Between integration and protection of national sovereignty in the European Union's radio spectrum policy

BETWEEN INTEGRATION AND PROTECTION OF NATIONAL SOVEREIGNTY IN THE EUROPEAN UNION'S RADIO SPECTRUM POLICY

Uncovering Potential Research Avenues

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ABSTRACT

This article stresses the importance to understand the institutional context in which decisions on radio spectrum use are taken. In particular, this article focuses on the European Union's (EU) institutional context. The history of EU radio spectrum policy is narrated highlighting the tension between the EU integration process and protection of national sovereignty. This tension sets the stage to discuss two research areas which call for further attention: lack of legitimacy of EU law and use of soft power to promote EU integration. Investigating these areas may contribute to identify institutional barriers to better decision making for radio spectrum use.

Keywords: radio spectrum, national sovereignty, EU integration, European Commission, soft policy instruments

The global economy is gradually becoming digital, thanks to technological advances in Information and Communications Technology (ICT). ICT has steadily moved from a stage of initial experimentation to becoming the foundation of modern economic systems.[1] In order to seize the opportunities of digitalization, the European Commission (hereafter Commission) has set the creation of the so-called digital single market as a key priority for the European Union (EU).[2] The EU aims to become a leader of the

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1. Michalis.

2. European Commission, "Mid-Term Review on the Implementation of the Digital Single Market Strategy."

digital economy, creating favorable conditions for EU companies to grow globally and for individuals to freely access online services.[3]

A fundamental enabler of the digital economy is the wireless or mobile communication technology,[4] which has revolutionized the way society works, allowing individuals and objects to be connected regardless of their spatial location. Once global leader of the mobile technology, the EU has fallen behind other economies, such as the United States and some countries in the Asia-Pacific region.[5] The Commission argued that a main factor which contributed to the relatively insufficient EU performance of recent years was lack of harmonized rules governing the use of the radio spectrum across the EU.[6] Different national management approaches to radio spectrum have contributed to the fragmented structure of the EU telecommunications market. Due to market fragmentation, mobile communications providers are unable to exploit economies of scale and network effects, hampering investment, and innovation in services and infrastructures.[7]

Mobile communications rely on an essential natural resource, known as the radio spectrum. The amount of radio spectrum demanded to accommodate mobile communications has been growing over the years.[8] As the radio spectrum is limited in supply, research work is generally conducted to explore ways to accommodate emerging spectrum needs.[9] Such work may entail efforts for the development of advanced radio technologies to enable a more flexible and dynamic use of the radio spectrum[10]; technical solutions to facilitate coexistence between different applications[11]; changes in management practices to support and foster the growth of certain industries[12]; and formulation of up-to-date policy initiatives.[13]

In addition to existing research, which has examined the technological, economic, and management dimensions of radio spectrum, the question of how best to use the radio spectrum requires understanding the institutional context in which decisions on radio spectrum use are taken.[14]

3. European Commission, "A Digital Single Market Strategy for Europe."
4. Øverby and Audestad.
5. Bohlin, Caves, and Eisenach.
6. European Commission, "Communication on the Telecommunications Single Market."
7. Bohlin, Caves, and Eisenach.
8. Cisco.
9. Levin.
10. Haykin.
11. Mukherjee et al.
12. Pogorel.
13. Medeisis and Holland.
14. Hazlett.

Decision makers are the gatekeepers of radio spectrum. Institutions which hold the decision-making power ultimately determine which services are granted access to radio spectrum, which technologies can be used to provide services and under which conditions.

In this regard, the purpose of this article is to investigate how decisions on radio spectrum use are taken in the EU institutional context. The radio spectrum is conventionally defined as a national resource and, therefore, it is mainly managed at national level. Countries around the world decide how to use the spectrum in their respective national territories and coordinate internationally to reduce the risk of cross-border interference. For the EU member states, national discretion to manage the radio spectrum is affected by their membership of the EU. As set forth in the principle of primacy of EU law, EU law supersedes the legal order of the EU member states, including their national constitutions.[15]

In radio spectrum policy, the EU and the EU member states share the competence to legislate.[16] Competence distribution has been a hot topic in research on the EU since the beginning of the EU integration process.[17] Studies have been conducted to scrutinize the exercise of legislative power by the EU institutions in several policy areas, including financial services and capital markets,[18] labor markets,[19] agriculture,[20] and environment.[21] The tension between the aim of the EU to drive EU integration further and the opposition of the EU member states to restrictions of their national sovereignty has been the leitmotiv of these studies.

Following this tradition, this article narrates the history of EU radio spectrum legislation to show variation in competence distribution between the EU and the EU member states, through the lenses of supranationalism and intergovernmentalism. Basic views of supranationalism were borrowed to highlight the relevance of the Commission as rule-maker in the EU. Intergovernmentalism was used to explain the logic behind the use of soft policy instruments to promote EU integration. Discussing these issues seem to be relevant to gain a better understanding of the institutional context in which decisions on radio spectrum use are taken, potentially uncovering barriers to more effective decision-making processes.

15. European Union.
16. Ibid.
17. Rosamond; Henkel.
18. Dixon; Pelkmans, "Subsidiarity between Law and Economics."
19. Pelkmans, "Testing for Subsidiarity."
20. Grether.
21. Morgera, Kulovesi, and Munez.

The rest of this article is structured as follows: the section "The Dual Nature of the EU: Supranational versus Intergovernmental" presents some of the supranational and intergovernmental features of the EU system, which are used to analyze the history of EU radio spectrum policy; the section "Methodology" provides details regarding the EU official documents used as data sources; in the section "History of EU Radio Spectrum Policy," the history of EU radio spectrum policy is narrated; the section "Supranationalism and Intergovernmentalism in Radio Spectrum Policy" illustrates the supranational and intergovernmental features observed in radio spectrum policy. Coexistence of supranational and intergovernmental forms of governance opens up to potential research avenues which are discussed in the section "Between Supranationalism and Intergovernmentalism: Potential Research Avenues." Finally, the section "Future Research" concludes by outlining potential research opportunities.

The Dual Nature of the EU: Supranational Versus Intergovernmental

The EU is widely recognized as a sui generis organization, which embraces both supranational and intergovernmental forms of governance.[22] Since the 1950s, when the process of EU integration took off, several theories of EU integration unfolded to explain the coexistence between supranational and intergovernmental features in the EU system. In particular, the role of supranational institutions in driving forward the process of EU integration has been the central debate between supranationalist and intergovernmentalist theories. Table 1 summarizes the main features of these two schools of thought, which are further elaborated in the next subsection.

TABLE 1 Selected features of supranationalism and intergovernmentalism in the EU

Supranationalism	Intergovernmentalism
• EU institutions have independent decision-making authority • Interdependence of national economies creates pressure for EU integration • EU law, including Commission's executive acts, restricts national sovereignty	• EU member states control the EU integration process • EU member states transfer decision-making power to EU institutions only if in their interests • EU soft power to promote EU integration when EU member states do not allow transfer of decision-making power to the EU

22. Nugent.

The Supranational Nature of the EU

According to supranationalist theories, EU institutions are able to independently drive EU integration further, beyond the power delegated to them by the EU member states.[23] EU integration is described as a self-reinforcing process, whereby integration in certain policy areas calls for further integration in neighboring policy areas, creating pressure on EU member states to extend the authority of EU institutions.[24] Such pressure for more integration increases as national economies within the EU become more interdependent. Companies, which operate in integrated markets, as well as other non-state actors, such as interest groups, are an important force for further integration. They see national differences in legal systems as obstacles to the exercise of their transnational activities.[25] Therefore, they demand centralization of power to supranational institutions for the creation of EU rules, laws, standards, and so forth.[26]

The Commission is recognized as a key engine of EU integration, together with the European Parliament (hereafter Parliament) and the Court of Justice of the EU.[27] The Commission is officially assigned the essential task of formulating policy measures to advance the interests of the EU as a whole.[28] In particular, the Commission retains almost exclusively the power to formulate legislative proposals. The power of legislative initiative is reserved to the Commission because of its neutral and non-partisan character.[29] Therefore, its proposals are supposedly unbiased and representative of the general interests of the EU. The EU's system of governance primarily relies on laws to achieve policy goals.[30] As a consequence, the number of EU laws has grown over the years, acquiring a complex hierarchy.

Generally, EU laws are adopted by following the so-called ordinary legislative procedure, whereby legislative proposals formulated by the Commission are decided upon by the Parliament and the Council of the EU (hereafter Council). A new EU law generally takes the form of a

23. Tsebelis and Garret.

24. Haas; Pollack, "Theorizing the European Union"; Schimmelfennig and Rittberger; Rosamond.

25. Stone Sweet and Sandholtz.

26. Haas.

27. Pollack, "The Engines of Integration?"

28. European Union.

29. Ponzano, Hermanin, and Corona.

30. Voermans, Hartmann, and Kaeding; Brandsma and Blom-Hansen.

regulation, a decision, or a directive.[31] Regulations are the most powerful legal instruments because they automatically become part of the EU member states' national legal systems, without the need to be transposed into national legislation. Decisions are also directly applicable. However, they are usually adopted to implement rather specific treaty provisions and are addressed to a specific audience, which can include natural and legal persons, as well as some or all EU member states. Directives are considered less intrusive of national sovereignty as they are used to remove contradictions between national legal systems, while, at the same time, taking account of national prerogatives. Different EU legal instruments impact, to different extents, on the legal systems of the EU member states. Regardless of which EU legal instrument is adopted, the creation and implementation of EU law inevitably restrict national sovereignty. As set forth in the principle of primacy of EU law, EU law supersedes the legal order of the EU member states, including their national constitutions.[32]

The Commission is also delegated the executive power to adopt nonlegislative acts for the daily administration of policy matters. These acts are distinguished between delegated and implementing acts. Delegated acts have the purpose to supplement or amend nonessential elements of legislative acts, while implementing acts usually contain very detailed technical instructions on how to put EU law into effect. They are considered nonlegislative acts because their function is to support the correct implementation of EU law across the EU. They do not contribute to the bulk of EU law with new laws. Nevertheless, their content is legally binding.[33]

Control mechanisms are put in place to scrutinize the way in which the Commission uses its delegated powers. In particular, the Commission is put under the control of the Parliament and the Council, in the case of delegated acts, and it is subject to the supervision of national committees in the case of implementing acts.[34] Two procedures have been set up for the adoption of implementing acts, called advisory and examination procedures. Under the advisory procedure, the advisory committee formulates opinions on the measures proposed by the Commission, whereby amendments or withdrawals may be suggested. However, the Commission is not obliged to put in place the recommended changes.

31. European Union.

32. Ibid.

33. Ibid.

34. European Parliament and Council of the EU, "Regulation 182/2011 Laying Down the Rules."

In the case of the examination procedure, the so-called examination committee or, in a second stage, the appeal committee votes on the Commission's draft act. The appeal committee is set up to deal with difficult issues that need a second level of scrutiny.[35] Qualified majority voting is required for the EU member states, represented in the committee, to approve or reject an act. Compared to the advisory procedure, the examination procedure is characterized by a stricter control mechanism because it finds application in cases when measures are expected to have a significant impact on the way in which EU law is implemented by the EU member states.[36]

The Intergovernmental Nature of the EU

Intergovernmentalists claim that the EU institutions do not exert independent influence on the course of EU integration, as this process is controlled by the EU member states.[37] National governments endorse EU institutions to decide in a particular policy area only if that is in their own interests, otherwise operating through intergovernmental procedures.[38] In the case of intergovernmental decision making, EU member states do not share decisional power with EU institutions, but retain exclusively the power to decide, usually acting unanimously.

An EU member state may want to transfer decisional power to EU institutions in order to impose on the other EU member states its own approach to a particular policy issue. If successful in influencing EU decision making, that EU member state would minimize the costs of legal and administrative adaptation to new EU rules. In addition, it would gain competitive advantage for its national economy which is already operating in those policy settings.[39] The bargaining power of the EU member states is a major driver of EU integration. Policy outcomes are the result of negotiations between the EU member states. Strict limits are placed on transfer of legislative power to EU institutions, if that would weaken national sovereignty.[40]

35. European Commission, "Report on the Implementation of Regulation."
36. European Parliament and Council of the EU, "Regulation 182/2011 Laying Down the Rules."
37. Moravcsik, "Preferences and Power in the European Community."
38. Moga.
39. Majone, "Regulatory Legitimacy."
40. Moravcsik, "The European Constitutional Compromise."

In the EU treaties,[41] the EU member states have made a clear distinction between policies where the EU has been given the sole right to legislate, for instance custom policies; policies where the EU and EU member states share the right to legislate, such as, single market policies; and policies where the EU plays only a supporting function to national actions, as in the case of education policy. As specified by the principle of conferral of EU law, the EU can exercise its legislative power within the limits of the competence voluntarily conferred upon it by the EU member states. Any policy area not mentioned in the EU treaties remains in the exclusive domain of the EU member states.

The exercise of EU legislative power is also regulated by two general principles of EU law: the principle of subsidiarity and the principle of proportionality.[42] Overall, these two principles aim to ensure that decisions are taken at the most appropriate level of governance. According to the principle of subsidiarity, the EU can act only if and in so far as the objectives of the proposed action cannot satisfactorily be achieved by the EU member states, either at national or at subnational level. The principle of proportionality seeks to keep actions taken by the EU institutions within the boundaries set by the EU member states. In other words, an action taken at EU level is required to be commensurate with the objectives specified in the EU treaties. Notwithstanding their key relevance for EU decision making, the principles of subsidiarity and proportionality remain vague concepts. The variety of interpretations of their meaning have contributed to confusion and controversy regarding their application.[43]

The process of "integrating by law"[44] has always been characterized by a tension between transfer of legislative power to EU institutions and protection of national sovereignty.[45] This tension increases as the EU integration process begins to touch upon policy issues traditionally considered of exclusive national competence.[46] Due to national resistance to the transfer of competences to EU institutions, the EU has developed alternative decision-making mechanisms which rely on the use of soft

41. European Union.

42. Ibid.

43. Henkel; Pelkmans, "Subsidiarity between Law and Economics"; Pelkmans, "Testing for Subsidiarity."

44. Armstrong, "Legal Integration."

45. For instance, Schimmelfennig and Berthold.

46. Gelauff, Grilo, and Lejour.

policy instruments to promote EU integration.[47] These instruments are not based on legally binding rules, but on less hierarchical and less prescriptive forms of cooperation between the EU member states.[48] Examples of soft policy instruments include the use of mechanisms for the diffusion of information, such as recommendations, resolutions, and opinions, as well as mechanisms of review and monitoring, benchmarking, and peer reviewing.[49]

Soft policy instruments may find application in policy areas too sensitive to national sovereignty, where EU legislation appears to be premature, inappropriate, or impossible.[50] The EU exercises its soft power to achieve certain policy objectives by encouraging EU member states to pool information together, compare themselves to one another, and periodically assess their performances relative to predefined goals.[51] At the same time, soft policy instruments are seen by the EU member states as ways to safeguard their national autonomy.[52]

Methodology

A detailed narrative of EU legal interventions to regulate radio spectrum is provided based on qualitative data gathered from major EU official documents dealing with radio spectrum matters. Directives, decisions, and regulations were considered for this study. Relevant information was also retrieved from other EU official documents, including communications, green papers, action plans, and resolutions. Each document was browsed several times and summarized. Summaries were used to build the narrative. Most of the documents used had a larger scope, addressing aspects of the broader legislative framework for electronic communications. However, only the parts dealing with radio spectrum related matters were taken into consideration. About 60 EU official documents were used to build the

47. Armstrong, "The Open Method of Coordination"; Borrás and Jacobsson; Fabbrini; Héritier, "New Modes of Governance in Europe."

48. Héritier, "New Modes of Governance in Europe"; Kohler-Koch and Rittberger; Radaelli.

49. Borrás and Jacobsson; Héritier and Lehmkuhl; Sanden.

50. Tholoniat.

51. Jacobsson; Kahn-Nisser; Szyszczak.

52. Héritier, "New Modes of Governance in Europe."

narrative. They are listed in the reference list. All documents used were freely available online.

A snowball sampling procedure was followed to gather relevant material for this study. This procedure is widely used in qualitative research and it is generally described with reference to studies where data is gathered by means of interviews or focus groups.[53] Snowball sampling requires the identification of an initial random sample of individuals. Each individual in the random sample is then asked to name other individuals to be potentially included in the sample.[54] In this study, a similar procedure was applied to documents. The procedure started in 2013, when the Commission launched a legislative proposal to revise the legislative framework for electronic communications. The EU official documents published in 2013 were gathered to build the initial sample of documents. These documents contained references to other relevant documents published in previous years, which were then gathered to enlarge the document sample. The procedure continued backward in time until the first EU official documents addressing radio spectrum issues were identified. Additional documents were published by EU institutions after 2013 and therefore added to the document sample. Various official websites of the EU were browsed to verify that all relevant EU official documents addressing radio spectrum policy issues were collected, including EUR-Lex,[55] the official portal to access EU law and the EU radio spectrum policy document archive.[56] The key EU official documents used to narrate the history of EU radio spectrum policy are listed and their main objectives are also indicated in Table 2.

As shown in Table 2, the narrative was divided into four stages, each stage constructed by and large on two key elements of the ordinary legislative procedure. The ordinary legislative procedure is the standard procedure for adopting EU laws. An ordinary legislative procedure generally starts with a legislative proposal from the Commission, published in a Commission communication, and concludes, if successful, with the coadoption of legislative acts by the Parliament and the Council. These legislative acts can take the form of decisions, directives, or regulations.

53. Biernacki and Waldorf.

54. Goodman.

55. EUR-lex portal: https://eur-lex.europa.eu/homepage.html.

56. Radio Spectrum Policy Archive: https://ec.europa.eu/digital-single-market/en/radio-spectrum-policy-document-archive.

TABLE 2 History of EU radio spectrum policy in four stages of development: key EU official documents and Their objectives

Stages	Main Official Documents	Objectives
1 Late 1980s onwards	**Commission Green Paper COM(1987) 290**	**Acknowledging the importance of radio spectrum for the EU internal market for telecommunications**
	Council Directives 87/372/EEC, 90/544/EEC, 91/287/EEC; Parliament and Council Decisions 710/97/EC, 128/1999/EC	Harmonizing radio spectrum bands for coordinated introduction of satellite and mobile communications systems
	Commission Directive 90/388/EEC	Requiring EU member states to establish independent national regulatory authorities responsible for granting access to radio spectrum
	Parliament and Council Directive 97/13/EC	Introducing a common framework for general authorization and individual licenses granting access to radio spectrum
	Council Resolutions 90/C 166/02, 92/C 318/01	Encouraging cross-country cooperation in radio spectrum management
	Commission proposal for Council Decision COM(1993) 382	Setting forth the power of the EU to regulate certain aspects of radio spectrum use
2 Late 1990s onwards	**Commission Green Paper COM(1998) 596**	**Proposing to create a common EU legislative framework for electronic communications**
	Parliament and Council Directives 2002/19/EC, 2002/20/EC, 2002/21/EC, 2002/22/EC, 2002/58/EC	Forming a comprehensive EU legislative framework for electronic communications, reinforcing an EU common approach to radio spectrum
	Commission Decision 2002/627/EC	Establishing the European Regulators Group for Electronic Communications Networks and Services (ERG)
	Parliament and Council Decision 676/2002/EC	Setting forth a comitology mechanism for the adoption of Commission's executive acts and establishing the Radio Spectrum Committee (RSC)
	Commission Decision 2002/622/EC	Establishing the Radio Spectrum Policy Group (RSPG)
	Commission Communication COM(2006) 334	**Proposing to revise the existing legislative framework for electronic communications**

Stages	Main Official Documents	Objectives
3 Late 2000s onwards	Parliament and Council Directives 2009/136/EC, 2009/140/EC	Strengthening the power of the EU to regulate the radio spectrum by amending the existing EU legislative framework
	Parliament and Council Regulation 1211/2009	Replacing ERG with the Body of European Regulators for Electronic Communications (BEREC)
	Commission Decisions 2010/267/EC, 2010/368/EU, 2011/251/EU	Harmonizing radio spectrum bands for coordinated introduction of mobile communications systems
	Parliament and Council Decision 243/2012/EU	Introducing the Radio Spectrum Policy Programme (RSPP)
4 2010 onwards	**Commission Communication COM(2013) 627**	**Proposing to revise the existing legislative framework for electronic communications by adopting a regulation**
	Position of the Council at first reading 2013/0309; Parliament Resolution 2014/0281	Failure to reach an interinstitutional agreement on the proposed radio spectrum reforms
	Commission Communication COM(2016) 590	**Proposing to revise the existing legislative framework for electronic communications by combining existing directives into one directive**
	Commission Communication COM(2016) 591	Proposing to transform BEREC into an EU agency
	Parliament and Council Directive 2018/1972	Establishing the European Electronic Communications Code

The first element considered for organizing the four stages of EU radio spectrum policy was a legislative proposal of the Commission to revise the existing legislative framework for electronic communications. The second element was represented by two categories of documents: either the legislative acts co-adopted by the Council and the Parliament as a result of a successful ordinary legislative procedure, or the documents separately published by the Council and the Parliament during the legislative procedure to express their views on the Commission's proposal. The former applied to the second and third stages of EU radio spectrum policy. The latter applied to the fourth stage of EU radio spectrum policy, which was characterized by a failed legislative procedure initiated in 2013.

A clarification has to be made with regard to the first stage of EU radio spectrum policy, for the reasoning explained earlier was not followed. In the first stage, a legislative proposal from the Commission is lacking. Nevertheless, the intention of the Commission to intervene in order to strengthen the EU-coordinated approach to radio spectrum was expressed in a green paper. The publication of this green paper was considered the trigger event which initiated the first stage of EU radio spectrum policy. In addition, in the first stage, legislative interventions were scattered, as a coherent EU legislative framework covering radio spectrum matters was set up only during the second stage. Essentially, a piecemeal approach was used to gather all EU official documents addressing radio spectrum issues to be included in the first stage of EU radio spectrum policy.

To increase the research credibility, this article was presented at various international conferences at different stages of the research process, between 2014 and 2018. Observations and comments from peers not involved in the research project were useful for providing more elaborated explanations of the arguments put forward and improving the overall research design.[57] This article was presented at both international conferences where telecommunications topics were discussed and international conferences centered on EU policy and legal issues to capture the views of experts in both telecommunications policy research and research on EU.

History of EU Radio Spectrum Policy

In this section, the history of EU radio spectrum legislation, since its inception in the 1980s to present date, is narrated. The narrative is organized in four stages of development, each stage lasting about ten years. The main factor which triggered the shift from one stage to another was technological development, and the subsequent increase of services, in particular commercial services, which demanded access to radio spectrum. A new generation of mobile cellular technology has been developed every ten years, each generation providing significant performance enhancements, opening up opportunities for innovative services to emerge.[58] These changes in technology and related services motivated revisions of the EU legislative framework for electronic communications to pursue two main objectives: to foster the development of the EU single market and to promote EU competitiveness.

57. Shenton.

58. European Commission, "5G for Europe: An Action Plan."

During the first stage, the interest of the EU toward radio spectrum started to emerge. In particular, a series of legislative actions followed the publication by the Commission of a green paper acknowledging the importance of radio spectrum for the EU single market for electronic communications. This was the stage where radio spectrum use began to be harmonized on a sector- or technology-specific basis, in particular for mobile communications. During the second stage, the so-called Radio Spectrum Decision was adopted. This Decision created a legal and policy framework to support a common EU approach to radio spectrum, promoting harmonization of radio spectrum bands allocated to specific uses and related technical conditions of use.

In the third stage, a revised legislative framework strengthened the power of the EU to regulate the radio spectrum.[59] Moreover, the first Radio Spectrum Policy Programme (RSPP) was adopted, aimed at increased radio spectrum harmonization across the EU. As implementation of the first RSPP did not bring the expected results, the Commission included important radio spectrum reforms in its 2013 legislative proposal. The fourth stage was marked by the failure to reach an interinstitutional agreement on the radio spectrum reforms proposed in 2013 and the attempt of the Commission to rely on voluntary cooperation between the EU member states to promote harmonization of certain aspects of radio spectrum use, as shown in the legislative proposal published in 2016.

Stage One: Ad hoc Approach to Radio Spectrum

Until the 1980s, the EU had no legal authority over radio spectrum, which was essentially regulated by the EU member states in their respective national territories. A limited number of radio-based services were provided and radiocommunications systems were at their infancy. The European Conference of Postal and Telecommunications Administrations (CEPT) was recognized as the essential framework for radio spectrum coordination at European level.[60] Also, international agreements were reached by countries around the world within the framework of the International Telecommunication Union (ITU), a specialized agency of the United Nations.

At the end of the 1980s, the EU started to get systematically involved in radio spectrum policy as part of the liberalization program of the

59. Oberst.

60. Council of the EU, "Resolution 90/C 166/02."

telecommunications sector.[61] It became apparent that the traditional monopolistic structure of telecommunications markets was hampering the emergence of new technologies and services.[62] In addition, the expansion of businesses beyond national borders was calling for common rules for the creation of an EU integrated market.[63] In the late 1990s, the telecommunications markets were fully liberalized in almost all EU member states.[64] In this context, the Commission strongly acknowledged the impact of radio spectrum use on the creation and functioning of the EU single market for telecommunications.[65]

Boosted by the momentum created by the Commission, the Council adopted a series of directives to promote harmonized availability of selected radio spectrum bands for the coordinated introduction of specific mobile communications systems.[66] Additional measures were taken in the late 1990s, when two Parliament and Council Decisions were adopted for the coordinated introduction of selected satellite and mobile communication technologies.[67] These decisions signaled the EU commitment to develop a self-contained EU radio spectrum legislation, decisions being directly applicable to national systems, without the need for the EU member state to ratify them into national legislation.

Additional directives were adopted by the Commission and the Council to boost competition in the telecommunications markets in the EU. The so-called Open Network Provision principles were introduced so that service providers could benefit from open access to public telecommunications networks, anywhere across the EU.[68] Special rights to provide telecommunications services, which were granted by the EU member states to specific public or private enterprises, were removed.[69] In this way, other service and network providers were given the opportunity to operate anywhere across the EU.

61. Ibid.

62. Kiessling and Blondeel.

63. Liikanen.

64. Kiessling and Blondeel.

65. European Commission, "Towards a Dynamic European Economy."

66. Council of the EU, "Directive 87/372/EEC on the Frequency Bands; "Directive 90/544/EEC on the Frequency Bands"; "Directive 91/287/EEC on the Frequency Band."

67. European Parliament and Council of the EU, "Decision 710/97/EC on a Coordinated Authorization Approach"; "Decision 128/1999/EC on the Coordinated Introduction."

68. Council of the EU, "Directive 90/387/EEC on the Establishment of the Internal Market."

69. European Commission, "Directive 90/388/EEC on Competition in the Markets."

The EU member states were also required to establish independent National Regulatory Authorities (NRAs) to ensure fair competition in the market. NRAs were responsible for granting licenses for radio spectrum use according to objective, nondiscriminatory, and transparent conditions.[70] A common framework for general authorizations and individual licenses, including those granting access to radio spectrum, was introduced.[71] This framework aimed to simplify, harmonize, and make less onerous rules and conditions for the provision of telecommunications networks and services, reducing differences in access regulation between the EU member states. Large discretion was left to the EU member states for the definition of NRAs' institutional structure and related powers and responsibilities.[72] As of today, the institutional landscape of EU NRAs in the telecommunications sector is still far from institutional uniformity.[73]

Liberalization of the telecommunications sector also necessitated the creation of an integrated market for radio and telecommunications equipment. To this aim, special and exclusive rights to import, market, connect, bring into service, and maintain terminal equipment were removed.[74] In addition, a common framework was introduced for radio and telecommunications equipment to ensure their placing on the market, free movement and putting into service across the EU.[75]

In 1993, the Commission officially set forth the right of the EU institutions to set rules for the allocation of radio spectrum in the EU. A formal mechanism for cooperation between the CEPT and the EU was set up. A memorandum of understanding was signed, according to which the CEPT was delegated the task to carry out technical studies for the coordinated use of radio spectrum in Europe, though the EU preserved its right to legislate any time the CEPT's resulting work proved insufficient to pursue the EU's policy objectives.[76]

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70. European Commission, Directive 90/388/EEClbid.

71. European Parliament and Council of the EU, "Directive 97/13/EC on a Common Framework."

72. Coen and Doyle.

73. European Commission, "Ministries, Regulators and Radio Frequency Management."

74. European Commission, "Directive 88/301/EEC on Competition."

75. European Parliament and Council of the EU, "Directive 1999/5/EC on Radio Equipment."

76. Council of the EU, "Resolution 92/C 318/01 on the Implementation"; European Commission, "Proposal for a Council Decision."

Stage Two: The Radio Spectrum Decision

In the late 1990s, the Commission initiated a review of the existing laws pertaining electronic communications because insufficient cross-country coordination was slowing down the development and provision of pan-EU services.[77] The opening up of the telecommunications sector gave a boost to the development of radiocommunication systems and services. Demand for access to radio spectrum increased and the problem of harmful interference became critical.

The review initiated by the Commission was concluded in 2002 with the adoption of five directives, are known as Framework Directive[78]; Access Directive[79]; Authorization Directive[80]; Universal Service Directive[81]; and Directive on Privacy.[82] These directives formed a comprehensive legislative framework, addressing important issues related to radio spectrum.[83] In particular, Framework Directive strengthened the obligation of NRAs to manage radio spectrum use following objective, transparent, nondiscriminatory, and proportionate criteria in order to safeguard competition among telecommunications network and service providers. Authorization Directive further simplified and harmonized rules for the grant of general authorizations and individual licenses for radio spectrum access. Furthermore, the Commission adopted an implementing decision in 2007 to make sure that information about radio spectrum use in each EU member state was made public.[84] Information availability and clarity about actual use of radio spectrum across the EU were expected to contribute to creating a more coordinated approach to radio spectrum.

The Commission also established an advisory group called European Regulators Group (ERG) for electronic communications networks and services, with the role to assist the Commission in supervising the

77. European Commission, "Green Paper on Radio Spectrum Policy"; "Next Steps in Radio Spectrum Policy"; "Towards a New Framework."

78. European Parliament and Council of the EU, "Directive 2002/21/EC on a Common Regulatory."

79. European Parliament and Council of the EU, "Directive 2002/19/EC on Access."

80. European Parliament and Council of the EU, "Directive 2002/20/EC on the Authorization."

81. European Parliament and Council of the EU, "Directive 2002/22/EC on Universal Service."

82. European Parliament and Council of the EU, "Directive 2002/58/EC Concerning the Processing of Personal Data."

83. European Commission, COM(2000) 393 Final.

84. European Commission, "Commission Decision 2007/344/EC on Harmonised Availability."

uniform implementation of the 2002 legislative framework across the EU. Members of the ERG were representatives of NRAs.[85] The initial proposal of the Commission to create an EU regulator was turned down by the EU member states, represented in the Council, which were unwilling to give up on their prerogatives to regulate electronic communications and radio spectrum use. Eventually, the ERG was established as a less powerful body, as compared to the Commission's initial idea. The ERG had monitoring responsibilities, but was mainly understood as a place where representatives of the NRAs could interact and exchange ideas.[86]

The role of the Commission as rule-maker in the policy field of radio spectrum was essentially institutionalized with the adoption of the so-called Radio Spectrum Decision by the Parliament and the Council, in 2002.[87] The Commission was given the right to adopt legally binding acts containing technical measures for the coordinated use of radio spectrum in the EU, for the frequencies between 9 kHz and 3,000 GHz considered relevant for the EU single market. A comitology mechanism was introduced whereby the EU member states, organized in a committee, called Radio Spectrum Committee (RSC), would approve the implementing acts proposed by the Commission. The Commission also created a consultative body, called Radio Spectrum Policy Group (RSPG), composed of representatives of the EU member states to receive strategic advice on economic, political, social, and other aspects of radio spectrum use.[88] The Radio Spectrum Decision also gave the Commission the responsibility to represent EU interests at international level. Therefore, the Commission started to play a more active role during international negotiations, in particular in the context of the ITU, to make sure that the EU member states would act in a way that would not harm the interests of the EU as a whole.[89]

During this second stage, the Commission frequently published communications to promote coordinated use of radio spectrum across the EU.[90] Examples are the communications on the transition from analog to

85. European Commission, "Decision 2002/627/EC Establishing the European Regulators Group."

86. Coen and Thatcher.

87. European Parliament and Council of the EU, "Decision 676/2002/EC on a Regulatory Framework."

88. European Commission, "Decision 2002/622/EC Establishing a Radio Spectrum Policy Group."

89. For instance, European Commission, "The ITU World Radiocommunication Conference."

90. European Commission, "A Forward-Looking Radio Spectrum Policy."

digital television[91] and on the promotion of market mechanisms for radio spectrum assignment.[92]

Stage Three: The Radio Spectrum Policy Programme

In 2006, the Commission initiated a second review of the legislative framework for electronic communications, drawing attention to the need to tackle emerging challenges posed by new technologies and market conditions. In this context, the Commission advocated the need to move toward a more EU-wide coordinated management of radio spectrum, calling for the removal of certain regulatory variations across countries and increased transparency of national decision making.[93] According to the Commission, national radio spectrum management approaches lacked the flexibility necessary to adapt to new circumstances. In addition, national variation in the implementation of the EU regulatory framework was hampering investment and innovation, limiting the potential of the EU single market for electronic communications. The review was completed in 2009 with the adoption of two directives containing amendments to the 2002 legislative framework. The new framework entered into force in 2011.[94]

The principle of technology and service neutrality was officially introduced in the new legislative framework to increase flexibility in radio spectrum management.[95] According to this principle, spectrum users were able to freely choose which technology they wished to use and which services they wished to provide, as long as protection from harmful interference was guaranteed.[96] Spectrum trading and general authorization were also reinforced in the 2009 framework. With regard to spectrum trading, EU member states were requested to allow spectrum users to transfer or lease their usage rights to third parties. In addition, EU member states were encouraged to award general authorizations instead of individual rights of radio spectrum use when technology was able to substantially reduce the

91. European Commission, "Transition from Analogue to Digital Broadcasting"; "Accelerating the Transition from Analogue to Digital Broadcasting."

92. European Commission, "A Market-Based Approach."

93. European Commission, "Review of the EU Regulatory Framework."

94. European Parliament and the Council of the EU, "Directive 2009/140/EC Amending Directives 2002/21/EC"; "Directive 2009/136/EC Amending Directive 2002/22/EC."

95. European Commission, "Rapid Access to Spectrum."

96. European Parliament and Council of the EU, "Directive 2009/140/EC"; European Commission, "Rapid Access to Spectrum."

risk of harmful interference. In addition, several implementing acts were adopted by the Commission for the coordinated introduction of mobile communications technologies in certain spectrum bands.[97] Overall, these interventions were aimed at removing some of the national regulatory differences which were preventing the EU from seizing the benefits of emerging technological developments pertaining mobile communications. Nevertheless, wide discretionary powers were left to the EU member states in implementing the new EU rules into their national legal systems.

As part of the legislative review, the ERG was replaced with the Body of European Regulators for Electronic Communications (BEREC), the Commission being unsatisfied with the ERG's performance.[98] The Commission claimed that the ERG failed to promote cooperation among NRAs which resulted in fragmented national implementation of EU law. Initially, the Commission sought to establish an EU regulatory agency, called European Electronic Communications Market Authority (EECMA), competent to regulate certain aspects of the telecommunications sector, including radio spectrum use. This entity would have been entrusted to execute a wide range of tasks from information collection and dissemination, to advisory support to the Commission, and even adoption of binding decisions for all EU member states, constraining the power of NRAs.[99] However, the Council resisted against such transfer of legislative power to the EU. Eventually, the proposal to create an EU regulatory authority failed and the BEREC was established.[100] The BEREC was given wider powers and responsibilities than the ERG, but it was still far from the EU regulatory agency initially proposed by the Commission.[101]

Also, the Commission was granted the right to set up so-called multiannual legislative programs to promote harmonized use of radio spectrum. The first multiannual RSPP was proposed by the Commission in 2010[102] and approved by the Parliament and the Council with a decision in 2012.[103]

97. European Commission, "Decision 2010/267/EU on Harmonised Technical Conditions"; "Implementing Decision 2010/368/EU"; "Implementing Decision 2011/251/EU."

98. Reding.

99. European Commission, COM(2007) 699 Final.

100. European Parliament and Council of the EU, "Regulation 1211/2009 Establishing the Body of European Regulators."

101. Pelkmans and Renda.

102. European Commission, "Proposal for a Decision of the European Parliament."

103. European Parliament and Council of the EU, "Decision 243/2012/EU."

The measures contained in the RSPP were thought to reduce national regulatory differences with regard to radio spectrum management and use.[104]

With the first RSPP, the Commission signaled its commitment to take more responsibilities in both radio spectrum allocation and assignment. Among other things, the EU member states agreed to assign to mobile communications service providers the 800 MHz band, commonly known in the EU as the first digital dividend, by January 1, 2013. The first digital dividend represented a unique opportunity to accommodate the growing demand for access to radio spectrum for the provision of mobile broadband internet services. However, the RSPP did not bring the expected results. In particular, several EU member states did not meet the deadline set for the assignment of the 800 MHz band, due to various national circumstances.[105]

Stage Four: Uncertain Steps Forward

In 2013, the Commission initiated a third legislative review of the legislative framework for electronic communications, in an attempt to address the shortcomings of the RSPP.[106] Contrary to the first and second legislative reviews, this time the Commission proposed to adopt a regulation, considering the existing directives were not sufficient to guarantee an adequate degree of compliance to the EU framework in the EU member states. Regulations are the most powerful EU legal instruments because they automatically become part of the EU member states' national systems, without the need to be transposed into national legislation.

For the part dealing with the radio spectrum, the legislative proposal sought to remove certain national differences in allocating and assigning radio spectrum.[107] In order to increase the level of radio spectrum harmonization across the EU, the Commission proposed to ask the NRAs to establish timetables for assignment procedures, which would have been used to set up common EU timetables for coordinated awards across the EU. In this way, radio spectrum licenses would have had the same duration in all EU member states. Furthermore, the Commission proposed the setup of a cooperative mechanism between the Commission and the NRAs for better coordinating national assignment procedures and license conditions. As

104. European Commission, "Implementation of the Radio Spectrum Policy Programme"; "Radio Spectrum Inventory."

105. European Commission, "Radio Spectrum Inventory."

106. European Commission, COM(2013) 627 Final.

107. European Commission, COM(2013) 634 Final.

part of this cooperative mechanism, the Commission would have had the power to review draft national assignment procedures and require amendments or even propose withdrawals. However, the withdrawal would have been binding only if a qualified majority of the EU member states would have agreed with the Commission. In addition, the Commission advanced the request to expand its power to intervene in case of cross-border coordination issues between the EU member states.[108]

An agreement could not be reached between the Commission, the Parliament, and the Council on the proposed radio spectrum legislative reforms. In particular, while the Parliament broadly supported the proposed reforms,[109] these were rejected in concert by EU member states because of their intrusiveness into national prerogatives.[110] Both the Council and the BEREC claimed that the Commission's proposal was not compliant with the principle of subsidiarity, as the Commission did not provide sufficient evidence in support of its radio spectrum reforms, which would have determined a substantial transfer of power to the EU.[111] Eventually, the Council obtained the removal of the radio spectrum reforms from the 2013 legislative proposal, which was adopted in a reduced fashion in 2015.[112]

After the unsuccessful attempt to adopt a regulation, the Commission launched a new legislative procedure in 2016, proposing to adopt a directive for the introduction of the so-called European Electronic Communications Code.[113] The content of the Code, for the part dealing with radio spectrum, was broadly based on the changes proposed in 2013. In particular, the Commission advised to grant itself the power to adopt implementing acts in a wide variety of matters related to the assignment of radio spectrum rights of use and in case of cross-border coordination issues.

The Code also aimed to achieve harmonization of spectrum use across the EU by promoting voluntary cooperation between the EU member states. In particular, a voluntary peer-review process to design national procedures for the assignment of radio spectrum rights of use was proposed. This process resembled the cooperative mechanism proposed in 2013, with the substantial difference that the 2016 peer-review process would

108. European Commission, COM(2013) 627 Final.

109. European Parliament, "Legislative Resolution of 3 April 2014."

110. Council of the EU, "Position of the Council at First Reading."

111. Ibid.; BEREC, "Statement on the Publication of a European Commission"; "Views on the Proposal for a Regulation."

112. European Commission, "Bringing Down Barriers in the Digital Single Market."

113. European Commission, "Proposal for a Directive of the European Parliament."

not result in binding decisions for the EU member states. By taking part in this peer-review process, NRAs would receive nonbinding comments from other NRAs, the BEREC, and the Commission on the design of their assignment procedures. In addition, the Commission sought to promote radio spectrum harmonization by encouraging the EU member states to set up pan-EU or multicountry assignment procedures. As part of the 2016 legislative proposal to revise the existing framework for electronic communications, the Commission also proposed to revise the BEREC regulation, transforming the BEREC into a full-fledged EU regulatory agency.[114]

The Council strongly criticized the proposed radio spectrum reforms because they would have resulted in an unnecessary transfer of competence to the Commission.[115] The version of the Code eventually adopted by the Parliament and the Commission in 2018 shows that the power of the Commission to regulate certain aspects of radio spectrum access and use has been substantially reduced, as compared to what had initially been proposed by the Commission.[116] In line with this position, the proposal of the Commission to transform the BEREC into an EU regulator was rejected in concert.[117] In addition, the Council proposed and obtained the replacement of the BEREC with the RSPG in the voluntary peer-review process to limit the possibility that the BEREC would acquire some form of regulatory power.[118]

Supranationalism and Intergovernmentalism in Radio Spectrum Policy

In this article, the historical evolution of radio spectrum policy in the EU showed a constant tension between the aim of the EU to drive EU integration further and the opposition of the EU member states to restrictions of their national sovereignty. EU law has been progressively expanded with the intent to create a single regulatory space for radio spectrum, in order to reduce fragmentation of the mobile communications market in the EU. At the same time, the EU member states have been opposing certain EU

114. European Commission, COM(2016) 591 Final.

115. Mumford, "EU Regulators: European Commission."

116. European Parliament and Council of the EU, "Directive (EU) 2018/1972 of the European Parliament."

117. European Commission, COM(2016) 591 Final.

118. Marti; European Parliament and Council of the EU, "Directive (EU) 2018/1972."

interventions, questioning the necessity to further harmonize the radio spectrum, by centralizing regulatory power at the EU level. As a result of this tension between the EU and the EU member states, aspects of supranational and intergovernmental governance in EU radio spectrum policy can be observed.

Supranational Governance in Radio Spectrum Policy

Over the course of the four stages of EU radio spectrum policy, the EU institutions have been able to take actions which have led to gradual transfers of competence from national to EU institutions. This is shown by the expansion of topics covered by EU radio spectrum legislation as well as the types of legal instruments adopted. Initially, EU radio spectrum legislation included mainly directives, which have a weaker centralizing power, compared to regulations and decisions. Since directives are not directly applicable, the EU member states are free to choose how to make them operative at national level. Nevertheless, the competence of the EU in the matter of radio spectrum extended as the directives constituting the EU legislative framework for electronic communications were subsequently revised. Most importantly, the adoption of decisions strengthened the power of the EU to regulate the radio spectrum, with these decisions being directly applicable and binding in their entirety for all EU member states. Key decisions in EU radio spectrum policy were the Radio Spectrum Decision of 2002 and the RSPP of 2012. In 2002, the EU legal and policy framework for the harmonization of radio spectrum bands and related technical conditions of use was officially created to promote harmonized used of radio spectrum across the EU and further EU interests at international level. In addition, the 2012 RSPP defined a roadmap of concrete actions to be followed by the EU member states to increase the level of spectrum harmonization, touching upon both elements of spectrum allocation and assignment. These decisions substantially reinforced the power of the Commission to push radio spectrum harmonization further.

The Commission has constantly strived to promote the development of a common EU approach to radio spectrum. Reviews of EU radio spectrum legislation have been periodically undertaken, following the momentum created by the Commission. Progressive expansion of the bulk of EU law broadened the scope of action for the Commission, whose delegated powers extended to various aspects related to radio spectrum use. In particular, the 2002 Radio Spectrum Decision institutionalized the role of the

Commission as rule-maker in the policy field of radio spectrum, introducing the comitology process for the adoption of implementing acts. The comitology process, building also on the general principles contained in the RSPP, has given the Commission the power to adopt binding measures which all EU member states need to follow when granting access to radio spectrum.[119] The Radio Spectrum Decision also gave the Commission the responsibility to represent the EU interests at international conferences on radio spectrum regulation, restraining national discretion to take actions which would be detrimental to the EU's objectives in radio spectrum policy.[120]

Intergovernmental Governance in Radio Spectrum Policy

Notwithstanding the progressive expansion of EU law, the narrative presented in this article revealed a constant opposition of the EU member states against major limitation of national sovereignty. A clear example is represented by the lack of support from the EU member states, represented in the Council, for the 2013 Commission legislative proposal to include important radio spectrum reforms in a regulation. Regulations are the most centralizing of all EU legal instruments, as they are both directly and generally applicable. This means that regulations become automatically part of the national legal systems of all EU member states, without the need for their content to be transposed into national legislation. In addition, their content applies to generalized, abstract, and objectively determined circumstances and it is not limited to specific situations. Because of the automatic centralization of power, which would stem from the adoption of regulations, EU law in the policy field of radio spectrum counts a limited number of regulations.

The history of radio spectrum policy also showed national resistance against further centralization of power which would have resulted from the creation of an EU regulatory authority responsible for radio spectrum. The Commission has repeatedly attempted to create an EU regulatory body responsible for regulating certain aspects of the telecommunications sector, including radio spectrum use. However, none of these attempts has

119. All implementing decisions adopted by the Commission, https://ec.europa.eu/digital-single-market/en/news/radio-spectrum-decisions.

120. European Parliament and the Council of the EU, "Directive 2009/140/EC"; Radio Spectrum Policy Group (RSPG).

been successful, as shown by the recent refusal of the EU member states, represented in the Council, to transform the BEREC into a full-fledged regulatory agency. The BEREC figures as an intermediary actor between the NRAs and the Commission, offering NRAs a context to interact and exchange ideas. Nevertheless, the BEREC does not have any substantial regulatory and enforcement power.

Due to national resistance to transfer of competence to EU institutions, the EU has attempted to rely on the use of soft policy instruments to promote radio spectrum harmonization, in particular during the current and most recent stage of EU radio spectrum policy. The peer-review mechanism proposed by the Commission in 2016 is expected to foster convergence of national approaches to radio spectrum assignment by offering a platform for voluntary cooperation among the EU member states.[121] At this stage, it cannot be claimed whether or not the peer-review mechanism will be instrumental in fostering radio spectrum harmonization as it has not found application yet. Nevertheless, three considerations can be made. First, participation in the peer-review process is voluntary, which means that the EU member state have the right to choose whether or not they want their draft national assignment procedures to be scrutinized by the RSPG, other NRAs, and additional competent authorities. Second, the EU member states are not legally bound to the recommendations formulated by the RSPG. Even if an EU member state would agree on participating in a peer-review process, there are no legal constraints which would force that EU member state to comply with the outcome of the peer-review process. Third, and in line with the previous point, no monitoring mechanisms are envisaged once the peer-review process is completed. Even if the EU member state would affirm that it wants to implement the recommendations formulated by the RSPG, the RSPG, or any other competent authority, has no power to verify whether the EU member state is following the recommendations.

Between Supranationalism and Intergovernmentalism: Potential Research Avenues

The mobile communications sector is one which calls for supranational regulatory structures, for operators to invest in new infrastructures and

121. European Parliament and Council of the EU, "Directive (EU) 2018/1972."

services and to benefit from economies of scale. At the same time, creating a common regulatory space also encourages the further opening up of national economies, eventually reinforcing EU competitiveness.[122] In order for the EU to foster the digital single market, reducing national variation in radio spectrum management and use is considered, by the EU institutions, crucial to guarantee certain availability of spectrum for the successful introduction of advanced mobile technologies.[123] Nevertheless, radio spectrum policy still remains a policy area of shared competence and the radio spectrum still remains a national resource. The coexistence of supranational and intergovernmental forms of governance in radio spectrum policy generates relevant research issues which deserve further investigation.

Supranationalism and the Role of the Commission as Rule-Maker

The objective to harmonize the rules governing radio spectrum use has generally been pursued by the EU by adopting new laws. This is because the dominant way to promote integration in the EU is via legal integration. The production of new EU laws reinforces the executive power of the Commission which is generally delegated the power to adopt legally binding acts for the uniform implementation of EU law. Although EU law is generally coenacted by the Council and the Parliament, major part of EU legislation is actually adopted by the Commission acting alone,[124] with extensive resort to the procedures for implementing acts.[125]

The comitology process involving the Commission and the RSC, whereby Commission's implementing acts are adopted is the primary instrument for radio spectrum harmonization across the EU. Through this process, the Commission sets very detailed rules, which are legally binding for all EU member states. Notwithstanding its importance, no research has been conducted to investigate the functioning of the RSC and its effectiveness in scrutinizing the measures proposed by the Commission.

The EU member states have largely criticized those instruments enacted by the Commission alone, because of the lack of democratic legitimacy. There is large disagreement on the causes, consequences, and possible

122. Lemstra and van Gorp.
123. European Parliament, "A Key Resource for the Digital Single Market."
124. Brandsma and Blom-Hansen; Siderius and Jan Brandsma.
125. Xhaferri.

remedies to the legitimacy problem of the EU. Nevertheless, the lack of legitimacy is recognized as a distinctive feature of the EU system.[126] Serious problems associated with the Commission's executive acts include great complexity, lack of transparency, and inadequate mechanisms of control and accountability.[127] The poor degree of legitimacy was one of the main reasons why the system of Commission's executive measures underwent a substantial revision in 2009. Notwithstanding the major changes that were introduced, the problem of the poor degree of legitimacy of implementing acts is still considered unresolved.[128]

The lack of legitimacy of Commission's implementing acts would stem from the fact that the Commission benefits from great discretionary powers. First, the Parliament and the Council cannot veto implementing acts. They can only adopt nonbinding resolutions stating whether the Commission is exceeding the power conferred upon it. Second, the scrutiny operated by the EU member states is to some extent inefficient. One explanation highlighted by existing research is that reaching a qualified majority in the committee, which is needed to accept or oppose an implementing act is hard to reach.[129] If either the examination or the appeal committee fails to reach qualified majority voting in favor or against an act, the Commission is generally free to decide whether to adopt, amend, or withdraw its draft acts.

Empirical research suggests that the difficulty to reach qualified majority voting at committee level may be due to lack of competence of the committees. According to Voermans, Hartmann, and Kaeding,[130] national representatives sitting in committees may not possess adequate knowledge to decide on the issues at stake. It must be said that EU member states differ in terms of human and financial resources that can be invested in participating in the almost 300 committees operating at EU level.[131] Also, the fact that the Commission chairs the committee meetings and steers the discussions between national representatives may favor the adoption of the acts proposed by the Commission. Legitimacy of the EU is a critical determinant of the EU's capability to reach its objectives, since correct

126. Majone, "The Regulatory State."
127. Biegon; Christiansen and Dobbels; Mendes; Stratulat and Molino.
128. Voermans, Hartmann, and Kaeding.
129. Christiansen and Dobbels.
130. Voermans, Hartmann, and Kaeding.
131. European Commission, "Implementation of Regulation."

implementation of and compliance with EU legislation, strictly depends on its perceived legitimacy from the EU member states.[132]

Given the prominent role played by the Commission in EU radio spectrum policy, lack of legitimacy of Commission's implementing acts is an issue which requires further investigation. The question is whether the RSC actually functions as control mechanism over the executive power exercised by the Commission or whether the Commission benefits from substantial autonomy, to an extent that justifies the criticisms regarding lack of legitimacy. Collecting data to investigate the functioning of the RSC may be challenging due to limited transparency with regards to comitology, including the tradition of committees to work "behind closed doors."[133]

Intergovernmentalism and the Use of Soft Policy Instruments

Policy areas where hard law fails to further integration have been identified as suitable for the implementation of soft forms of coordination to pursue EU objectives.[134] Nevertheless, existing research does not offer sufficient evidence to support the claim that sharing experiences and spreading best practices among EU member states would even out differences in national decision making.[135] According to some research, soft policy instruments are ineffective in policy areas where removal of national differences is essential.[136] For the Commission, harmonizing rules governing the use of radio spectrum in the EU is considered essential for the well-functioning of the EU single market for electronic communications.[137] In the light of the recent Commission's proposal to introduce soft instruments in radio spectrum policy, understanding whether soft power is sufficient to promote coordinated radio spectrum use across the EU appears crucial.

The society of today is undergoing a substantial transformation, which calls for a more comprehensive understanding of the institutional context in which decisions on radio spectrum use are taken. The digitalization of several industries, such as transport, automotive, health, and energy, as well as of the public sector, including applications in smart cities, public

132. Føllesdal.

133. Pollack, "Control Mechanism or Deliberative Democracy?"

134. For instance, Borrás and Jacobsson.

135. Eberlein and Kerwer; Simpson "New Governance in European Union policy making: policy innovation or political compromise in European telecommunications?" *West European Politics* 34, no. 5, (2011): 1114–33.

136. Dehousse.

137. European Commission, "Proposal for a Decision of the European Parliament."

safety, and education, demands access to radio spectrum. Examining the technological, economic, and management dimensions of radio spectrum is necessary, but not sufficient to ensure that the radio spectrum is used in such a way as to bring the greatest benefits to society. Attention needs to be paid to the institutions which hold regulatory authority.

Future Research

International, EU, and national perspectives can be adopted to conduct studies on the role of the EU in radio spectrum regulation.[138] In this article, an EU perspective was adopted, looking at the EU as an international organization, established by a limited number of European countries. Studies on the international radio spectrum regulatory context would require a conceptualization of the EU as an entity by itself, focusing, for instance, on the external representation of the EU in international organizations, such as the ITU. A brief mention is made in the narrative of the participation of the EU in international contexts where decisions on radio spectrum use are taken. Nevertheless, a separate study is considered more suitable to investigate the role of the EU as global actor, which still remains largely unexplored with respect to radio spectrum use.[139]

The national regulatory context was also considered outside the scope of this article. Studies with a national focus could address questions related to the different national responses of the EU member states to EU radio spectrum legislation, in terms of implementation of EU laws into national legal systems. This would require a much deeper elaboration on the differences in legal structures between the EU member states. In this study, instead, the EU member states were considered as a single group, whose interests were represented in the Council. As a matter of fact, the 28 EU member states are quite different from one another. In some countries, radio spectrum regulatory responsibility is assigned to independent agencies; in other countries, it is assigned to government ministries. There are also cases where independent agencies and ministries share the responsibility to regulate different aspects of radio spectrum use.[140] Due to the complexity of this topic, separate studies need to be conducted to explore national responses to EU interventions.[141]

138. Massaro, "Radio Spectrum Regulation in the European Union."
139. Massaro, "Radio Spectrum Regulation as a Matter of International Affairs."
140. Cave and Webb.
141. Massaro and Bohlin.

The role of non-state actors is another interesting aspect of decision-making processes which is not covered in this study. Non-state actors have become an integral part of EU decision making. Not only non-state actors seek to influence EU legislative outcomes, but they also provide external expertise which is essential for EU institutions to legislate.[142] Although a key element of supranationalism, the so-called phenomenon of interest representation or lobbying deserves a much more detailed investigation based on a different set of data than the one used in this article.[143]

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142. Greenwood.

143. Massaro, "Business Lobbying in the European Union."

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