
EVALUATING THE SCIENTIFIC PERFORMANCE OF RESEARCHERS AT THE FIELD OF EU AGENCIFICATION FROM A BIBLIOMETRIC APPROACH

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Abstract

The paper aims to provide an overview on the field of European Union agencification, a later trend characterizing EU's policy agenda and functioning to a significant extent. EU agencies are responsible for a wide range of policies and an unavoidable element when testing EU's legitimacy. In the paper, the research field of EU agencification is analyzed from a bibliometric aspect, quantifying the academic production, identifying the main publication and network patterns of authors, and defining the leading research directions by keyword analysis. Bibliometric metadata was collected from the Scopus international citation database, collecting the research output of 14 researchers participating in the TARN project (The Academic Research Network on Agencification of EU Executive Governance). The TARN project is an international research collaboration specially designed to study EU agencification process. Data was imported and analyzed using the software VOSViewer and Gephi. In total, 437 records were found. The findings indicated that the researchers participating in the TARN projects are the research group leaders, primarily coming from Western European countries. We found that the co-authorship network contains 13 communities and having the density of 0.787, while the co-citation network consists of 4 communities with a density of 0.39. Findings, implications, and suggestions for future research are presented.

Key Words

EU agencification; NPM; NWS; TARN; bibliometrics.

INTRODUCTION

EU agencification as a policy area is crucial with respect to the European Union's policy decision-making and functioning, getting in the forefront in many specific policy areas. These policy areas are of a wide range of themes, providing a colorful landscape but an ever-demanding research topic for analysis. The paper aims to provide an evaluation of the publication performance of the researchers involved and research performance of institutions involved as members of the TARN international project. The present paper aims to investigate the main academic actors, researchers in the research field of EU agencification, providing a bibliometric analysis on the existing literature. Studying the publication performance, the connectivity of the researchers and identifying leading topics by keywords for the topic sheds light on the latest and most relevant trends and research directions of EU agencification. In parallel, based on our results, we can draw up an expected research direction for the future that can guide academicians and practitioners, pointing out the most attractive spaces for further developing the EU agencification topic, and calls attention to some of the existing concerns. These two aspects gain their significance when discussing the deliberate functioning of the EU and the legitimacy of EU agencies being responsible for certain policies at a European level. The methodology of this examination consists of the tools of bibliometrics, including research and publication patterns, co-authorship and co-citation networks and keyword analysis. After an overview on the main issues of the field of EU agencification based on the available international scientific literature, the methodology is presented. Then, the discussion of our results is divided into three chapters – the identification of authors and co-authorship network, the publication performance in a comparative analysis and a keyword analysis pointing the latest topical trends of the research field. Based on the empirical results, practical implications are formed.

LITERATURE REVIEW

The subject itself is rather complex, it requires an inter- and multidisciplinary approach and the parallel observation of different processes. It is necessary for the good understanding of the research carried out and the point of the article to know what the field itself is, whose scientometric patterns we are trying to draw. Hereunder, in this chapter, the main issues are outlined in short summaries, such as the meaning of agency and agencification – especially in the context of the EU –, the 2008 economic crisis and its effect

on the EU financial supervision regime, and the later developments of the process, such as the European Banking Union and the changes in the relevant case-law.

The term ‘agency’

The history of the agencies – nota bene: an ‘agency’ is understood as set out later in this paper – starts in the middle of the 20th century, in the Pan-American continent. From a European standpoint, naturally, the US is to be examined further, where many agency-type administrative organizations have been functioning throughout the decades. It is the so-called U.S. Code, the code containing the general and permanent laws of the US, which beside a definition, enacts a positive taxative list of the U.S. agencies (e.g. the Securities and Exchange Commission – SEC, or the Board of Governors of the Federal Reserve System – FED, etc.) (Kálmán, 2013, p. 1).

There are many definitions of the term ‘agency’ because even the scholars of one single legal regime cannot reach a complete agreement regarding the exact nature of the ‘agency’ phenomenon. The EU-specific agency-definition accepted in this paper due to its consistency is as follows: ‘A ‘European agency’ is a public administration body established by a legal act of the European Union, has a legal personality and a relatively independent organization, and participates in the regulation of a certain line on a European level and/or in the implementation of a EU-policy.’ (Kálmán, 2013, p. 3)

The above definition reflects the most controversial features of agencies, namely, their relative independence and non-departmental character. By nature, EU agencies are non-treaty based which means that they do not have an explicit legal basis in the primary law of the EU. They are only implicitly acknowledged in the Founding Treaties, and Art. 263 (1) and (5) of the Treaty on the Functioning of European Union (TFEU) provides a legal remedy against the decisions of agencies when it talks about ‘bodies, offices and agencies’ of the European Union as objects of legal control of the Court of Justice of the European Union (CJEU).

The Europeanization of the administrative law

To understand the exact place and role of the agencies in the EU, the structure of the European administration (Schwarze, 1988, pp. 21-36) needs to be considered briefly. Danwitz (2008) distinguishes the EU’s own administrative law (Eigenverwaltungsrecht), enforced by the organizations of the EU, the common administrative law (Gemeinschaftsverwaltungsrecht), enforced by the authorities of the Member States, and cooperative administrative law (Kooperations- oder Verbundverwaltungsrecht), enforced in cooperation. Since agencies are subject to the EU’s own administrative law (Danwitz, 2008, pp. 312-314), as a result of agencification, the enforcement of the EU law shifts towards direct enforcement which means that the positions of EU organizations are strengthening in comparison to the authorities of Member States.

The agencification of the European Union

Chronologically, three generations of EU agencies are distinguished: 1) first-generation agencies established before 1975, 2) second-generation agencies established between 1975 and the 2003 framework regulation and 3) third-generation agencies, including executive agencies set up in accordance with the framework regulation [Council Regulation (EC) No 58/2003 of 19 December 2002, laying down the statute for executive agencies to be entrusted with certain tasks in the management of Community programmes] and the regulatory agencies created after 2003 (Danwitz, 2008, pp. 312-314). In line with those mentioned in the previous paragraph, we can speak about a so-called ‘*agencification*’ trend within the EU administration. In a quantitative approach, this means the proliferation of agencies, as Griller and Orator puts it, the ‘*mushrooming of agencies*’ (Griller and Orator, 2010, p. 3) but it also has a qualitative meaning, namely that EU agencies in general get more and more competences and powers. It is to be noted that EU agencification – and agencification in general – has no such elaborated definition as the definition of EU agencies by Kálmán for instance (see above), as the nature of the phenomenon is widely disputed. The aforementioned approach of Griller and Orator is probably the closest one can get to the definition of the construct.

The effects of the 2007/08 financial-economic crisis

Paradigmatic changes in the economy and the public administration

The crisis brought about a nearly global paradigm change. The neoliberal economic policy and its administrative counterpart, the New Public Management (NPM) proved to be insufficient in terms of effective regulation and supervision of the market – especially the financial market – and of the prevention of the financial crisis (Lőrincz, 2010, pp. 50-51). NPM, focusing on competition and profit to measure the efficiency of administration in a given state, was replaced by the neo-Weberian State (NWS), a combination of ‘*Weberian*’ and ‘*neo*’ elements, in other words, a reorganization of the Weberian elements without neglecting the achievements of the previous paradigms (Nakrosis *et al.*, 2016, pp. 78-94; Hajnal and Jenei, 2012, pp. 515-520). Above all, this means ‘the reaffirmation of the state as the main facilitator of solutions to the new problems of globalization’, the reaffirmation of representative democracy as a legitimating element, the reaffirmation of the role of administrative law in regard of the principles of state-citizen relationship, and ‘the preservation of the idea of a public service with distinctive status, culture, and terms and conditions’ (Lynn, 2008, pp. 27-30). The ‘*neo*’ elements include the external orientation of the administration (i.e. towards citizens), the professionalization of public services, a redesign of the management of resources in order to focus on virtual achievements rather than simply following protocols, etc. (Lynn, 2008, p. 30). Regarding EU agencies, this whole paradigm changes strongly enhanced the mentioned process (in Section 2.3), which is described as the ‘*mushrooming of agencies*’ by Griller and Orator. For instance, in the field of financial

supervision, the three European Supervisory Authorities (see below) were established, as a regulatory response to the previous insufficient system, and to the crisis.

The European Supervisory Authorities

The three financial supervisory authorities, namely, the European Banking Authority (EBA), the European Securities and Markets Authority (ESMA) and the European Insurance and Occupational Pensions Authority (EIOPA), collectively referred to as European Supervisory Authorities (ESA) are third-generation decision-making regulatory agencies. These three agencies were established after several unsuccessful efforts made by the decision-makers of the EU to handle the 2007-2008 crisis when they realized that more powerful organizations were needed to regulate and supervise the three sub-sectors of the financial market. On the one hand, this decision is a welcome acknowledgment of the failure of the concept of the neoliberal self-regulatory market, on the other hand, the extensive competences of these authorities may seem to be an overkill or a legal risk for the participants of the market. For a spectacular example, see the EBA-regulation [Regulation (EU) No 1093/2010 of the European Parliament and of the Council of 24 November 2010 establishing a European Supervisory Authority (European Banking Authority)], whose Art. 8 para (2) f) applied together with Art. 17 para (6), or Art. 18 para (4), or Art. 19 para (4) provides the competence for EBA to *'take individual decisions addressed to financial institutions'* without involving the National Competent Authorities.

The European Banking Union

A further step in the field of the supervision of banking was – after the establishment of EBA – the construction of the so-called European Banking Union. It is remarkable, that out of the three fields covered by the ESA, the banking sector was the only one where the EU legislator has deemed it necessary to take a further step. The Banking Union consists of four instruments, namely: 1) the Single Supervisory Mechanism – SSM, 2) the Single Resolution Mechanism – SRM, 3) the Common Deposit Guarantee Scheme – CDGS, and 4) a so-called Single Rulebook as an accessorial collection of guidelines for the whole of the sector (Everson, Monda and Vos, 2014, pp. 132-140). The reason why in the case of the two other fields (securities and insurance) the EU legislation has not taken this further step yet, is probably because ESMA and EIOPA proved to be fully sufficient. EBA, however, is responsible for not predicting the failure of the Spanish banking system in its 2011 stress-test, which resulted in a bail-out by the EU worth more than 100 billion euros in June 2012 when the Spanish banking system almost collapsed. It is presumed that the members of the Board of Supervisors in the EBA, who are national delegates from all Member States, became the victims of the so-called 'groupthink', and in order to prevent future decisions against their own countries, they made a much more conservative decision by the 2011 stress-test regarding Spain than they should have. This incident provoked the establishment of a bank supervision system (i.e. the European Banking Union) depending on a supranational

institution of the EU (i.e. the European Central Bank) (Szedegi, 2018, p. 106). The organizational structure of the SRM includes another agency, the Single Resolution Board (SRB). As Asimakopoulos puts it: 'The establishment of the SRB has pushed the constitutional boundaries of agencification further. After elaborating on the SRB's powers and safeguards, one can argue that its governance structure combined with its policy-making powers distinguish the SRB from all other agencies.' (Asimakopoulos, 2018, p. 1) And by that, it has to be taken into consideration that the constitutional boundaries mentioned had already been modified and expanded by the ESMA-case by the time the European Banking Union including the SRB was constituted (see below).

The Meroni-doctrine and its transformation

The original Meroni-doctrine was laid down by the Court of Justice of the European Union (CJEU) in a ruling which was brought at a very early stage of the European integration in 1956 (Case C-9/56). The doctrine had a very clear set of criteria regarding the powers and competences of the European Commission (back then the High Authority). These were as follows: 1) only such competences can be delegated, which are possessed by the delegator itself, 2) the delegated competences are exact executory competences which do not require a discretionary decision, and the delegator keeps them under supervision, 3) the delegation is an explicit decision and 4) the delegation does not generate any disturbance in the institutional balance of the European Community (European Union). For decades it was a set of criteria which was virtually only strengthened by further rulings of the CJEU, and so it became the basic dogma regarding the conferral of powers from the Commission to other EU bodies (Hofmann and Morini, 2012, pp. 1-41). The change came in connection with the agencification trend related to the handling of the 2007-2008 crisis.

The effect of the ESMA-case (C-270/12) of the CJEU

The concrete subject of the case (i.e. the substantive legal debate itself) is not so important from the perspective of the Meroni-doctrine, only the effect which was caused by the ruling itself (Pelkmans and Simoncini, 2014). Repasi (2014) summarizes the changes brought about by the new ruling as follows: 'According to the updated Meroni-doctrine any conferral of powers must be (1) clearly defined by the empowering act and the exercise of the powers must be (2) effectively controlled by the delegating authority (political control) and (3) subject to a legal review (legal control). Finally, as the purpose of 'Meroni' is the protection of the institutional balance, (4) political responsibility cannot be conferred upon executive bodies.' (Repasi, 2014)

The relevance of the Meroni-doctrine and the ESMA-case

The CJEU traditionally has a significant role in shaping not only the application of the EU law and the related jurisprudence, but also the topics of the common talk related to the European Union. The original Meroni-

judgment become a doctrine intact for long decades. Questioning it, and transforming it into something much more up-to-date and fit for the challenges of the post-2008 world had an amplifying effect on the willingness of scholars to research it and, in connection with that, to research the new financial supervision agencies as well.

METHODOLOGY

Identification of institutions

After defining the research field from a theoretical aspect, the TARN international research network provides support in identifying the most significant academics. The research field specialty that a well-identified research network has been established with the participation of leading Western European universities. This network stands as alternative in listing the most influencing representatives in the topic of EU agencification. According to its Mission Statement, the Academic Research Network on Agencification of EU Executive Governance (TARN) aims to promote multi- and interdisciplinary research about the agencification of EU executive governance and to encourage a dialogue between academia and practitioners. As we have seen, the research field of EU agencification is very narrow and close among researchers, and that is also seen in the case of the TARN network. With only nine partner institutions from eight participating countries, it can be observed that for a researcher desiring to join, it is only available by invitation. All the participating countries are Western European countries, pointing out the dominance of West Europe in the research field. TARN is a research, information, and agenda-setting network informing agency operation within the EU in a transnational setting. It brings together renowned and young academics and practitioners from various disciplines and policy areas and pools knowledge on research and legal provisions, policy documents and information on the practical operation of EU agencies. TARN aims to fill two particular lacunae in current agency research by: 1) promoting in-depth multi- and interdisciplinary research on critical concerns about the position and operation of EU agencies and agency-like bodies to integrate isolated disciplinary approaches; 2) encouraging the dialogue between academia and practitioners that is needed to enhance the democratization of the EU in scholarship and practice (Mission Statement of TARN). It is important to note here that data collection was carried out based on the TARN member universities and especially along with the research activities of the participating leading researchers. A detailed list of these researchers can be found among the descriptive statistics.

However, in visualizing the co-authorship and co-citation networks, other researchers related to the 14 leading professors can be observed as well. By this technique, we exported the articles of the 14 TARN member researchers from the Scopus database. The size of the total sample is 437

articles authored by these 14 researchers. For further data analysis, we used the VOSViewer 1.6.16. version for Microsoft Windows System and Gephi 0.9.2. Both software visualize networks, while the VOSViewer was more useful to import the Scopus database from CSV file and create basic visualization of the scientific landscape, the Gephi was used to calculate basic statistics.

Mapping of the topic of EU agentification

The mapping of EU agentification was carried out based on the above-mentioned 437 exported articles – being the total publication collection of the 14 investigated researchers. The identification of the research topic plays a key role in defining the most important research topics, directions, and research questions. It comes extremely useful for practitioners and researchers trying to collect appropriate literature for their research to connect.

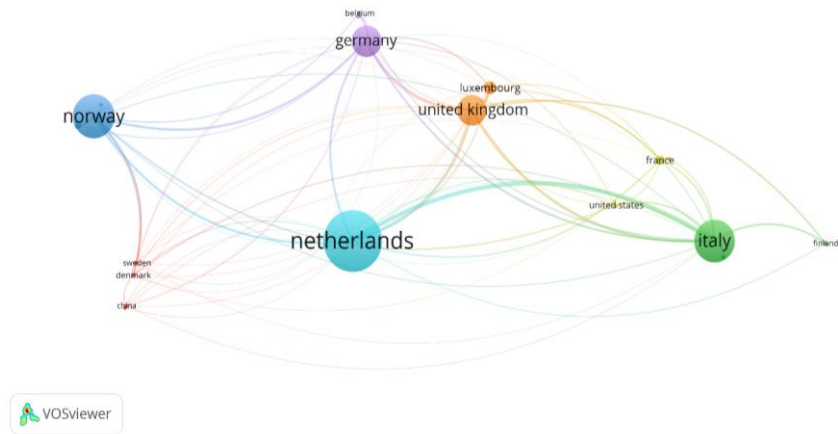
Research topics were analyzed by the SciVal research intelligence online tool, based on a defined group of the 14 researchers. Leading keywords were visualized by VOSViewer based on the co-occurrence analysis of all keywords. All keywords contain both the author keywords and index keywords providing the whole collection of relating keywords found in the articles. Three indicators are presented with regard to the keywords: scholarly output, field-weighted citation impact and prominence percentile. Here, it is important to clear the meaning of these variables. Scholarly output refers to the number of publications published by the predefined set of authors. Field-weighted citation impact is the ratio of the total citations received by the denominator's output, and the total citations that would be expected based on the average of the subject field. It considers the differences in research behavior across disciplines such as the difference between heavily co-cited and lightly co-cited disciplines. Prominence percentile shows the current momentum of a topic by looking at very recent citations, views and CiteScore values. CiteScore here refers to the yearly average number of citations to recent articles published in that journal.

RESULTS

Identification of authors

Studying research patterns, it is indispensable to identify the researchers, being the units of the analysis. In this section we concentrate on the identification process of the authors of the field, and further investigate the scientific collaborations among them. In terms of collaborations, two types of ties should be clearly calculated: the co-authorship network and the co-citation network.

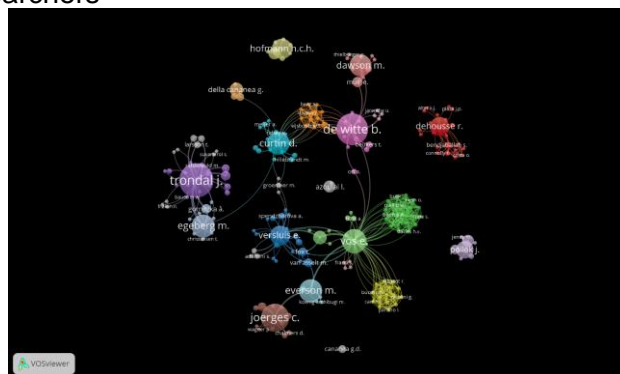
Figure 1: Network graph of the countries of TARN project member researchers



Source: Own survey.

Figure 1 shows the edges between cooperating countries. It is important to note that although the TARN research group consists of 8 countries being the home of the 9 partner universities, some other states join to these research activities through co-authorship. The leading country is the Netherlands, being the headquarters of the TARN project formally as well. Tight relations can be identified between the Netherlands, and Italy, the United Kingdom, Germany, and Norway. The network is undirected as the direction of edges is not relevant from the co-authorship aspect, however, we will further analyze it if the leading researchers are Dutch. Other connected countries are Sweden, Denmark, and China, connected to Norway primarily. Germany attracts Belgium, while the United Kingdom involves Luxembourg in the publications. Between Italy and the United Kingdom, France is a connected component, while between Italy and the Netherlands, the United States has significant ties. Finland is also displayed in the graph, but interestingly not being clustered with the Scandinavian countries, rather as a strongly connected component to Italy.

Figure 2: Co-authorship network based on the publications of TARN member researchers

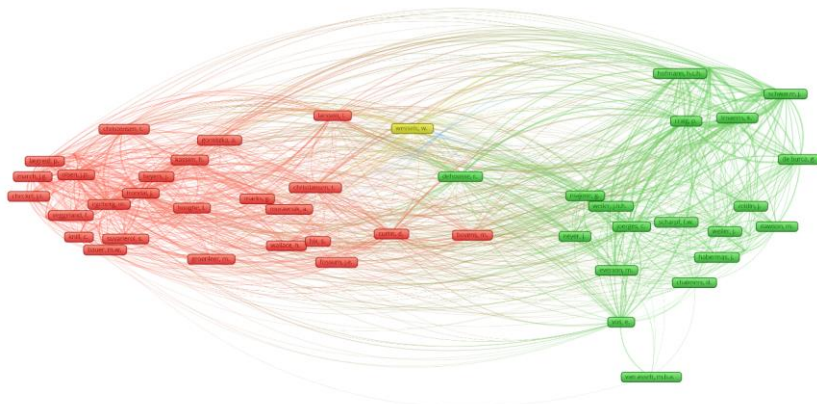


Source: Own survey.

In Figure 2 the network of TARN researchers is displayed. Here, it is important to note some of the basic statistics of the network to have a better insight on its nature. The basic statistical information is extracted from Gephi. The average degree of the network is 3.26, meaning that every author involved has on average more than 3 co-authors. The average weighted degree is 4.026, and the network diameter is 8 (meaning the longest path between authors). The average path length is however 3.83. The graph density is 0.029, meaning a 2.9% proportion of ties in a network relative to the total number of links possible. The modularity is 0.787 with 13 communities, while the connected components are 6. The number of communities and components show a dense network within the clusters, meaning an active link between authors constituting the clusters.

Network clusters demonstrate that the TARN member researchers are the research group leaders being surrounded by their co-authors in our sample. The biggest component is centered around J. Trondal, B. de Witte, C. Joerges, while other researchers such as H.C.H. Hofmann, M. Dawson, D. Curtin, M. Egeberg, M. Everson and R. Dehousse are centered by medium-size groups. It is important to note the links between the clusters. In terms of inter-cluster links the tandem of J. Trondal and M. Egeberg is observed, while for another bigger component E. Vos is a center figure having inter-cluster links with B. de Witte, M. Everson, E. Versluis among others. Separated clusters are centered around H.C.H. Hofmann, R. Dehousse, J. Pollak, G. della Cananea and I. Azoulai.

Figure 3: Co-citation network based on the publications of TARN member researchers



Source: Own survey.

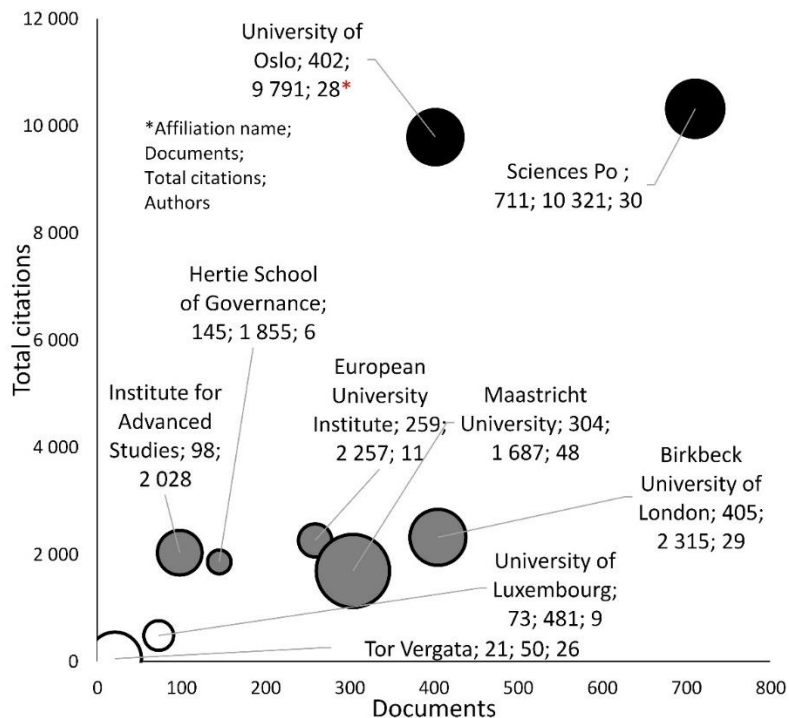
In Figure 3 the co-citation analysis of authors can be observed. The co-citation network was analyzed by the Gephi to further investigate some of its basic statistical properties. The average degree is 4.788, which is much

higher than it is in the co-authorship network, meaning a higher connectivity of researchers by citations. The network diameter is significantly lower with the value of 3. The graph density is 18%, while the modularity is 0.39 with 4 communities. This also reveals the higher connectivity of researchers based on co-citations. There are 2 connected components, displayed in the figure above. The clustering coefficient of the network is 0.775. The nature of co-citation network is visible on the graph above too. Researchers are divided into two clusters, one being centered around J. Trondal and M. Egeberg, the other is centered around E. Vos, M. Everson, and C. Joerges. R. Dehousse (with more citation links to the group dominated by Joerges-Everson-Vos, indicated with green on the graph) and D. Curtin (with more citation links to the group dominated by Trondal-Egeberg indicated with red on the graph) are found between the two components having co-citation links to both groups standing in a bridging place. H.C.H. Hofmann and M. Dawson are researchers having more citation links to the group dominated by Joerges-Everson-Vos.

Publication performance of investigated authors

Publication performance, after mapping the researchers in their relative position and ties with each other, is evaluated based on the TARN member universities and participating researchers.

Figure 4: Research performance of the partner institutions involved in the TARN project by the number of documents and total citations



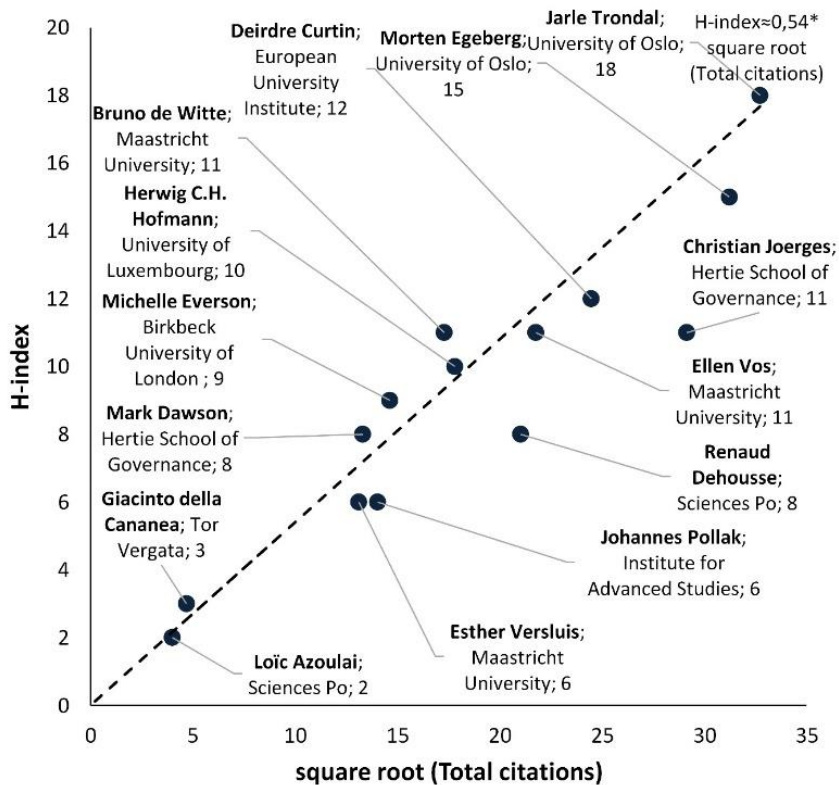
Source: Own survey.

It is worth continuing the analysis by investigating the publication performance of the authors clusters based on their institutions as seen on Figure 4. It is important to note here, that the general performance of partner universities is measured but not limited to the 14 researchers. Figure 4 shows the number of documents and number of citations, drawing the significance on leading institutions of the EU agencification research field. We can observe that most researchers belong to Maastricht University, which is the leading institution of the TARN project. From the aspect of publication performance, the Sciences Po French university stands out, regarding both the number of documents and number of citations (711; 10,321). It is followed by the University of Oslo (402; 9,791) and the Birbeck University of London (405; 2,315). However, it is surprising that the Maastricht University can be classified into the group of average institutions with the result of 304 documents and 1,687 citations. The nine institutions clearly form three categories. The Sciences Po and University of Oslo belong to the group of top institutions which consists of universities publishing a great number of documents and receiving a high number of citations. They are followed by the second group consisting of the average universities from which some reach a high number of publications, others have been cited highly. Last but not least, the third category includes the University of Luxembourg (73; 481) and Tor Vergata (21; 50) with the poorest publication performance. The results of the Hertie School of Governance are outstanding in terms of the average number of documents and citations per capita because with its 6 researchers it is a member of the second group with 145 documents and 1,855 citations.

After the analysis of the institutions, the mapping of the topic of EU agencification can be continued by the comparison of the research performance of the 14 academics involved in the TARN project. These results are presented in the H-index – root square of total citations coordinate system (where the H-index is the number of documents published by the given author which has received at least the same number of citations based on the Scopus dataset). A correlation can be found between the H-index and the number of citations as following (Yong, 2014, pp. 1040-1050):

$$H - index \approx 0,54 * \sqrt{number\ of\ citations}$$

Figure 5: Research performance of researchers involved in the TARN project by the square root of total citations and H-index



Source: Own survey.

Figure 5 demonstrates the publication performance of the participating researchers. We can see the square root of total citations and H-index as the above-described correlation is studied among these two variables. It can be observed that the most successful academics belong to the University of Oslo (Jarle Trondal, H=18; Morten Egeberg, H=15). They are followed by Deirdre Curtin H=12, Christian Joerges, Ellen Vos and Bruno de Witte with all of them having H=11. The researchers having H>10 produce an above average H-index compared to other academics working in the field of social sciences as they usually have much lower H-indices than those dealing with natural sciences and engineering. The examined academics can be categorized into four groups based on their H-indices: H=18-15, H=14-10, H=9-6 and H=5-0. The two biggest groups are the H=14-10 and H=9-6 with 5 researchers each. In the group of H=18-15 only the two researchers from the University of Oslo can be found. They are followed by the group dominated by the staff of the Maastricht University. It is surprising that the academics of the Sciences Po are classified into the two last groups with H-index 2 and H-index 5, even though this university leads the ranking of institutions. Which means that the outstanding results of the university come from other academics working at the examined department. It is also interesting that even though the Maastricht University is classified into the group of average universities, its three academics are in the top (with H-index 11, 11 and 6).

Mapping of the topic of EU agencification

After identifying and analyzing the participating researchers, and research patterns among them, it is worth continuing the analysis by mapping the leading topics and keywords characterizing the research field studied.

Table 1: Dominant research topics in the research activity of TARN member researchers

Number	Topic	Scholarly Output	Field-Weighted Citation Impact	Prominence percentile
1	New Public Management; Regulatory Agencies; Social Responsibility	28	2,47	93,192
2	European Parliament; European Council of Ministers; Lisbon Treaty	24	1,62	92,266
3	European Law; Public Advocate; Court of Justice	16	1,22	75,851
4	Banking Union; Eurozone; Euro Crisis	16	3,48	95,902
5	Genetically Modified Organisms; Subsidiarity; Scientific Uncertainty	16	0,5	68,354
6	National Parliament; Lisbon Treaty; Open Method of Coordination	14	1,3	76,079
7	European Stability Mechanism; Economic and Monetary Union; Sovereign Debt Crises	14	4,3	70,2
8	Court of Justice; Fundamental Rights; Constitutional Courts	10	2,19	85,969
9	Euroscepticism; European Parliament; Referendum	6	2,91	98,022
10	European Neighbourhood Policy; Europeanization; Enlargement Policy	6	0,45	95,901

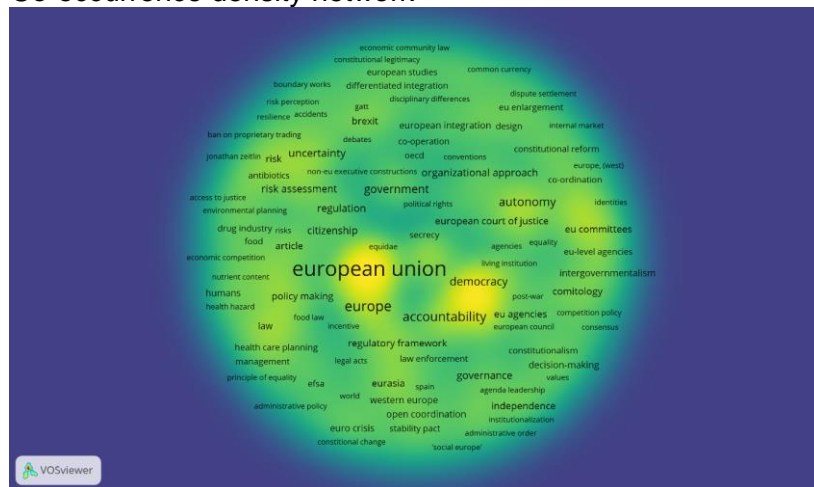
Source: Own survey.

In Table 1, the most actively involved research topics are listed based on the scholarly output. The list was exported from the SciVal studying the 14 participating researchers of the TARN project as a group of researchers in a whole. Their research activity points out the research topics defined by 3 keywords in the SciVal. Agencies are essential part of the organizational structure of the supranational level of the EU governance. Therefore, euroscepticism and its field-specific components are obviously relevant as the manifestations of criticism towards the supranational level.

It is to be noted how many questions and problems related to the financial sector are overrepresented in the topics, in comparison to any other sector-specific topics, which are virtually non-existent within the top ten topics. Topics no. 4 and 6 are entirely about the questions related to the future of the EMU and the euro, and the means of financial-economic stabilization after the 2008 crisis. Which means, that the researchers examined prioritized these topics to the sector-specific issues of other sectors, and that is an obvious evidence of the importance of the topic described in the first part of this paper, including the Banking Union.

Moreover, in terms of field-weighted citation impact, the leading topics are associated with the financial aspects of the EU agencies. Here, the leading topic is the “European Stability Mechanism; Economic and Monetary Union; Sovereign Debt Crises” with the value of 4.3, followed by the topic of “Banking Union; Eurozone; Euro Crisis” (3.48) and the critical topic of “Euroscepticism; European Parliament; Referendum” (2.91). From the prominence percentile aspect, hot issues are identified led by the topic of “Euroscepticism; European Parliament; Referendum” (98.022), the “Banking Union; Eurozone; Euro Crisis” (95.902) and the “European Neighbourhood Policy; Europeanization; Enlargement Policy” (95.901). These topics are very much centered around the fundamental questions concerning EU’s internal (among member states) and external (towards third party) legitimacy.

Figure 4: Co-occurrence density network

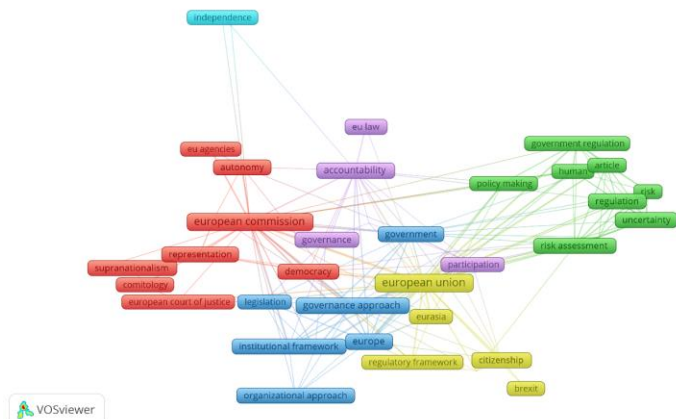


Source: Own survey.

Figure 4 on co-occurrence density analysis indicates the central keywords in yellow. These leading keywords are in the central positions, led by the term of “European Union”, “Europe”, “democracy” and “accountability”. Further keywords connect to these ones, drawing the landscape of EU agencification. The terms of “regulatory framework”, “citizenship”, “policy making”, “autonomy”, “risk assessment”, “uncertainty”, “euro crisis” are the theoretical concepts primarily connected to the research field. Along these

words, various research directions can be observed. The abovementioned ‘euroscepticism’ and criticism towards the supranational level of EU governance is detailed here, as the expressions ‘accountability’, ‘autonomy’, ‘democracy’, ‘government’ ‘uncertainty’ are among the most visible and therefore most relevant expressions in this figure. Consequently, it can be claimed that the EU agencies and agencification is one of the focal points of the contemporary research of the European Union. The plurality of the categories of the expressions visualized leads us to the fact how versatile is this field of research.

Figure 5: Co-occurrence cluster analysis



Source: Own survey.

Co-occurrence cluster analysis defines 6 modules of keywords. It demonstrates the connections and connected components among the clusters, but it is worth studying the clusters and their content. Keywords indicated with bigger size of letters means the highest number of occurrences, while the central place shows the more inter-connected keywords. Most keywords were identified within the red cluster, having the content about the “supranational”, “autonomy”, “democracy” and “representation” characterizing the democratic functioning of EU agencies. The green cluster collects keywords related to the policy making and regulating issues, while the blue module gains its content from the institutional and organizational framework of EU agencies. The yellow module (focusing on foreign policy), the purple module (focusing on accountability and participation issues) and the turquoise module (focusing on independence) are clusters gathering fewer keywords, but nevertheless important for the research of the EU agencification. It is important to note here that the figure indicates only the most common keywords based on the number of occurrences.

DISCUSSION AND IMPLICATIONS

The study of the EU agencies and agencification, just as the study of the academic background and scientometric aspects of these entities and phenomena, is a very important task and has many scientific and practical applications. It is of fundamental importance for practically all actors dealing with the legal and economic nature, and the institutional design of the European Union on either theoretical or practical levels.

This research helped to identify the core patterns of publication of the TARN network, which is the almost exclusive organised network of scholars, universities and research institutions focusing on the study of EU agencification. This result, besides the field-specific usable knowledge it gives to us, also sets an example how to analyze the scientometric aspects of a certain field of research, which must be of great use for researchers involved in subjects of social science. It is inevitable that researchers know the fellow researchers and academics who are active in the same field of research, and through that they can get familiar with almost the entirety of the relevant literature.

Future studies are suggested, especially in the sense of seeking wider connections of the study of agencification, i.e. the study of agencification on a global level. Since the cradle of the phenomenon is the United States of America and the Pan-American continent, it is certain, that a comparison between the different regimes would be intriguing, and the same is true for the comparison of the scientometric aspects, for instance publication patterns of the researchers of EU agencification and non-EU agencification. For a research like that, it would be crucial to catalogue and investigate the directions taken by the research of the phenomenon on a global level. The current paper would be a good starting point for such research.

CONCLUSIONS

As it must have become apparent by now, the circle of the researchers, academics dealing with the subject of EU Agencies and EU Agencification is relatively closed. Nevertheless, the importance of this field of study is undoubtedly outstanding and this is being realized by more and more people who encounter the subject during their studies. By evaluating these results and links of the publication performance, we can tell that the TARN project has reached its aims in providing a platform for the researchers in the field of EU agencification and encourages the cooperation between academics for the development of the field.

In spite of the relatively small number of researchers involved, the subject is quite thoroughly elaborated. However, we are absolutely dealing with such a field where new twists can occur in any minute due to the decisions of the EU legislator or the national legislators, therefore, as long as the European Union exists, we can never say that the research is over. Many predictions, including that of the authors of this article, say that the trend of agencification will get even stronger in the near future, in the quantitative just as in the qualitative meaning of the word. It can be perceived that when an EU-wide problem occurs, (be it a cybersecurity problem, the Dieselgate scandal, or

the quality of Nutella in the Eastern European Member States) the establishment of a new EU agency is almost always among the recommendations for a solution to the problem and there are cases when this idea prevails.

Conclusively, more and more researchers will be attracted to the questions of EU Agencification as the spectrum of fields where an EU Agency functions gets wider and wider. It will also bring along the more conscious and more organized networking between these individuals, which will result in an even stronger academic background for the subject.

REFERENCES

- Asimakopoulou, Ioannis G., (2018). Single Resolution Board: another Meroni extension or another chapter to Europe's Constitutional Transformation? [Online] Available at: https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3367559, (Accessed: 27 November 2020)
- Council Regulation (EC) No 58/2003 of 19 December 2002 laying down the statute for executive agencies to be entrusted with certain tasks in the management of Community programmes, published in the Official Journal of the European Union *L 11 from 16.1.2003*.
- Danwitz, T., (2008) *Europäisches Verwaltungsrecht (European Administrative Law)*, 1st edition, Berlin-Heidelberg: Springer Verlag
- Everson, M., Monda, C., Vos, E., (2014). *European Agencies in between Institutions and Member States*, 1st edition, Amsterdam: Wolters Kluwer
- Griller, S. and Orator, A., (2010). Everything under Control? – The 'Way Forward' for European Agencies, in the Footsteps of the Meroni-doctrine, *European Law Review*, 35(1), 3–35.
- Hajnal, G. and Jenei, G., (2012). The Politics of Agency Governance in Europe and Beyond: The Fifth Trans-European Dialogue in Public Administration, *Society and Economy*, 34(3), 515–520.
- Hiadlovsky, V., Hunady, J., Orviska, M. and Pisar, P. (2018). Research Activities and their Relation to Economic Performance of Regions in the European Union, *Business Systems Research: International Journal of the Society for Advancing Innovation and Research in Economy*, 9(1) 44–54
- Hofmann, H.C.H. and Morini, A., (2012). Constitutional Aspects of the Pluralisation of the EU Executive through 'Agencification', *University of Luxembourg Law Working Paper No. 2012-01*, March 30, 1–41.
- Judgment of the Court (Court of Justice of the European Union) of 13 June 1958, *Meroni & Co., Industrie Metallurgiche, SpA v High Authority of the European Coal and Steel Community*, Case 9–56.
- Kálmán, J., (2013). Az európai ügynökségek és a Meroni-doktrína (The European Agencies and the Meroni-doctrine), *De iure prudentia et iure publico*, 7(3) 1–17.
- Lórincz, L., (2010). *A közigazgatás alapintézményei (Fundamental Institutions of the Public Administration)*, 3rd edition, Budapest: HVG-ORAC
- Lynn, L.E., (2008) 'What is a Neo-Weberian State? Reflections on a Concept and Its Implications', *NISPAcee Journal of Public Administration and Policy*, 1(2), 17–30.
- Merton, R.K., (1968). 'The Matthew Effect in Science', *Science*, 159, 56–63.
- Nakrošis, V., Martinaitis, Ž., Hudrea, A. and Balica, D., (2016) 'Ex Post Control and Steering of Government Agencies: A Comparative Analysis of Lithuania and Romania', *Transylvanian Review of Administrative Sciences*, 49E, 78–94.
- Pelkmans, J. and Simoncini, M., (2014). 'Mellowing Meroni: How ESMA Can Help Build the Single Market', *CEPS Commentary*, [Online] Available at: <https://www.ceps.eu/ceps-publications/mellowing-meroni-how-esma-can-help-build-single-market/> (Accessed: 25 November 2019.)
- Regulation (EU) No 1093/2010 of the European Parliament and of the Council of 24 November 2010 establishing a European Supervisory Authority (European Banking

- Authority), amending Decision No 716/2009/EC and repealing Commission Decision 2009/78/EC, published in the Official Journal of the European Union *L 331 from 15.12.2010*.
- Repasi, R., (2014). 'Assessment of the Judgment of the European Court of Justice in Case C-270/12, United Kingdom v Council and European Parliament', 2014, published by Sven Giegold, MEP, January 23, [Online] Available at: <https://sven-giegold.de/wp-content/uploads/2014/01/Assessment-ECJ-Case-C-270-12-and-relevance-for-the-SRM1.pdf>, (Accessed: 25 November 2019.)
- Schwarze, J., (1988). *Europäisches Verwaltungsrecht (European Administrative Law)*, 1st edition, Baden-Baden: Nomos Verlagsgesellschaft
- Szegedi, L., (2018). *Az európai közigazgatás fejlődése és szabályozása (The Development and Regulation of the European Public Administration)*, 1st edition, Budapest: Dialóg Campus
- TARN (The Academic Research Network on Agencification of EU Executive Governance), Mission Statement, [Online] Available at: <http://tarn.maastrichtuniversity.nl/about/>, (Accessed: 25 November 2019)
- Yong, A., (2014) 'Critique of Hirsch's Citation Index: A Combinatorial Fermi Problem', *Notices of the American Mathematical Society*, 61(9), 1040–1050.