband providers, representatives of local communities and businesses. The interviewees were selected through purposive sampling to identify the most qualified and representative stakeholders in each sector and country (Kovalainen & Eriksson, 2016). Furthermore, participant observation (Kawulich, 2005) was employed in four occasions to further explore the interaction between these stakeholders. The primary data was integrated with a variety of secondary sources: policy documents, trade and local press, reports from consultancies and public authorities evaluating public initiatives in broadband markets.

Table 1: Summary of primary data collection

	<b>IT</b>	<b>ES</b>	<b>UK</b>	<b>Total</b>
<b>Interviews</b>	<b>18</b>	<b>8</b>	<b>25</b>	<b>51</b>
National administration	4	1	2	7
Local administration	3	3	4	10
Broadband providers	5	2	8	15
Representatives of residential and business end-users	6	2	11	19
<b>Ethnography</b>	<b>1</b>	<b>1</b>	<b>2</b>	<b>4</b>
Meetings between local authorities and local communities	-	-	2	2
Meetings between regions, national authorities and EU institutions	1	1	-	2

Source: compiled by the authors

Both primary and secondary data were analysed with NVIVO, a software widely utilised for qualitative research, to explore and organise the themes emerging from primary and secondary sources (Welsh, 2002). For each country, the codes were grouped into recurring themes that were then compared across the case study countries to map similarities and differences across the EU broadband market (Jonsen & Jehn, 2009). The following sections outlines the findings for each country, after a brief overview of state aid regulation in the EU.

#### **4. State aid for broadband diffusion in the EU**

The existence of market failures has motivated public intervention in EU broadband markets since the late 1990s (Gómez-Barroso & Feijóo, 2010). Whereas early initiatives were autonomously led by local authorities (Gerli et al., 2018a), the EU later adopted specific guidelines for state aid in broadband markets that prevent public intervention(s) from distorting competition and crowding out private investment (Gomez-Barroso & Feijoo, 2012). The latest version of the guidelines (Communication 2013/C 332/01) confirmed that state aid is only authorised in those areas where private suppliers are not investing within three years (that is, in the so called ‘white areas’). The latter are identified through open consultations where private operators report their current and planned investment in superfast broadband networks.

Alongside such consultations, the EU guidelines outline a number of conditions that need to be fulfilled in the implementation of state aid. For example, subsidised networks must be available to competitors through regulated access, whose price and technical conditions being set by NRAs. Furthermore, state aid must be awarded to the most economically advantageous offer through open tenders, which must not favour any specific technology. Local and national authorities undertaking public interventions in the EU broadband market have to notify their initiatives to DG-COMP who ascertains their adherence to state aid regulation.

Between 2003 and 2018 DG-COMP analysed 162 cases of state aid, raising objections for only three of them (EC, 2019). Despite the common framework, the implementation of state aid has varied significantly across the EU with a plurality of models and funding being employed to support the diffusion of superfast broadband (CERRE, 2018). The following subsections provide a detailed analysis of how state aid have been employed and governed in the case study countries over the past 20 years.



## 4.1 The UK

The diffusion of broadband in the UK has been supported by public interventions since the early 2000s, when the Regional Development Agencies (RDAs)<sup>4</sup> subsidised the rollout of broadband infrastructure to bridge the gap between rural and urban areas (EC, 2019). It is only as recently as 2011 did the UK government adopt a nationwide strategy to support the diffusion of broadband (BIS, 2010). Since then, Broadband Delivery UK (BDUK), an agency of the (now) Department for Digital, Culture Media & Sport (DDCMS), has designed and led a number of supply- and demand-side initiatives. Most of these have been implemented by regional public-private partnerships (PPPs) between local County Councils and private suppliers selected through a competitive process (National Audit Office, 2015). The network deployments have been funded by a mix of public subsidies and private resources, with also European Regional Development Fund (ERDF) being employed in some cases (BDUK, 2019).

BDUK acted as a national competence centre (NCC), overseeing the allocation of subsidies across the regional partnerships, monitoring the execution of their projects and managing the notifications to DG-COMP. A first aid scheme was approved by EC (2012) in November 2012, despite initial concerns about the target speed<sup>5</sup> of the programme and the impact upon competition of the model adopted by BDUK (Jackson, 2012). A new notification was issued in January 2015 to seek approval for the Phase 2 of BDUK programme, which was approved in June 2016 (EC, 2016). According to a consultant in telecommunications policy, such a delay was caused by potential inconsistencies between the conditions requested by the EC and the regulation defined at national level by OFCOM, the NRA:

“the new, second State aid arrangement (...) took a long time to approve... and the reason it took a long time to approve was that the EC wanted duct access, passive infrastructure access, as one of the condition in State aid approval. Ofcom was doing a market review of the wholesale market (...) BT didn’t want the UK government to agree a condition under the State aid rules that BT had not agreed to in the market review with Ofcom, in relation to its other commercial infrastructure.”  
(Interview UK23)

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<sup>4</sup> Regional Development Agencies were non-departmental bodies, established in 1998 to promote economic growth and competitiveness in each of the 9 NUTS1 regions in the UK.

<sup>5</sup> BDUK aimed to cover 90% of the premises with at least 24 Mbit/s, while the Digital Agenda for Europe set universal access to 30 Mbit/s as the ultimate goal for Member States.

Interviewees agreed on the advantages of having a NCC coordinating local projects and liaising with the EU institutions. As admitted by the public manager of a regional PPP, it was “easier to go with the government than to go by ourselves” to comply with state aid rules (Interview UK2). BDUK was also praised for supporting the local authorities by “sharing the information that is needed” (Interview UK19). According to a manager of BDUK, overall this centralised approach contributed to increasing the efficiency of the programme:

“the standardisation that gives around the projects makes the programme much more efficient than if the local bodies were free to pursue these projects in the way that they believed it was the right way” (Interview UK11)

On the other hand, the national framework designed by BDUK was often criticised for favouring the incumbent over other infrastructure providers. During the first Phase, all 44 contracts funded by BDUK were awarded to British Telecom (BT), the former monopolist. This was largely caused by limitations in the model adopted for the allocation of subsidies (National Audit Office, 2012) but was also seen as a consequence of the fact that “the UK really is a very centrally managed country where the government likes to talk to big companies” (Interview UK23). In fact, new entrants struggled to partner with BDUK because the conditions imposed to obtain public subsidies were too burdensome for small players, as remarked by the founder of a community network:

“Part of the money that BDUK was giving us we would have to get back to the project manager that would have to be approved by them and subjected to tender, and bla bla... And in the end, we just told them to get stuffed. Their condition they put on it meant our project would have failed: our project would haven’t worked doing it that way” (Interview UK1).

Both primary and secondary sources also reported cases of private networks being overbuilt by BT with public subsidies (Environment, Food and Rural Affairs Committee, 2017; Gigaclear, 2016; Jackson, 2017). The ability of both BDUK and EU institutions to tackle anticompetitive behaviour was questioned. On the one hand, the national agency was accused of “chang[ing] the rules very quickly on BT’s request” (Interview UK3), while EU institutions were perceived as passive and distant as they “should do something but there is nobody in Europe that can be asked for anything...” (Interview UK 1).

Furthermore, the top-down approach followed by BDUK was accused of neglecting the differences that exist between local authorities, thereby exacerbating divides within the UK. The comparison of local projects highlighted how their objectives and resources vary significantly, with some authorities expecting a final coverage way below the national target at the end of the programme (Rathbone, 2016). As highlighted by the public manager of a regional PPP, the relationship between local authorities and BDUK was sometimes conflictual, as the priorities of the latter were not always aligned with the needs of the former:

“we fight our corner - and this sometimes is the right description with BDUK, so that they understand the needs of *County B* rather than just understanding the needs of the national programme. So, I spend a lot of time with BDUK explaining why we need to do something in *County B* that may be a bit different to the normal (Interview UK10)

Local authorities running the projects were expected to develop a plan for the communication and engagement with local stakeholders, in addition to running public consultations for the identification of white areas (BDUK, 2011). The board of most regional PPPs included elected representatives of local communities (MPs, district and parish councillors) as well as members of various interest groups (local charities, chambers of commerce, local enterprise partnerships, etc.). The ability of these actors to effectively engage with local stakeholders was, however, questioned by, among other, the public manager of a regional PPP:

“we keep oiling the process (...) this meeting this morning was a regular quarterly meeting and we’ve the representatives of the District Councils and representatives of the Parish Councils, National Parks, the police, Health authority... but what we don’t know is whether they go back and tell their people, we don’t know” (UK6IP)

However, participant observation and secondary sources highlighted the activism of local communities, lobbying for superfast broadband and exerting pressure on BDUK and regional PPPs to have their villages included in their projects (Observation UK1). Secondary data also confirmed that many residents and businesses directly took part in the open consultations run by regional authorities for the definition of white areas. For example, 77% of the responses to the consultation launched in November 2017 by the Welsh Government (2017) came from the general public. Based on the interviews, the interaction between broadband campaigners and local authorities varied significantly even within the same area. For example, in County A, some interviewees described their

County Council as “very supportive” (Interview UK12), while others complained that “they don’t seem to do anything to help the communities” (Interview UK18).

However, even the detractors of regional PPPs admitted that County Councils “have had all the criticism for poor delivery, but actually it isn’t their fault, it’s about the contract” (Interview UK20). In particular, the framework designed by BDUK was criticised for the confidentiality clause which limited the ability of local authorities to “tell you when you’re getting the service” (Interview UK20) and “to look at their BT’s invoice and compare it with another local authority’s invoice” (Interview UK19). The ability of local authorities to manage the PPPs was further compromised by the fact that “they didn’t have the resources to manage the project effectively, they didn’t get the support that they needed at national level to do it properly” (Interview UK19)

In particular, interviewees stressed the lack of qualified employees in the local administration. On one hand, “it was not homogeneous the knowledge of local authorities in terms of the business, technology-wise of the broadband” (Interview UK16) because some had gained experience through the management of local broadband projects while others “did not have enough expertise to be able to take on the weight of deal with BT, which is a huge business and who effectively hold all the cards” (Interview UK9). More generally the ability of local authorities was significantly compromised by the adoption of austerity policies starting in 2010, as admitted by the CTO of a regional authority:

“when we started this programme time was a lot better, kind of austerity had kicked in... so, I don’t know if you realise but if I look at my ICT budget, for example, I would have about 60% less money that I started with 5 years ago, 6 years ago, I’ve got less than a half people I had” (Interview UK2)

## **4.2 Spain**

The Spanish broadband market has always been characterised by the co-existence of multiple public and private actors. Since the late 1990s, many regional and municipal authorities have engaged in the rollout of public networks (Gerrand, 2006), while the national government launched its first plan for rural broadband in 2004 (EC, 2005). This was followed by Plan Avanza in 2009 and Plan Extension Banda Ancha (PEBA) in 2012, which consisted in soft loans to private suppliers for the rollout of ADSL and superfast broadband, respectively (EC, 2010, 2013). The launch of these nationwide plans has not prevented local authorities from undertaking their own initiatives (Observation ES1): some have established public open-access networks (such as Asturcón in Asturias) while others have formed PPPs with commercial operators (such as ConnectAragón in Aragón).

The nationwide programmes have been entirely managed by the Department of Industry, Trade and Tourism (Mincotur). The department identifies the areas eligible for public intervention through annual public consultations. Subsidies and loans, financed from both national and ERDF funding, are then allocated on a municipal basis through a competitive process, led and monitored by Mincotur without the involvement of municipalities or regions (EC, 2013). As lamented by the representative of a regional administration, local authorities have had no formal role in this programme:

“the role of the regional government in this programme has been, especially since 2011, limited to reading the plans: its participation has not been required for the definition of the programme, or the analysis of the needs or the ex-post evaluations” (Interview ES8)

Not only were local authorities excluded from the governance of PEBA, the latter also did not engage with the initiatives autonomously launched by regions and municipalities. A representative of Mincotur clarified that “the local implementations are independent aid measures, there is no relationships with PEBA” (Interview ES6). Consequently, local public networks did not benefit from national funding, because “the money are for private operators (...), we’re from the Comunidad<sup>6</sup>, they’re from the State and the money is not for us” (Interview ES5). Furthermore, the PEBA framework did not include any mechanism to engage with local stakeholders in the execution of the projects, apart from the open consultations mandated by EU guidelines. The participation in the latter was limited to private suppliers and public authorities, with only ten responses received from other actors (primarily businesses). The engagement of local authorities was also heterogeneous over the years: in 2013 only seven regions and four municipalities submitted responses, but four years later 14 regions and 42 municipalities participated in the consultation (Mincotur, 2013, 2017).

The centralisation of public intervention in the Spanish broadband market has not only characterised the governance of PEBA. Over the past five years, the Spanish government has adopted a number of laws to centralise broadband policy. The latter was defined as an exclusive competence of the national government by the Telecommunications Law approved in 2014, while the Royal Decree 462/2015 gave the State Secretary for Telecommunications and the Information Society the powers to coordinate and supervise the interventions of local authorities. The need for such coordination was agreed by many interviewees, who criticised municipal and regional initiatives as

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<sup>6</sup> Comunidad Autónoma is the official denomination of regional authorities in Spain

“some kind of showcase” (Interview ES1) pursuing “more a political goal than a real goal of improving competition” (Interview ES3). Their impact on competition was indeed questioned; ISPs have had little incentive to use these infrastructures because of their small scale, as explained by the manager of a national operator:

“it was very difficult to develop a specific process for the provision and maintenance or operations just in any municipality in Catalonia or any municipality in Asturias or 3 villages in Andalusia to get access to these wholesale services. (...) this supposes new processes, a new development of IT systems, new processes for the provision and the installation of the customers, the connections with the networks. And then, we don’t use it.” (Interview ES4)

Nevertheless, the recent measures adopted by the national government do not automatically exclude local authorities from the Spanish broadband market. Being consulted on the legitimacy of region-wide public networks, the NRA concluded that local authorities can maintain their infrastructure as long as the latter are managed by separate entities (CNMC, 2014). In fact, despite the push towards the centralisation of the public intervention, regional authorities have recently launched new initiatives, employing ERDF funding directly obtained from the EC (Observation ES1). This may exacerbate tensions existing within the Spanish broadband market, as underlined by an expert in telecommunications policy:

“the EC gives funds directly to the Regions (...) it’s complicated because, you know, the Regions have funds to do something that they don’t have full competences for. So there are also a lot of tensions now, not only regional-national but national-DG Connect” (Interview ES1)

Furthermore, the increasing centralisation has not affected the powers of local authorities with regard to the administration of civil engineering works. Whereas the collaboration between public operators and municipalities has historically been “smooth and beneficial” (ES0EPb), because “we’re public, they’re public and (...) there’s no problem to agree with these municipalities to use their ducts” (ES0EPa), commercial operators still struggled to cooperate with local administrators in the rollout of broadband networks. As reported by a manager of the Spanish incumbent:

“you’ve to deal with a lot of Local Councils, a lot... with different regulations, there’s some kind of harmonisation that the Ministry made through the Telecom

Bill, so you ensure they're homogeneous to a certain extent but in the end you've to deal with them, go there, explain the project. As the size of the project reduces, when you make the interview you realise they don't know a word about network rollout or whatever... sometimes it's difficult to explain, because the people you're talking to has not detailed knowledge" (Interview ES3)

### 4.3 Italy

The Italian broadband market was initially characterised by the intervention of local utilities who have, since the late 1990s, deployed public networks in many cities and provinces, especially in the northern regions of the country. These initiatives preceded the adoption of state aid rules specific to broadband markets and were often accused of "creating imbalances and harming the market" (IT1IM) because they were unfairly competing with private providers. Their development has, however, stopped since the late 2000s, when "a progressive reduction of the resources available to local authorities has led to a drop, even drastic, of the investments, especially in infrastructures" (IT0EPa).

After 2005, numerous initiatives were launched by regional authorities to bridge the digital divide, often with the support of EU funding (EC, 2019). In the meantime, the Ministry of Economic Development (MISE) established Infratel, a public company in charge of executing and coordinating public interventions in support of broadband diffusion (Infratel, 2018). The first national broadband plan was also adopted in 2009 (EC, 2009). Despite the increasing involvement of the national government in the Italian broadband market, the coordination of public initiatives remained limited in this phase, as clarified by an expert in rural broadband:

"In the previous operational programme<sup>7</sup>, the regions managed their interventions autonomously without a national coordination (...) the national coordination is a characteristic of the current operational programme<sup>8</sup>." (IT0ECa)

The situation has changed since 2011, when MISE launched a new plan for the diffusion of superfast broadband (Piano Banda Ultralarga, hereinafter 'Piano BUL'). Although initially meant to be a nationwide initiative, 'Piano BUL' was only implemented in seven regions where EU funding from the operational programme 2007-2014 was still available (MEF, 2014). This plan consisted of subsidising the fibre networks built and owned by private suppliers selected through competitive

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<sup>7</sup> It refers to the operational programme of European Structural Fund (ESF) for 2007-2013.

<sup>8</sup> It refers to the operational programme of European Structural Fund (ESF) for 2014-2020.

tenders (AGCOM, 2018). Although the subsidies were allocated on a regional basis, Infratel took the lead and was “the main partner and interface” for the private supplier involved in the programme (Interview IT11).

Although ‘Piano BUL’ managed to expand the availability of superfast broadband, it was criticised for its impact on competition as the Italian incumbent had won all seven contracts. This pushed the Italian government to “actuate a different strategy” (Interview IT1) and adopt a new plan in March 2015 (‘Strategia Banda Ultralarga’, hereinafter ‘Strategia BUL’). Rather than subsidising the rollout of private infrastructure, the new plan consisted of the deployment of an open-access network entirely funded and owned by the government, but built and managed by a private concessionaire (Infratel, 2015b). ‘Strategia BUL’ confirmed the leading role of Infratel, as clarified by a representative of the Italian government:

“the control is substantially centralised (...) The role of the Regions has been absolutely marginal, limited to that of facilitator, meaning that they arranged meetings at local level to explain what was happening, to favour the collaboration with the company who is going to intervene...” (Interview IT15)

Such centralisation was generally positively perceived by representatives of both national and local administrations. A spokesperson of MISE commented that “the previous fragmentation impeded a uniform development across the country” (Interview IT16), while a member of the Research Council for rural economy concluded that national coordination was necessary to avoid a “proliferation of red tape and decisional centres” (Interview IT14). The oversight of Infratel also reduced the administrative burdens attached to broadband projects, as clarified by the officer of a regional authority:

“the biggest obstacle for the execution of the regional project<sup>9</sup> was bureaucracy, especially with the EU. It took more than a year and a half for two notifications. (...)

We didn’t do the new notification<sup>10</sup>, because we took advantage of the fact that the government did it. Rather than doing two notifications, we waited for the European Commission to reply to the government, who did a notification for the whole country” (Interview IT1)

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<sup>9</sup> This refers to the regional project run during the operational programme 2007-2014.

<sup>10</sup> This refers to the notification for ‘Strategia BUL’, the latest programme run by Infratel.



Some concerns were, however, raised by the spokespersons of other local authorities. Representatives of municipalities lamented the limited engagement in the design of public interventions and the lack of transparency over the procedures for the usage and management of EU funding (Observation IT1). The mechanisms included in Italian and EU regulation also proved unable to foster stakeholder engagement in the governance of broadband projects. Reports by Infratel (2015a, 2017) reveal that neither local authorities nor third-sector organisations participated in public consultations, which only involved private suppliers. Furthermore, the participation of local authorities in the multi-stakeholder meetings mandated by Italian administrative law (the so called ‘conferenze dei servizi’<sup>11</sup>) was not homogeneous, as clarified by a manager of Infratel:

“There were regions where all the municipalities took part and immediately gave all the authorisations. In other regions, instead, the participation to the ‘conferenze dei servizi’ was very limited, hence they have been unsuccessful, and we had to go and negotiate with every single municipality” (Interview IT9)

This affected the relationship between private suppliers and local authorities, which emerged as a major constraint on the prompt execution of broadband projects across Italy. Private providers involved in public initiatives experienced “significant inefficiencies in terms of costs and time” (Interview IT11) due to “limited collaboration of local authorities in the release of permits for civil engineering works” (Interview IT11). Despite the rules adopted at EU and national level to streamline the rollout of broadband networks, municipalities and other public entities kept applying their own conditions, as explained by a representative of a regional authority:

“Telecommunications are ruled by an ad hoc law (...) the Code of Electronic Communications, do you know it? Unfortunately nobody does. This law says that you cannot ask for bank guarantees, that you must release the permit within 30 days, even that you must make available the existing infrastructures at no cost (...) but nobody applies the law, they follow their own regulation.” (Interview IT1)

Interviewees agreed that such misconduct was justified by the fact that local administrators “were not adequately informed on the plan and its goals” (Interview IT11) but also did not

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<sup>11</sup> A ‘Conferenza dei servizi’ (literally ‘services conference’) is a mechanism imposed by the Italian administrative law, that oblige public administrations to engage with all the public and private actors with a stake in public projects in order to favour the cooperation among these stakeholders and streamline the execution of public projects (Bassanini & Carbone, 2006)

“understand the importance of broadband projects for their community and (...) were more concerned with the conditions of the roads” (Interview IT9). Nevertheless, the conflictual relationship with local authorities also emanated from idiosyncrasies in the Italian administrative system, as emphasised by the spokesperson of the national association of local councils:

“Municipalities have autonomy in all the issues regarding the governance of the territory. For example, if a municipality says that, for any excavation (...) regardless of its size, the entire road has to be renovated, the municipality has the ability of doing it, autonomously. Then maybe you go to the next municipality and that municipality says, instead, that you have to renovate only one part of the carriageway. As a matter of fact, there are inconsistencies and, based on the structure of the Italian system, certain things cannot be imposed onto the municipalities” (Interview IT5)

## **5. Discussion**

The three case studies have shown a common trend towards the centralisation of state aid governance in their respective national broadband markets. Whereas a greater coordination of public interventions was generally welcomed, tensions emerged between national and local authorities across the case study countries. This was exacerbated by the formal mechanisms used for stakeholder engagement, which proved unable to ensure the effective participation of local actors in the governance of state aid. The effectiveness of the EU oversight was also questioned, as it failed to acknowledge and address competitive problems and other issues affecting the governance of state aid within the national broadband markets.

The centralisation of state aid for broadband development has become evident over the past decade, as nationwide initiatives were launched in all the case study countries that progressively replaced the autonomous interventions of local authorities. The role of regions and municipalities in national programmes has generally been limited. Even in the UK, where the execution of the state aid scheme has been delegated to regional PPPs, the influence of local authorities over the design and execution of broadband projects has been largely minimal. In fact, the national framework constrained the ability of county councils to tailor their interventions to the specific local context. The lack of resources - human and financial - within the local authorities further inhibited their effective control of the PPPs, resulting in BT “actually manoeuvring and picking and choosing as the project developed” (Interview UK19).

Overall the case study comparison showed a ‘decline of the local authorities’ in broadband markets, a development that contradicts the rise of regional authorities observed by scholars in other

areas of the EU policy (Behnke et al., 2019; Broschek, 2015). This trend was largely driven by political changes and the austerity policies undertaken after the 2008 financial crisis. The interventionism of regions and municipalities was halted by the electoral success of parties historically adverse to the devolution of powers (Del Pino & Pavolini, 2015; Lowndes & Gardner, 2016). One of the first action of the Coalition government formed after the 2010 elections in the UK was to abolish the RDAs that had supported the diffusion of ADSL (Sandford, 2013). Likewise, the collaboration between the Spanish government and the regional authorities was “interrupted after the change in the government” (Interview ES8) following the victory of the Popular Party at the 2011 elections. This confirms that the effectiveness of MLG is significantly influenced by the support of political groups (Sielker, 2016), reflecting their views on local autonomy and the devolution of administration powers (Karlsson, 2015).

Furthermore, austerity policies left local authorities without the financial and human resources necessary to manage autonomous broadband projects. As previously observed by Del Pino and Pavolini (2015) in the context of social welfare, the cuts imposed to regional authorities forced them to accept the increasing oversight of national governments. These findings also reinforce the view of scholars accusing austerity policies of undermining the effectiveness of MLG through compromising the ability of local authorities to effectively contribute to the implementation of EU policy (Chardas, 2014; Dąbrowski, Bachtler, & Bafoil, 2014).

The effect of this centralisation on the implementation of state aid in the EU broadband markets is ambiguous. Across the case study countries, there was a general agreement that national coordination was necessary to overcome distortions resulting from local interventions and ensure a homogenous distribution of broadband networks. Furthermore, the establishment of national competence centres was seen as generating efficiencies in the administration of state aid, especially with regard to the notification process (that was perceived as burdensome and time-consuming procedure). On the other hand, centralised interventions were accused of distorting market competition by favouring the incumbents, who won the majority of the subsidies awarded. Nevertheless, the impact of municipal and regional initiatives on competition was also questioned because they were either crowding out private investment or failing to provide a convenient platform for commercial operators.

Whereas further research is needed to clarify the impact on competition of the various models adopted for public intervention in EU broadband markets, our comparison highlighted that the existence of EU oversight was neither able to prevent nor halt distortive behaviour emerging during the implementation of state aid. In fact, the control exerted by DG-COMP only focused on the

adherence of the proposed initiatives to the EU regulatory framework. Furthermore, there was no evidence that the evaluation of these projects took into account the lessons learnt from previous initiatives in the EU broadband market.

This largely reflected the lack of a rigorous and transparent monitoring of public interventions across the case study countries. Based on the EC guidelines, NRAs were expected to act as supervisors of state aid implementation. Although the projects notified to DG-COMP generally emphasises the involvement of NRAs in the monitoring and regulation of public programmes, the comparison revealed that only the Italian NRA has exercised these functions (AGCOM, 2018). Conversely, regional partnerships in the UK had “very little interface with Ofcom” (Interview UK10) while in Spain the NRA is involved only “if any problem between operators arise” (Interview ES6). The reluctance of state aid programmes to engage with regulators could be caused by the controversial relationship between regulatory agencies and national governments (Lanza & Lucattini, 2014; Napolitano, 2014). Further research, which includes the NRA, is needed to clarify whether this is the case.

The case study analysis vividly demonstrated the ineffectiveness of the formal mechanisms included in the EU regulatory framework to encourage and emphasis stakeholder engagement. Although public consultations were run in all case study countries, as demanded by the EU guidelines, the responses of and engagement by local stakeholders varied significantly. In Italy only private companies took part to the consultations run by Infratel, while those launched by regional PPPs in the UK attracted a large number of responses from residents and businesses. In Spain, the number of local authorities responding to public consultations varied over the years, but the participation of third-sector representatives was negligible. This variance is consistent with the different level of citizenship activism observed in the case study countries (Hingels, Saltelli, Manca, Mascherini, & Hoskins, 2009; Hoskins et al., 2006). It could also indicate that the public consultations run by regional authorities (such as was the case in the UK) are more likely to attract responses from local stakeholders, thereby reinforcing the view that the inclusion of local administration(s) in policy-making facilitates democratic participation (Dolinar, 2010).

Other mechanisms of stakeholder engagement mandated by national regulations, such as the ‘conferenze dei servizi’ in Italy or the measures recommended by BDUK, were equally ineffective. The case study analysis suggested that the active participation of local stakeholders in the governance of state aid “depends on the political commitment” (Interview ES1) of both national and local actors to cooperate and support the execution of broadband projects. As initially observed, such cooperation is affected by the views of local autonomy that dominate and shape the political landscape. However,

it is also influenced by the vision of broadband shared within the local communities, as “the pressure of the citizens with regards to the need of having sufficient bandwidth (...) leads the administrators to change attitude” (Interview IT5) towards these projects.

Across the case study countries, the lack of engagement with local stakeholders had significant repercussions on the execution of state aid programmes, as it led local administrators to engage in opportunistic behaviours that raised the costs and timing of network deployments. The latter could be seen as a further proof that stakeholder engagement favours rent-seeking – as suggested by Milio (2014) – thereby undermining the effectiveness of MLG. However the analysis clarified that such behaviour is facilitated by the powers of local authorities (regardless of MLG), thereby reinforcing the view that implementation problems are exacerbated by shortcoming in the administrative structure of the public sector (Eckersley, 2018; Milio, 2014).

Furthermore, previous research emphasised the need to engage with local communities to sustain broadband diffusion in rural areas, which are the primary target of state aid (Gerli & Whalley, 2018; Warren, 2007). Whereas this paper focused on supply-side interventions (consistent with the priority of state aid programme), the case studies provided anecdotal evidence that broadband adoption was higher when local stakeholders were directly engaged in the design and delivery of demand-side initiatives. This confirms the urgency of identifying (new) mechanisms to ensure the effective and extensive participation of local communities in the governance of public interventions in broadband markets (Fuentes-Bautista, 2014).

## **6. Conclusion**

By comparing the governance of state aid for broadband diffusion across three EU Member States, this paper has shed light on the impact of MLG on the EU broadband market. Overall the analysis has suggested that a distributed and shared governance is potentially beneficial for the diffusion of broadband. On the one hand, centralised coordination can generate economies in the administration of broadband projects as well as ensure their homogeneous distribution nationally. On the other hand, the involvement of local stakeholders in the execution of these initiatives is crucial to prevent local authorities from abusing their administrative powers and to foster the adoption of broadband.

In the current scenario, however, the effectiveness of MLG is shaped by countervailing forces: the push towards the centralisation of public interventions (favoured by austerity policies and the political attitude towards local autonomy) and the risks of opportunistic behaviour locally (enabled

by idiosyncrasies in the administrative system and aggravated by the lack of political support for broadband projects). To date, the EC, in its capacity as supervisor of national interventions, has failed to address such trade-offs as its role has been limited to certifying the fulfilment of regulatory requirements rather than promoting best practices for the implementation of state aid.

As new policies are adopted in the EU to support the diffusion of ICT technologies such as 5G and smart cities, it is crucial to identify new ways to achieve s effective MLG in the context of the ICT policymaking within the EU. The formal mechanisms currently in place have proved largely ineffective when there is no political commitment to support public projects locally. Thus, a range of actions need to be developed and then implemented to raise awareness of broadband within those local communities that are reluctant to accept and adopt new technologies. Furthermore, local authorities should be equipped with the necessary resources - human and financial - to oversee broadband projects and manage relationships with local and national stakeholders. Significantly, this requires long term investment on the part of local authorities that enables them to manage their relationship(s) with the operator of the broadband infrastructure, NRA and EU.

The role of DG-COMP should also be revised to maximise the benefits of its supervisory role. Having scrutinised more than 160 projects, the EC should be in a position to identify best practice and utilise this in the implementation of state aid programmes through developing a series of recommendations that address the issues that have merged to date. This knowledge should be shared across different levels of governance, employing BEREC and the recently established Broadband Competence Offices to facilitate its dissemination as well to engage with NRAs and local authorities. Overall, the greater involvement of NRAs in state aid programmes is desirable to ensure consistency in the regulation of national broadband markets and enforce the rigorous monitoring of public interventions.

By exploring the governance of state aid in the EU broadband market, this paper has also contributed to the debate on the effectiveness of MLG. The evidence from the case studies contradicts the ‘rise of regional authorities’ observed by scholars in other contexts. Regarding the implications of MLG in terms of democratic participation and accountability, the findings of this paper are aligned with previous research advocating for coordination mechanisms to enact effective stakeholder engagement and enhance transparency in the implementation of public policy (del Río, 2014; Henderson & Roche, 2018).

Finally, the analysis also revealed the ambiguous impact of MLG on market competition, as both national and local initiatives have been accused of distorting the market despite being compliant with EU guidelines. Thus, further research is needed to understand to what extent the centralisation

of public interventions influences the development of competition in broadband markets. Similarly, additional research is needed to clarify why the role of NRAs in the governance of state has varied significantly across EU. This will help identify those structural and contextual factors affecting the cooperation that occurs between regulatory authorities and other actors in broadband markets.

## 7. Appendix A: list of the interviewees

Interview UK1	Founder, community network A
Interview UK2	CTO, County Council A
Interview UK3	Founder, community network B
Interview UK4	Manager, Provider A
Interview UK5	Manager, Provider B
Interview UK6	Volunteer, community network A
Interview UK7	Representative of small businesses, County A
Interview UK8	CTO, City Council A
Interview UK9	District Councillor, County B
Interview UK10	Manager and Cabinet member, County B
Interview UK11	Manager, BDUK
Interview UK12	Broadband champion, County A
Interview UK13	Manager, Provider B
Interview UK14	Broadband champion, County A
Interview UK15	Broadband campaigner, County B
Interview UK16	Manager, BDUK
Interview UK17	Spokesperson, national association of rural communities
Interview UK18	Broadband campaigner, County B
Interview UK19	Spokesperson, national association of local authorities
Interview UK20	Spokesperson, local association of rural communities
Interview UK21	Spokesperson, local association of rural communities
Interview UK22	Spokesperson, local association of rural communities
Interview UK23	Consultant
Interview UK24	MP, County B
Interview UK25	Spokesperson, national association of rural communities
Interview ES1	Consultant and academic
Interview ES2	Consultant and academic

Interview ES3	Manager, Provider A
Interview ES4	Manager, Provider B
Interview ES5	Manager, Public operator A
Interview ES6	Official, Mincotur
Interview ES7	CTO, Region A
Interview ES8	CTO, Region B
Interview IT1	Manager, Region A
Interview IT2	Manager, Provider A
Interview IT3	Manager, Provider B
Interview IT4	Manager, Provider C
Interview IT5	Spokesperson, national association of local authorities
Interview IT6	Spokesperson, regional association of local authorities
Interview IT7	Broadband campaigner, Region A
Interview IT8	Representative of small businesses, Region A
Interview IT9	Manager, Infratel
Interview IT10	Manager, Provider B
Interview IT11	Manager, Provider C
Interview IT12	Member of AGCOM
Interview IT13	Spokesperson, national association of businesses
Interview IT14	Member of national government
Interview IT15	Member of national government
Interview IT16	Representative, national centre of rural economy
Interview IT17	Spokesperson, national association of businesses
Interview IT18	Spokesperson, national association of businesses



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