



ARCHIVIO ISTITUZIONALE DELLA RICERCA

Alma Mater Studiorum Università di Bologna Archivio istituzionale della ricerca

PERCEIVE project - Deliverable D5.3 "Production of a report discussing (including visualizing topographic maps of meanings) the emergent topics in identity relevant discourse at the different levels"

This is the submitted version (pre peer-review, preprint) of the following publication:

Published Version:

PERCEIVE project - Deliverable D5.3 "Production of a report discussing (including visualizing topographic maps of meanings) the emergent topics in identity relevant discourse at the different levels" / Barberio, Vitaliano ; Kuric, Ines ; Mollona, Edoardo ; Pareschi, Luca. - ELETTRONICO. - (2017), pp. 1-137. [10.6092/unibo/amsacta/5764]

This version is available at: <https://hdl.handle.net/11585/622226> since: 2019-04-02

Published:

DOI: <http://doi.org/10.6092/unibo/amsacta/5764>

Terms of use:

Some rights reserved. The terms and conditions for the reuse of this version of the manuscript are specified in the publishing policy. For all terms of use and more information see the publisher's website.

(Article begins on next page)

This item was downloaded from IRIS Università di Bologna (<https://cris.unibo.it/>).
When citing, please refer to the published version.

PERCEIVE DEL. 5.3: 'REPORT DISCUSSING THE EMERGENT TOPICS IN IDENTITY RELEVANT DISCOURSE AT DIFFERENT LEVELS'



Perception and Evaluation of Regional and Cohesion Policies by Europeans and Identification with the Values of Europe

PERCEIVE

GA nr. 693529

D 5.3 'Production of a report discussing (including visualizing topographic maps of meanings) the emergent topics in identity relevant discourse at the different levels'

Table of contents

1. Introduction	3
2. Method: Topic Modeling.....	4
3. Method: Semantic network analysis of topic models.....	5
4. Findings: The analysis of the public sphere at different levels.....	7
4.1 Communications of the EU: Panorama	7
4.2 Local implementation: financed projects' abstracts.....	12
4.3 Local press: newspapers	16
4.3.1 Italy	16
4.3.2 Austria.....	24
4.3.3 Poland.....	32
4.3.4 Romania	40
4.3.5 Sweden	46
4.3.6 Spain.....	51
4.3.7 United Kingdom.....	57
4.4 Social media: Facebook	64
4.4.1 Italy.....	64
4.4.2 Austria	73
4.4.3 Poland.....	78
4.4.4 Romania.....	85

4.4.5 Sweden	94
4.4.6 Spain	99
4.4.7 EU profiles.....	105
5. Finding: The Semantic Network Analysis.....	116
5.1 Italy.....	116
5.2 Austria.....	118
5.3 Poland	120
5.4 Romania.....	122
5.5 Sweden.....	124
5.6 Spain	126
5.7 UK.....	128
6. A Tentative International Topographic Map	130
7. Conclusion.....	131
8. References.....	137

AUTHORS OF THIS REPORT AND EDITORS OF THE DELIVERABLE:

- Vitaliano Barberio, Research Institute for Urban Management and Governance, WU University of Economics and Business, Vienna, vitaliano.barberio@wu.ac.at
- Ines Kuric, Research Institute for Urban Management and Governance, WU University of Economics and Business, Vienna, ines.kuric@wu.ac.at
- Edoardo Mollona, Università di Bologna, edoardo.mollona@unibo.it
- Luca Pareschi, Università di Bologna, luca.pareschi@unibo.it

LEADING PARTNER:

Alma Mater Studiorum – Università di Bologna [UNIBO, Italy]

ESTIMATED PERSON/MONTHS PER PARTNER (person/month):

Alma Mater Studiorum – Università di Bologna [UNIBO, Italy] : 7

Wirtschaftsuniversität Wien [WU, Austria]: 6

SUBMISSION DATE: 30th November 2017

1. Introduction

In this report we describe the results of the analysis that we performed through topic modeling on the texts that we collected and described in the previous deliverable 5.2. In particular, our aim was to analyze the latent meaning structure, and the shared meanings of EU policies and EU identity, on four levels of communication:

- Communications of the EU: here we analyzed the magazine Panorama
- Local implementation: here we analyzed financed projects' abstracts
- Local press: at this level we focus on newspapers
- Social media: at this level we focus on Facebook

The analysis performed with Topic Modeling on the corpus of tweets collected from Twitter did not provide good results, due to the short length of each tweet. It is a result that is expected, but collected data are not useless. In order to provide a better coherence of this report, which focuses on the results of Topic Modeling, we are therefore not providing an analysis of tweets here. On the contrary, we will analyze tweet in the next deliverable 3.3, that is aimed at analyzing the use LMAs make of social media.

With regards to the other level, we are presenting 16 models: one model for Panorama, one model for financed projects' abstracts, 7 models for newspapers – one for each country – and 7 models for Facebook. Regarding Facebook, LMAs in our case study region in UK do not have a Facebook profile. The seventh model regards thus European Institutions' Facebook profiles. Each model is composed of a list of 20 topics, which we analyze and characterize through descriptive statistics. We focus in particular on the emergent topics related to European Identity and Cohesion Policy. Moreover, in this report, we make use of formal methods and techniques to visually represent the meaning of topics elicited through topic modeling.

The following paragraph provides a short introduction to the technique of topic modeling. Then four paragraph accounts for the several topic models elicited at different level of communication. Finally, conclusions make sense of the whole analysis,

2. Method: Topic Modeling

We used topic modeling (Blei et al., 2003) to analyze our data. This technique provides an automated way to code the content of a corpus of texts into a set of 'topics' that are containers of meaningful words (Mohr and Bogdanov, 2013), with the latter co-occurring frequently. Topic modeling combines four important features. First, it can analyze bodies of texts that would be impossible for a human being to deal with because of their volume or extent. Second, once topics are automatically produced, they need to be interpreted – and topic modeling does not require the imposition of a priori-categories. The third relevant feature is that topic modeling categorizes words, not documents. It allows for variations in the meaning of terms in different contexts, and recognizes that the meaning of a word depends on the surrounding words. The fourth element is that topics are explicit and other researchers may reproduce the analysis, which improves reliability (DiMaggio et al., 2013). Overall, topic modeling complements systematic analysis with an inductive approach. The most diffused implementation of topic modeling uses an algorithm called latent Dirichlet allocation (LDA) (Blei et al., 2003). LDA is based on Bayesian statistics and allows the development of topics in a completely automated way. Researchers make two decisions before running the model: the number of topics the model should produce, and whether topics should contain an equal number of words or not. Based on these parameters, the model provides the probabilities of words being used in a topic, as well as an account of the distribution of those topics across the corpus of texts. To put it more simply, the model places together terms that appear in the same texts more frequently than one would expect by chance. The idea is that each word of the corpus is assigned to a topic in an iterative process.

To perform topic modeling, we used Mallet - an open-source software developed by the University of Massachusetts Amherst working through command line in MS-DOS. For each language we developed a so called stop-word list, which is a list of words the software will ignore, usually composed by articles, prepositions, adverbs, and other words with scarce substantive meaning. Then, it is possible to produce output grouping words in a number of topics requested by the researcher. Each model produces three main outputs:

- *a list of words per topic* displaying the highest-ranked terms for each topic, where the prevalence of each word within a topic is adjusted for its prevalence within the corpus as a whole;
- *a list describing how each word has been coded in each text analyzed*. Thanks to this list it is possible to distinguish the coding of each word within the text and therefore achieve a deep understanding of each topic; and
- *a breakdown of the topics comprising each paper*. Thanks to this output it is possible to observe the composition of each source analyzed and calculate the prevalence of each topic throughout the sample.

We used these outputs to make sense of the topics elicited, together with our projects' partners: they provided a valuable contribution in interpreting words in national languages as embedded in each national and regional culture. As an aid to our interpretation, finally, we used tables of statistics provided by Mallet, as another output of the algorithm: these statistics permits to evaluate the importance of each word in interpreting the meaning of each topic.

3. Method: Semantic network analysis of topic models

Topic models are meant to enhance our understanding of the public debate on EU regional Cohesion Policy in different national contexts. In these terms, the specific contribution of topic modeling is the elicitation of *areas of meaning* emerging from the linguistic analysis of media. The main¹ output of automatic procedures implied by this technique consists of a set of topics to be understood as *bags of words*. The term “bag” actually emphasises that when we enter the interpretative stage of topic modeling (i.e. which meanings are connected with each topic) no particular relevance is given to the patterns of co-occurrence among words within and between topics. However this latter dimension, sometimes referred to as *vocabulary structure*, has been argued to be of central importance in the formal analysis of meanings (i.e. Loewenstein, Ocasio and Jones, 2012). Therefore, while topic models give us a solid and formal representation of meanings around regional Cohesion Policy, we understand that such a representation can be complemented usefully with other techniques aimed at revealing vocabulary structure.

One such technique is semantic network analysis (SNA hereinafter) or network text analysis (i.e. Carley, 1997). In the research presented here, SNA is used with the main purpose of finding *macro-semantic areas* as clusters (or groups) of topics at the national level. A secondary use of SNA in the current report entails the determination of structural positions or centrality of topics in their national semantic context (made of other topics).

While we have covered several different levels at which meanings of EU policy are shaped (i.e. press, EU issued magazines, Facebook and financed projects' descriptions) with topic modeling, we have used only the PERCEIVE newspapers dataset (described in Deliverable 5.3) in order to model topics' content as semantic network. This is because of two main elements: first, newspapers have responded better to the topic model algorithms than social media (i.e. on average, they have generated more interpretable topics), because of the longer length of texts; and second, dataset in the different national cases are more balanced, while in the case of Facebooks we have a greater variance of usage by Lmas.

For all data preparation, analysis and visualisation described in this section and concerning semantic network analysis, we have used a freely available software tool called ORA (Altman, Carley and Reminga, 2017). Our empirical design starts by building relational models or networks out of the set of topics obtained as described in the first part of the current report. We refer to these models as semantic networks as the *nodes are the topics* and the *links are the shared words in each pair of topics* (or shared vocabulary). In more detail, for each national set of topics we have built a *raw semantic network* containing all words of all topics. This procedure gave us very high dense networks – i.e. all topics were connected to all others. Therefore, in order to get more interpretable models, we removed all links below certain thresholds from the *raw networks*. Put simply, this means that we removed all vocabulary (words) that were not *strongly* connecting any pair of topics. As regards the value of the threshold, it was slightly different for each country-model, but we always set the value between the average link strength (i.e. the average number of shared words between any pair of topics) and the average plus one standard deviation. All further analytical steps have been performed on these *reduced networks*.

An assumption that derives by the way we built our networks is that two or more topics tend to be more similar if they share more words, or vocabulary, with each other than with other topics. A second assumption is that topics that share their vocabulary with many other or with particular

¹ The main output in this case is understood as the automatically generated output that will constitute the basis for the interpretive work of labeling and detailing the content of topics.

other might have a central position in the network and therefore may be of particular importance in the construction of meanings.

More precisely, as for the structural properties of topics, we are interested in analysing two main properties derived from shared vocabulary: a) the clustering of topics, and b) the centrality of topics. In order to analyse clustering, we used two clustering approaches and related techniques to find so-called *dense subgraphs* (i.e. Khuller & Saha, 2009) and *community structure* (Clauset, Newman & Moore, 2004) in networks. While detailed descriptions of the algorithms are provided in the referenced papers, we are more interested in the general principle according to which these two techniques find sub-groups in semantic networks here. Both techniques try to find cohesive sub-groups of nodes, that is, clusters of topics that share more vocabulary among themselves than with other topics. For the dense-sub-graphs technique the investigator is asked to set a minimal density ratio for the groups to be found – we set this parameter to 75% of links among topics. This technique is effective in determining if the semantic network has sorts of *cores* and *peripheries*. The Newman technique instead tries to find so-called community structures in networks and does so by maximising the modularity of the network structure through iterative removal of the most central nodes. We expect this technique to give us a more fine grained view on the semantic associations among topics.

In order to analyse the topics' centrality in the wider space formed by the totality of available topics, we also performed highly standard social network analytical measures such as degree centrality, closeness centrality and betweenness centrality (see for example Freeman, 1979; Wasserman and Faust, 1994). Loosely, degree centrality measures the extent to which a topic has more connections to others in the same network. This measure indicates the prominence of a topic among others. Closeness is the inverse of the sum of distances in the network from a node to all other nodes. This measure assesses the capacity of a topic to reach all others. Betweenness centrality of a topic in a network measures the extent to which it rests in the middle of all topics' pairs that have a shortest path containing it. This measure assesses the capacity of a topic to bridge others.

A final step of our semantic network analytical strategy entailed the use of Correspondence Analysis (CA) in order to build a first attempt towards an integrative representation of the meanings having emerged during the topic modeling exercise. Such a representation should encompass all seven national cases in our sample as well as the sum of some representative vocabularies captured by topic modeling. CA is a descriptive/exploratory technique designed to analyse simple two-way and multi-way tables containing some measure of correspondence between the rows and columns (i.e. see Greenacre, 1984). Correspondence analysis is well suited to deal with categorical rather than continuous data and it provides a means of displaying or summarising a set of data in two-dimensional graphical form. All data should be nonnegative and on the same scale for CA to be applicable, and the method treats rows and columns equivalently.

In our case, the two-way table to be scaled was a *country per words* one where the cells indicated the sums of occurrences of a given word in all topics elicited for a given country – we actually only used the top 50 words across all topics in order to produce a more readable topographic map. The results of CA are to be interpreted as taking in consideration the relative position of entities (topics and words in our case) in the topographic space of meanings, as well as in respect to the horizontal-vertical axes and to their intersection (centre of the topographic space). Proximity of entities in the plotted semantic space has to be understood as indicating similarity or more simply, commonality of vocabulary.

4. Findings: The analysis of the public sphere at different levels

The next four paragraphs will describe the results of the analysis performed through topic modeling at different levels of communication. We move from the center to the periphery: the first paragraph analyzes the magazine Panorama. The second paragraph deals with financed projects' abstracts. The third paragraph is about national and regional newspapers. Finally, the fourth paragraph deals with LMAs Facebook profile.

For each source we elicited a topic model. In the following paragraphs, we describe each topic with a label and a short description. Then, based on the actual use of the topics in our sample of texts, we describe the characteristic of the public discourse at each level analyzed.

4.1 Communications of the EU: Panorama

The first level of our analysis deals with the communication of the EU. Among the communication materials directly produced by EC – DG REGIO, collected to be able to explore the translation of content from central to local level, we are analyzing all 66 issues of the PANORAMA magazine spanning over the 2006-2017 time period with irregular intervals (from 1 to 15 issues per year).

A list of the 20 topics elicited from this corpus follows: each column represents a topic, which is described firstly by 20 most important words. Our interpretation of the meaning of the topics follows the table. In order to elicit the meaning of each topic, we relied on i) this table, ii) a breakdown of the topics comprising each abstract, and iii) the exact coding of each word of each abstract to a specific topic.

We developed a stopwords list, containing words that are not meaningful for eliciting the latent meaning space. We then analyzed these articles through Mallet. Overall, our corpus consists of 448.460 words (excluding words in the stopwords list), the longest abstract is composed of 11.853 words.

PERCEIVE DEL. 5.3: 'REPORT DISCUSSING THE EMERGENT TOPICS IN IDENTITY RELEVANT DISCOURSE AT DIFFERENT LEVELS'

topic	0	1	2	3	4	5	6	7	8	9
20 most important words	transport	innovation	energy	innovation	eur	new	funds	evaluation	structural	cohesion
	infrastructure	development	climate	people	regional	projects	programmes	will	union	policy
	rail	research	change	change	financial	member	programme	member	community	regions
	road	region	renewable	year	smart	states	regional	programmes	region	european
	port	growth	sustainable	creativity	support	support	policy	results	eur	territorial
	project	european	regional	culture	growth	policy	information	states	funds	europe
	growth	project	wind	project	cooperation	national	structural	cohesion	inforegio	future
	major	economy	emissions	time	hahn	panorama	commission	fund	economic	need
	network	sustainable	power	need	autumn	commission	projects	erdf	social	policies
	ten-t	urban	electricity	creative	croatia	local	communication	commission	regions	regional
	main	social	environment	ideas	summer	period	authorities	rules	gdp	challenges
	urban	innovative	regions	different	current	important	managing	policy	enlargement	different
	railway	million	environmental	panorama	peace	project	partnership	evaluations	information	report
	line	cities	adaptation	ground	process	resources	best	period	objective	social
	traffic	results	sources	cultural	instruments	investment	public	national	country	growth
	motorway	knowledge	solar	conference	crisis	economic	fund	implementation	regional	development
	high-speed	strategy	project	city	technology	role	practice	audit	countries	strategy
	link	citizens	production	communication	inclusive	total	activities	objectives	million	cities
	planning	people	water	working	investments	billion	good	focus	programme	financial
	links	environment	buildings	explains	programming	employment	experience	state	average	framework

topic	10	11	12	13	14	15	16	17	18	19
20 most important words	european	cohesion	cooperation	maritime	region	fund	investment	cities	will	urban
	development	eur	interreg	policy	baltic	solidarity	funds	urban	funding	women
	regions	inforegio	programmes	regions	strategy	eur	eur	services	economic	social
	regional	eff	cross-border	european	sea	aid	energy	city	regional	gender
	areas	benefi	territorial	eur	danube	urban	urban	training	countries	cities
	area	fund	programme	coastal	countries	prevention	investments	health	work	equality
	million	water	project	new	water	damage	smart	education	panorama	people
	measures	nancial	information	port	river	cities	fund	unemployment	new	poverty
	network	countries	transnational	inforegio	cooperation	risk	will	project	europe	local
	will	project	border	sea	commission	eusf	specialisation	region	impact	jobs
	objective	will	states	ports	environment	disasters	support	data	level	mainstreaming
	set	offi	europe	change	actions	commission	european	programme	key	training
	action	rst	member	activities	energy	disaster	financial	esi	public	roma
	transport	diff	regions	economic	maritime	million	public	eur	issues	men
	community	waste	iii	research	area	floods	areas	public	example	exclusion
	networks	structural	interregional	cornwall	plan	major	esi	spring	business	action
	various	effi	people	clusters	environmental	flooding	cooperation	agenda	help	inclusion
	central	specifi	interact	asturias	common	total	funding	management	life	business
	management	member	borders	training	people	natural	instruments	grand	organisations	employment
	terms	ese	partners	transparent	tourism	hungary	agenda	safety	focus	integrated

Topic 0 - TRANSPORT INFRASTRUCTURES: This topic collects word used to refer to transport infrastructures, such as railroad, port, rail, road, railway, motorway, high-speed.

Topic 1 - RESEARCH AND DEVELOPMENT: This topic collects words linked to research and development, especially linked to the condition of citizens: sustainable economy and growth, urban and social environment, and projects for the cities.

Topic 2 - RENEWABLE ENERGIES: This topic deals with all the forms of renewable energies aimed at lowering emissions to prevent climate change.

Topic 3 - CULTURE AND CREATIVITY: This topic focuses on innovation driven by cultural and creative ideas and industries.

Topic 4 - PROJECTS' DESCRIPTION: This topic especially cites Johannes Hahn and focuses on specific projects' description.

Topic 5 - NEW MEMBER STATES: This topic collects references to new member States and projects especially aimed at supporting these countries.

Topic 6 - PROGRAMMES' MANAGEMENT: This topic focuses on words related to projects' implementation and management: managing, best, audit, focus, and objective.

Topic 7 - PROJECTS' EVALUATION: This topic deals with evaluation of the results of project funded by Cohesion Policy, in particular ERDF.

Topic 8 - ECONOMIC EFFECT OF STRUCTURAL FUNDS: This topic deals with the economic effects of structural funds in regions and countries.

Topic 9 - COHESION POLICY: This topic deals with the aim of Cohesion Policy and with the future impact on European Regions in terms of growth and development

Topic 10 - SPECIFIC AREAS OF DEVELOPMENT: This topic deals with measures to improve development of specific areas and regions within the EU.

Topic 11 - Noise: This topic collect noisy words (broken, not readable), in order to improve the other topics.

Topic 12 - CROSS-BORDER COOPERATION PROGRAMMES: This topic deals with the description of specific cooperation programmes characterized by being transnational, with effect across borders (Interreg)

Topic 13 - MARITIME POLICY: This topic deals with maritime policy and the sea: coastal economics, ports of the European Regions, and specific projects within regions are mentioned.

Topic 14 - BALTIC REGIONS: This Topic deals explicitly with Baltic Region strategy, dealing with Danube River, tourism, energy, people.

Topic 15 - NATURAL DISASTERS' PREVENTION: This topic deals with natural disasters' prevention and solidarity, by citing words such as damage, natural disaster, floods, flooding.

Topic 16 - FINANCIAL ASPECTS: This topic deals with financial aspects of investments related to energy in urban areas.

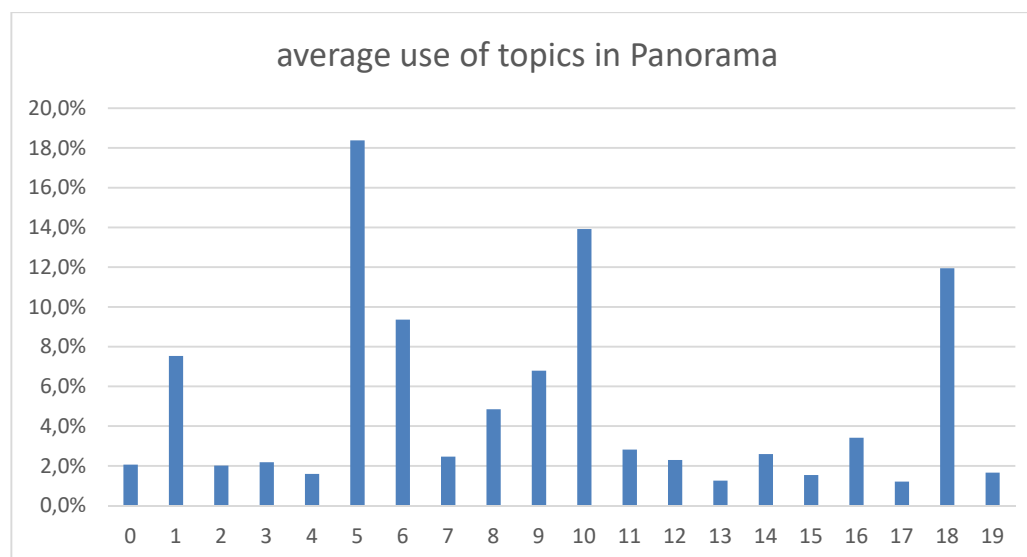
Topic 17 - URBAN SERVICE: This topic focuses on urban services related to health, education, employment.

Topic 18 - NOISE: This topic collect noisy words (broken, not readable), in order to improve the other topics.

Topic 19 - GENDER EQUALITY: This topic deals with gender equality, especially in urban and city contexts. We find words such as inclusion, exclusion, women, and men.

We can now analyze which are the topics that are used most. Indeed, topics are composed by the same number of words, but these words can be used more or less. A consequence is thus that some topics are more prevalent in our sample. The topic that is mostly used in our sample of Panorama is

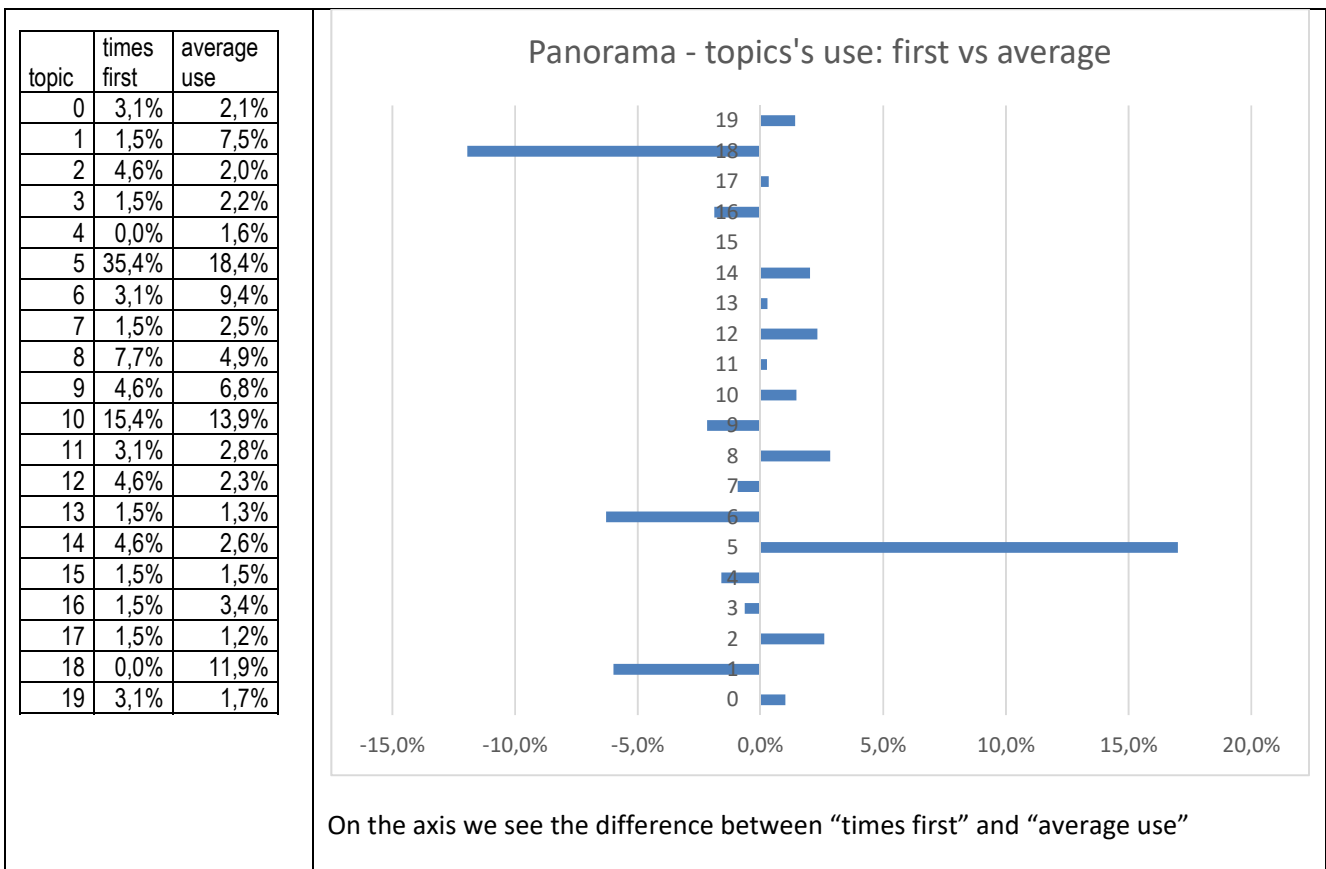
topic 5, that deals with new member states, and then we have topic number 10, which is about the description of the development of specific areas.



Based on the following table and figure, which compare the average usage of a topic in our corpus of articles, and the number of times in which that topic is the most important for an article, we can understand whether a topic characterizes a debate, or is mainly used as a secondary topic that integrates discourses dominated by other topics. In the table on the left of the graph, for each topic, we report the percent usage of a topic ("average use") and the percent usage of a topic as a characterizing topic in the articles in which it appears ("times first"). In the graph, the value on the horizontal axis reports the difference between "times first" and "average use". Therefore, positive values on the axis highlight topics that more often characterize the articles in which they recur. Indeed, following Ferri *et al.* (2017), we can say that if a topic is widely used on average, but rarely is the most prevalent for articles, that topic is not a characterizing one. On the contrary, if a topic is on average used seldom, but when it is used is the most important for the articles in which it is used, then it really characterizes the sources where it is used.

The topic that most often characterizes the issues of Panorama it is used into is topic 5, again on new member states. It is interesting to note that there are two topics that are widely used in issues of Panorama, despite rarely being the most important ones. One topic is topic 1, that is about research and development, the other is topic 6, that is about the management of programmes (we do not consider topic 18, as it collects noise in order to improve other topics).

PERCEIVE DEL. 5.3: 'REPORT DISCUSSING THE EMERGENT TOPICS IN IDENTITY RELEVANT DISCOURSE AT DIFFERENT LEVELS'



4.2 Local implementation: financed projects' abstracts

We then analyzed financed projects' abstracts. The aim is twofold: on one hand, we can understand what kinds of projects are funded; on the other hand we can analyze the ways in which projects are communicated to the public. In particular we retrieved the descriptions of 'flagship' projects from the INFOREGIO portal. For the 2007-2013 programming period this set comprises 1250 projects and 752 major projects, while the 2000-2007 dataset comprises 715 projects and no major projects.

A list of the 20 topics elicited from this corpus follows: each column represents a topic, which is described firstly by 20 most important words. Our interpretation of the meaning of the topics follows the table. In order to elicit the meaning of each topic, we relied on i) this table, ii) a breakdown of the topics comprising each abstract, and iii) the exact coding of each word of each abstract to a specific topic.

We developed a stopwords list, containing words that are not meaningful for eliciting the latent meaning space. We then analyzed these articles through Mallet. Overall, our corpus consists of 390.569 words (excluding words in the stopwords list), the longest abstract is composed of 928 words.

topic	0	1	2	3	4	5	6	7	8	9
20 most important words	research	will	project	total	project	project	million	training	business	port
	centre	road	areas	investment	students	regional	years	people	companies	sea
	technology	transport	natural	project	education	european	year	women	businesses	island
	new	project	park	eur	school	development	new	young	new	maritime
	will	line	nature	nbsp	schools	region	european	skills	project	new
	development	traffic	landscape	funding	language	total	area	project	innovation	project
	university	new	tourism	fund	learning	investment	time	employment	development	islands
	technologies	construction	local	period	region	europe	erdf	programme	support	baltic
	science	network	italy	european	educational	partners	set	work	smes	transport
	facilities	railway	region	regional	university	regions	major	courses	products	marine
	laboratory	section	development	operational	teachers	eur	company	design	market	ports
	scientific	infrastructure	conservation	development	children	programme	number	support	jobs	traffic
	equipment	rail	species	programme	information	innovation	during	job	industry	terminal
	industrial	work	area	programming	activities	central	union	entrepreneurs	enterprises	airport
	materials	motorway	national	eu's	virtual	fund	created	workers	region	lng
	researchers	city	diversity	contributing	teaching	cooperation	site	education	company	fishing
	engineering	phase	protected	eur 	cultural	baltic	end	labour	growth	facilities
	companies	route	sites	new	czech	countries	region	centre	services	north
	institute	safety	number	jobs	communication	network	large	opportunities	sector	infrastructure
	systems	roads	lake	region	german	developed	jobs	local	production	coast

PERCEIVE DEL. 5.3: 'REPORT DISCUSSING THE EMERGENT TOPICS IN IDENTITY RELEVANT DISCOURSE AT DIFFERENT LEVELS'

topic	10	11	12	13	14	15	16	17	18	19
20 most important words	health	energy	cross-border	projects	local	network	project	centre	water	change
	care	project	border	will	urban	project	regional	visitors	will	management
	project	power	cooperation	role	social	services	development	building	waste	bridge
	services	renewable	project	challenges	city	information	management	cultural	project	climate
	medical	gas	information	growth	will	technology	planning	new	treatment	des
	patients	efficiency	partners	economic	development	development	authorities	tourist	environmental	project
	elderly	buildings	joint	economy	area	finland	areas	heritage	plant	flood
	people	heating	germany	regions	programme	bioenergy	european	area	pollution	river
	hospital	heat	interreg	generate	community	regional	countries	site	river	area
	healthcare	used	german	set	project	training	data	local	environment	danube
	eur	production	sides	strategy	people	new	based	town	quality	risk
	emergency	emissions	creation	sustainable	public	centre	approach	tourism	new	eur
	citizens	electricity	network	energy	centre	region	sustainable	old	wastewater	land
	data	fuel	management	including	areas	internet	different	museum	supply	protection
	operational	solar	activities	develop	cities	digital	new	tourists	management	work
	total	public	areas	ageing	activities	access	achieve	buildings	work	adaptation
	quality	sustainable	region	goals	projects	service	results	park	drinking	programme
	treatment	biogas	area	project	residents	technologies	established	facilities	process	water
	population	local	flood	helping	services	centres	regions	industrial	area	used
	living	green	regional	population	housing	finnish	able	events	sea	flooding

Topic 0 - NEW RESEARCH CENTERS: Description of new facilities aimed at being centers of excellence in several fields of research

Topic 1 - IMPROVING INFRASTRUCTURES : Projects to improve roads and railways to improve citizens' safety, time spent travelling, and reduce traffic.

Topic 2 - PARKS: Parks and networks of parks as a way to protect natural and cultural landscape, but also as a mean for economic development.

Topic 3 - NEW JOBS: Creation of new jobs through investments in infrastructures, such as hospitals, or waterways.

Topic 4 - EDUCATION: Projects referred to school and education

Topic 5 - IMPROVING PROJECTS: This topic describe projects aimed at improving processes, in example by clustering skills of different actors, already involved in a specific value chain.

Topic 6 - EFFECT OF EUROPEAN FUNDS ON EUROPEAN REGIONS: This topic describes the effects of money from European funds - especially erdf - on specific regional issues, such as tourism or railroads. Several words related to time span are used to describe the progressive effect of investments.

Topic 7 - TRAINING: Training programmes targeted at specific socio-cultural sectors, such as women or young.

Topic 8 - BUSINESS SUPPORT FOR SMEs: Projects to assist small and medium-sized companies to exploit opportunities in new markets, to network with relevant players, and to fill gaps in the existing range of services offered.

Topic 9 - THE SEA: Projects related to the sea: ports, fishing, marine transportations.

Topic 10 – HEALTH CARE: Health care oriented projects: medicals services for elderly people, and in general quality of treatment.

Topic 11 – SUSTAINABLE ENERGY: Projects on sustainable use of energy: emphasis on renewable energy, efficient systems of heating, low emissions, green houses and sustainable use of resources.

Topic 12 – CROSS-BORDER COOPERATION: Projects on cross-border cooperation on issues that affect more than one region, ore more than one area.

Topic 13 – SUSTAINABLE ECONOMIC GROWTH: Projects that tackles societal challenges, such as the need for a sustainable economic growth. Other challenges cited include politics towards an ageing population.

Topic 14 – URBAN DEVELOPMENT: Projects for urban and local development: housing services, public services, services for citizens.

Topic 15 – NETWORKS FOR TECHNOLOGY: Projects aimed at international networking and close co-operation between private companies and public authorities to tackle vast technology driven projects. A cited project, in example, deals with development in bioenergy.

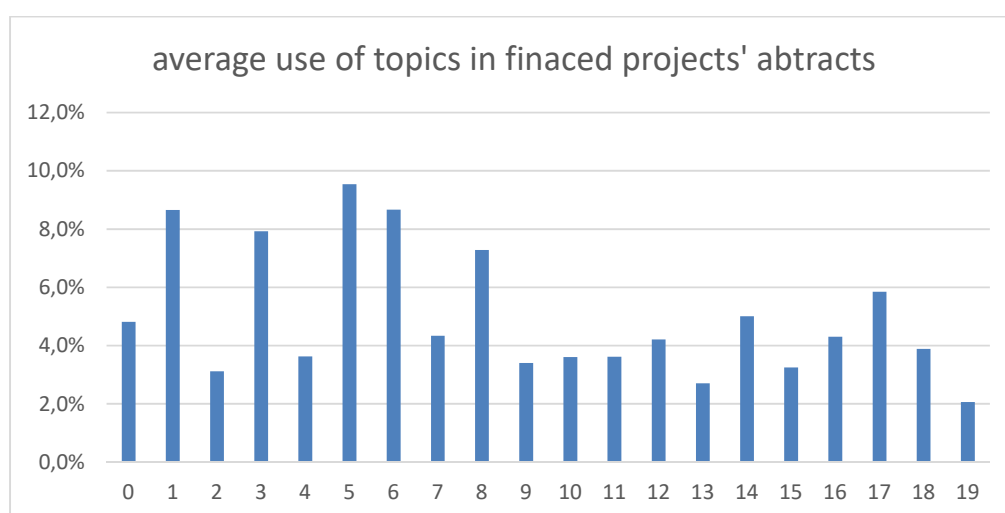
Topic 16 – REGIONAL PLANNING POLICIES: Projects aimed at improving regional planning strategy by analyzing regional planning policies and methods. Project aiming at influencing decisions on the use of European funding in the applicant countries.

Topic 17 – CULTURAL HERITAGE: Projects aimed at improving cultural sites, and preservation and exploitation of heritage.

Topic 18 – WATER: Projects aimed at treating waters (rivers, sea, environment), to prevent or resolve pollution.

Topic 19 – FLOODING AND CLIMATE CHANGE: Projects aimed at counteracting the effects of climate change by taking early actions on the effects of the change. In example actions taken for water management and for flood damage prevention.

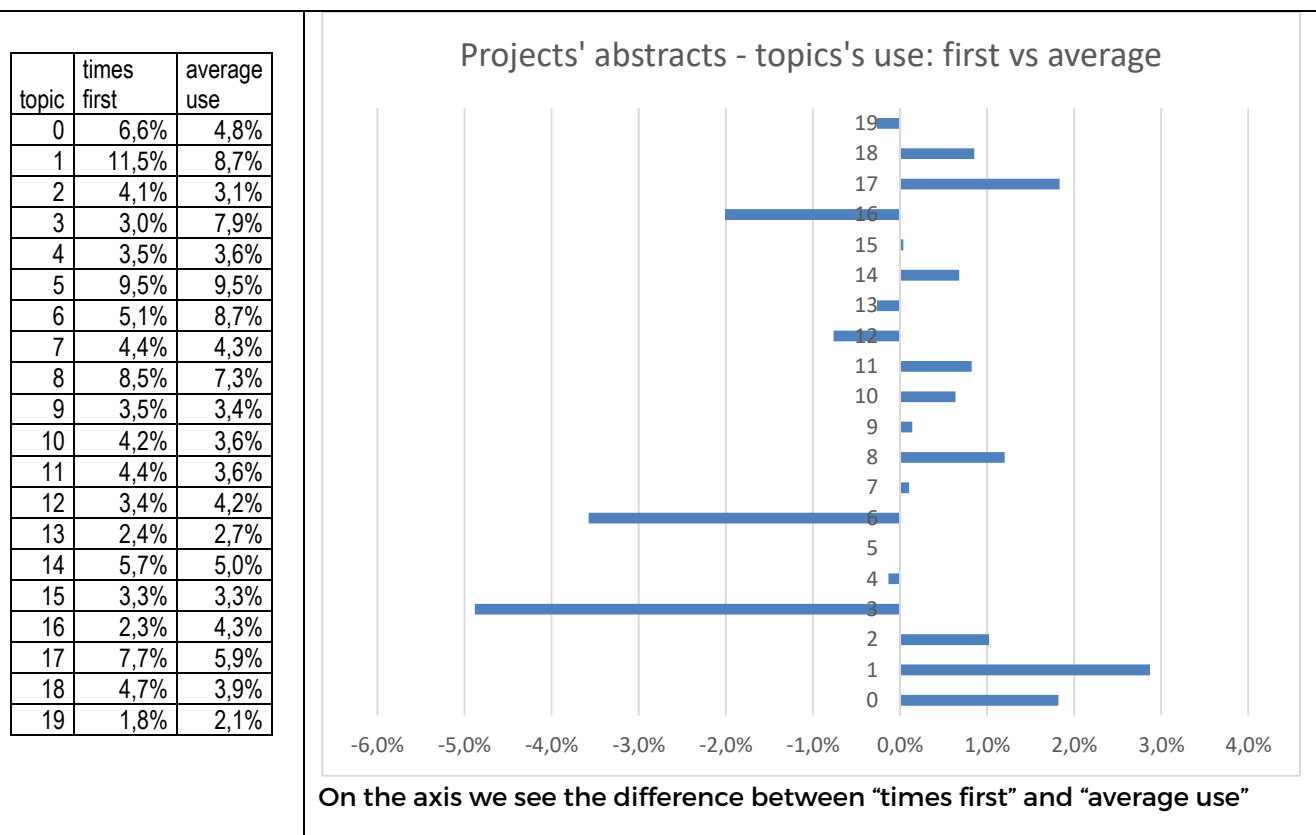
We can now analyze which are the topics that are used most. Indeed, topics are composed by the same number of words, but these words can be used more or less. A consequence is thus that some topics are more prevalent in our sample. By analyzing projects' abstracts, we can see that more prevalent topics are topic number 5, on improving projects, topic 6, on the effects of European funds on European regions, and topic 1, on improving infrastructures. Then we have topic 3, on new jobs, and topic 8, on business support for SMEs. Indeed, improving projects, infrastructures, business and creating jobs are the most desired effects of projects.



PERCEIVE DEL. 5.3: 'REPORT DISCUSSING THE EMERGENT TOPICS IN IDENTITY RELEVANT DISCOURSE AT DIFFERENT LEVELS'

Based on the following table and figure, which compare the average usage of a topic in our corpus of articles, and the number of times in which that topic is the most important for an article, we can understand whether a topic characterizes a debate, or is mainly used as a secondary topic that integrates discourses dominated by other topics. In the table on the left of the graph, for each topic, we report the percent usage of a topic ("average use") and the percent usage of a topic as a characterizing topic in the articles in which it appears ("times first"). In the graph, the value on the horizontal axis reports the difference between "times first" and "average use". Therefore, positive values on the axis highlight topics that more often characterize the articles in which they recur. Indeed, following Ferri *et al.* (2017), we can say that if a topic is widely used on average, but rarely is the most prevalent for articles, that topic is not a characterizing one. On the contrary, if a topic is on average used seldom, but when it is used is the most important for the articles in which it is used, then it really characterizes the sources where it is used.

The three topics that are more often characterizing the abstracts they are used into are Topic 1, which deals with improving infrastructures, topic 0, which refers to research centers, and topic 17, which is about cultural heritage. On the contrary, among the topics that support articles characterized by other topics, the most important is topic 3, on the creation of new jobs. This is an effect of the fact that most of the projects have also the aim of creating jobs. Then we have topic 6, that analyzes the effects of European funds on European Regions, and topic 16, on regional planning policies. Those two topics reflect themes that are treated in several projects.



4.3 Local press: newspapers

For each country we selected six newspapers: two national quality newspapers, a business newspaper, two regional newspapers, one tabloid. Regarding Italy and Poland, where we have two regional case studies, one regional newspaper was selected for each region; in the other cases we have selected two newspapers in the region that constitutes our sample. The only exception is Austria as, due to the small dimension of Burgenland, it was possible to select one regional newspaper only.

4.3.1 Italy

With regard to the Italian case, case we selected six newspapers, and searched through their archives with the following keywords: "(unione europea or ue) and (fond* eu or fond* europe*)", "(unione europea or ue) and fond* struttural*", "(unione europea or ue) and investment* and regional*", "(unione europea or ue) and politic* regional*", "fond* (europe* or ue) and emilia* romagna", "fondi europei", "fondi europei and regional*", "fondi strutturali", "fondi ue", "politiche regionali"². The list of the newspapers follows, together with the number of articles that we analyzed for each source, after removing empty ones:

1. **La Repubblica**, as national quality newspapers: 2.795 articles analyzed
2. **Corriere della Sera**, as national quality newspaper: 1.202 articles analyzed
3. **Il Sole 24 Ore**, as business newspaper: 1.990 articles analyzed
4. **Il Resto del Carlino**, as regional newspaper: 1.132 articles analyzed
5. **Il Giornale di Calabria**, as regional newspaper: 1.739 articles analyzed
6. **Leggo**, as tabloid: 533 articles analyzed.

We then developed a stopwords list, containing Polish words, which are not useful for eliciting the latent meaning space. Finally, we analyzed these articles through Mallet. Overall, our corpus of Polish newspapers consists of 2.502.335 words (excluding words in the stopwords list), the longest article is composed of 5.367 words. The following table presents a list of the 20 most important words for each topic that we used in order to make sense of each topic. Indeed, in this inductive phase of the analysis, we relied on the list of words per topic, and on the three most representative articles papers for each topic. Our interpretation of topics follows the table.

² Please see deliverable 5.2 for more details

PERCEIVE DEL. 5.3: 'REPORT DISCUSSING THE EMERGENT TOPICS IN IDENTITY RELEVANT DISCOURSE AT DIFFERENT LEVELS'

topic	0	1	2	3	4	5	6	7	8	9
20 most important words	lavoro	paesi	regione	presidente	regione	italia	paesi	sviluppo	città	euro
	giovani	sicurezza	presidente	partito	regionale	società	europea	ricerca	milioni	corte
	formazione	paese	regionale	governo	euro	mercato	commissione	imprese	progetto	fondi
	lavoratori	europea	milioni	napoli	milioni	milano	europeo	progetti	opere	milioni
	scuola	migranti	territorio	campania	sicilia	gruppo	bruxelles	europea	piano	società
	anni	uniti	fondi	sindaco	fondi	milioni	dell'unione	programma	infrastrutture	persone
	sociali	guerra	imprese	elettorale	assessore	aziende	germania	progetto	lavori	procura
	sociale	internazionale	provincia	consiglio	giunta	mercati	membri	sistema	comune	guardia
	studenti	mondo	euro	regionale	bilancio	usa	francia	attività	trasporti	finanza
	scuole	europa	romagna	renzi	puglia	cina	l'europa	innovazione	euro	polizia
	euro	difesa	turismo	bassolino	presidente	miliardi	presidente	attraverso	porto	pubblici
	professionale	polonia	pesca	voto	europei	mondo	politica	servizi	trasporto	finanziamenti
	tempo	usa	settore	luca	governatore	settore	l'italia	fondi	realizzazione	controlli
	corsi	russia	aziende	segretario	anno	nuova	bilancio	settore	centro	conti
	professionisti	contro	piemonte	ministro	lombardo	breve	spagna	strumenti	fondi	anni
	fondi	presidente	toscana	contro	spesa	roma	strutturali	investimenti	linea	indagini
	servizi	mondiale	europei	berlusconi	cento	nuovi	europa	livello	già	europei
	politiche	europei	emilia	elezioni	palermo	affari	fondi	locali	anni	frodi
	studio	rifugiati	marche	italia	sanità	contro	europei	politiche	progetti	europea
	europei	mediterraneo	bologna	politica	enti	europa	vertice	iniziative	grandi	truffa

topic	10	11	12	13	14	15	16	17	18	19
20 most important words	anni	legge	governo	investimenti	rifiuti	calabria	fondi	cultura	imprese	politica
	c'è	decreto	ministro	miliardi	euro	regionale	milioni	progetto	cento	può
	così	comma	già	banche	milioni	regione	euro	città	crescita	governo
	giorni	euro	patto	europeo	banda	presidente	risorse	culturali	sud	tempo
	soldi	attività	renzi	europea	energia	catanzaro	miliardi	fondazione	investimenti	così
	giorno	ministero	stabilità	banca	impianti	commissione	regioni	comune	pil	problema
	persone	lavoro	roma	crescita	rete	reggio	spesa	san	mezzogiorno	grande
	può	dicembre	miliardi	piano	anni	programmazione	progetti	centro	anni	futuro
	casa	regolamento	consiglio	euro	larga	giunta	sviluppo	culturale	paese	anni
	danni	nazionale	piano	debito	già	l'assessore	programmazione	teatro	dati	ciò
	civile	entro	legge	juncker	piano	calabresi	strutturali	beni	media	punto
	poco	all'articolo	c'è	paesi	raccolta	territorio	europei	sindaco	crisi	sistema
	storia	materia	l'italia	bei	comuni	stampa	programmi	patrimonio	spesa	problemi
	ricostruzione	base	commissione	crisi	ambientale	sviluppo	coesione	museo	lavoro	politiche
	tempo	caso	presidente	l'italia	aree	europea	interventi	direttore	miliardi	paese
	terremoto	articolo	bruxelles	grezia	operatori	nota	bruxelles	turismo	confindustria	dobbiamo
	lavoro	legislativo	premier	commissione	internet	calabrese	programma	grande	italia	però
	terra	periodo	fondi	bce	rinnovabili	scopelliti	sud	mondo	nazionale	bisogno
	però	nonché	riforma	prestiti	italia	nazionale	europea	roma	rapporto	dare
	grande	commissione	riforme	capitale	differenziata	consiglio	commissione	fondi	ultimi	crisi

Topic 0 - STRUCTURAL FUNDS, TRAINING AND EMPLOYMENT: This topic revolves upon the training of young workers. Indeed, "labour", "young people" and "employment" are the three words that characterize the topic. Among the following words, the concept of professional training recurs. The topic probably addresses structural fund allocation to beneficiaries that run training programmes aimed at creating professional competencies for young people. The idea emerging is that this activity could probably help young people in becoming employed.

Topic 1 - DIVISIVE THEMES IN THE EUROPEAN POLITICAL DEBATE: Interestingly, in the analysis of the discourse, a topic emerges that apparently polarizes the typically divisive themes in the discourse in and about Europe. Migrants, borders, the relationship with Turkey, China and USA are examples of recurring theme in the topic.

Topic 2 - EUROPE IN THE REGIONAL DISCOURSE ON FISHING AND AGRICULTURE: This topic highlights the debate on the effect of Europe on regional agriculture and fishing.

Topic 3 - EUROPE IN THE NATIONAL POLITICAL DEBATE: This topic describes the national political debate. It does not explicitly concern Europe. It rather seems to depict a political terror that emerges in background of the political discourse.

Topic 4 - STRUCTURAL FUNDS IN THE POLITICAL DEBATE OF SOUTHERN REGIONS: This topic captures the role of Europe in the regional political debate. The debate regards especially southern regions. In particular, two southern regions are mentioned - Puglia and Sicily - that are convergence regions.

Topic 5 - BRIEF NEWS FROM STOCK MARKET AND ENTERPRISES: This topic collects articles that deal with stock market and Italian enterprises. Articles are presented as brief highlights or updates.

Topic 6 - STRUCTURAL FUNDS AND INTERNATIONAL POLITICS: The topic captures an international political debate. Names of European countries are mentioned (Germany, France, Spain, Portugal), along with the names of key European institutions and symbols (Commission, Union, Council, Bruxelles). Romano Prodi is mentioned who has been a president of the Commission. "Structural funds" are mentioned within this general context.

Topic 7 - STRUCTURAL FUNDS AND THE DEVELOPMENT OF DOMESTIC PRODUCTIVE SYSTEMS: The topic clearly connects structural funds to the innovation and entrepreneurial activity. The words "opportunity", "innovation" and "investment" are associated to words such as "structural funds" and "programming".

Topic 8 - STRUCTURAL FUNDS AND THE DEVELOPMENT OF CITIES: The topic associates structural funds to a number of infrastructural investments at the level of the city. Words such as "infrastructure", "railways", "subway", "transportation" and "shipyards" are associated to "programme" and "realisation".

Topic 9 - STRUCTURAL FUNDS AND CRIME: The topic unveils instances of mismanagement of structural funds (or warns about the possibility of mismanagement). Crimes such as "fraud" and "bribe" are mentioned along with the concept of "justice" or the reference to "financial police" and "investigation".

Topic 10 - STRUCTURAL FUNDS AND SOLIDARITY: The topic associates the concept of structural fund to concepts such as "solidarity", "protection", "damages" and "reconstruction". The topic is strongly influenced by the debate that followed the allocation of structural funds to support the Italian areas interested by earthquakes in recent years.

Topic 11 - DECREES AND LAWS: This topic is used to publish important decrees and law approved by the Italian Government or the Parliament. In example, the most important article coded to this topic is the proposed law regarding "Disposition on how to comply with the duties arising because of the belonging of Italy to the European Union".

Topic 12 - EUROPEAN CONSTRAINTS FOR NATIONAL ECONOMIC POLICY: The topics speak to the debate concerning the constraints that belonging to the European Union brings about. "Stability", interpreted as economic and financial stability, "reforms", "government", "pact" are concepts that stand along with "Commission" or "Bruxelles".

Topic 13 - EUROPEAN INSTITUTIONS AND THE EUROPEAN ECONOMIC GROWTH: The topic captures the controversial debate concerning the role of Europe in the management of financial systems. The topic specifically refers to "banks", "debts", "credits" and "liquidity". It mentions the European Central Bank and the direction of this latter, Mario Draghi. Interestingly, the topic mentions "Germany" and "Greece" to further suggest the idea that the topic addresses the theme of financial management with reference to the Greek crisis.

Topic 14 - STRUCTURAL FUNDS AND SUSTAINABILITY: The topic puts in connection structural funds with investment in the area of urban sustainability. Reference to concepts such as "renewable sources of energy", "environment", "internet", "water", "networks" and "recycling" are associated to "funds" and "millions".

Topic 15 - EUROPE IN THE POLITICAL DEBATE OF CALABRIA REGION: The topic seems to elicit a political debate internal to Calabria region. European regional policies are embedded in harsh political debate.

Topic 16 - THE MANAGEMENT OF STRUCTURAL FUNDS: The topic attracts technical terms and concepts that pertain the management of structural funds.

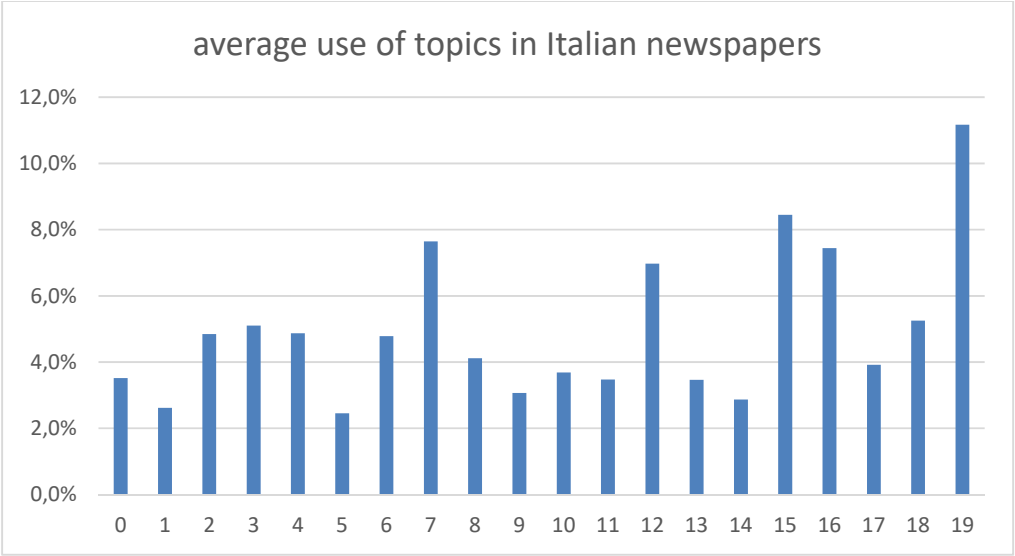
Topic 17 - STRUCTURAL FUNDS FOR CREATIVE ENTREPRENEURSHIP: This topic points at the connection between structural funds and regional cultural entrepreneurship. "Museums", "theaters", "tourism" are mentioned along with historical sites such as Pompei.

Topic 18 - STRUCTURAL FUNDS AND THE DEVELOPMENT OF 'MEZZOGIORNO': The topic focuses on the connection between structural funds and the development of southern regions ("Mezzogiorno"). Words such as "enterprise", "growth", "employment" and "crisis" are associated to "investment".

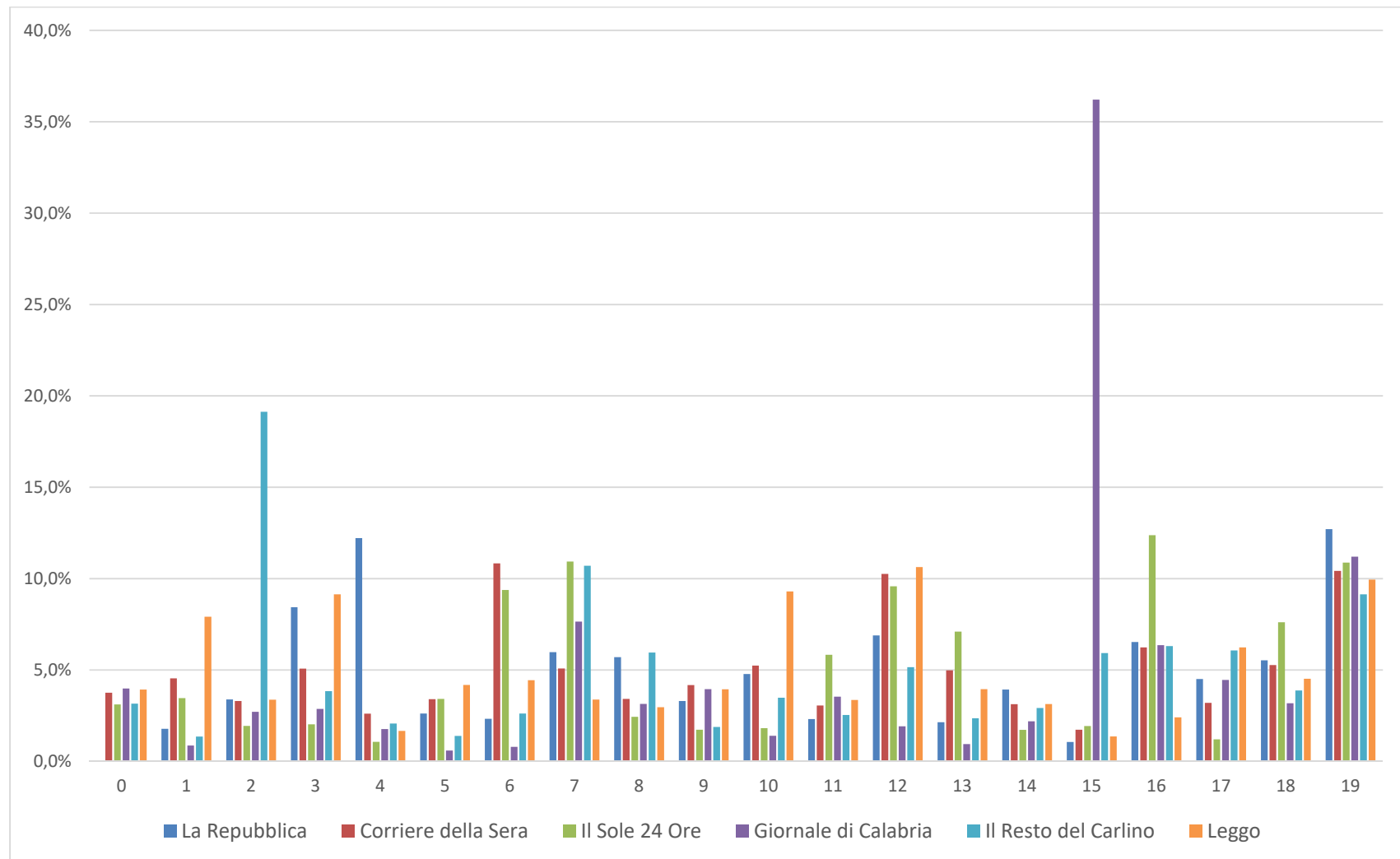
Topic 19 - POLITICAL MISMANAGING OF EU FUNDS: This topic collects complaints regarding the ineffectiveness of politicians in managing the Italian economic system and, in particular, the possibility of absorbing EU funds.

Overall, in our sample, the topic that is most used is number 19, that portrays complaints regarding the ineffectiveness of Italian politicians, in particular in managing European funds. The second topic is topic 15, which is about political struggles related to EU within the Calabria Region. Then we have three topics that deal with structural funds and the belonging to EU: topic 16 is on the management of structural funds. Topic 17 is on the relationship between structural funds and the development of domestic productive system. Finally, topic 12 describes a debate that revolves around constraints for Italian economic policy that depends on the belonging to European Union.

PERCEIVE DEL. 5.3: 'REPORT DISCUSSING THE EMERGENT TOPICS IN IDENTITY RELEVANT DISCOURSE AT DIFFERENT LEVELS'

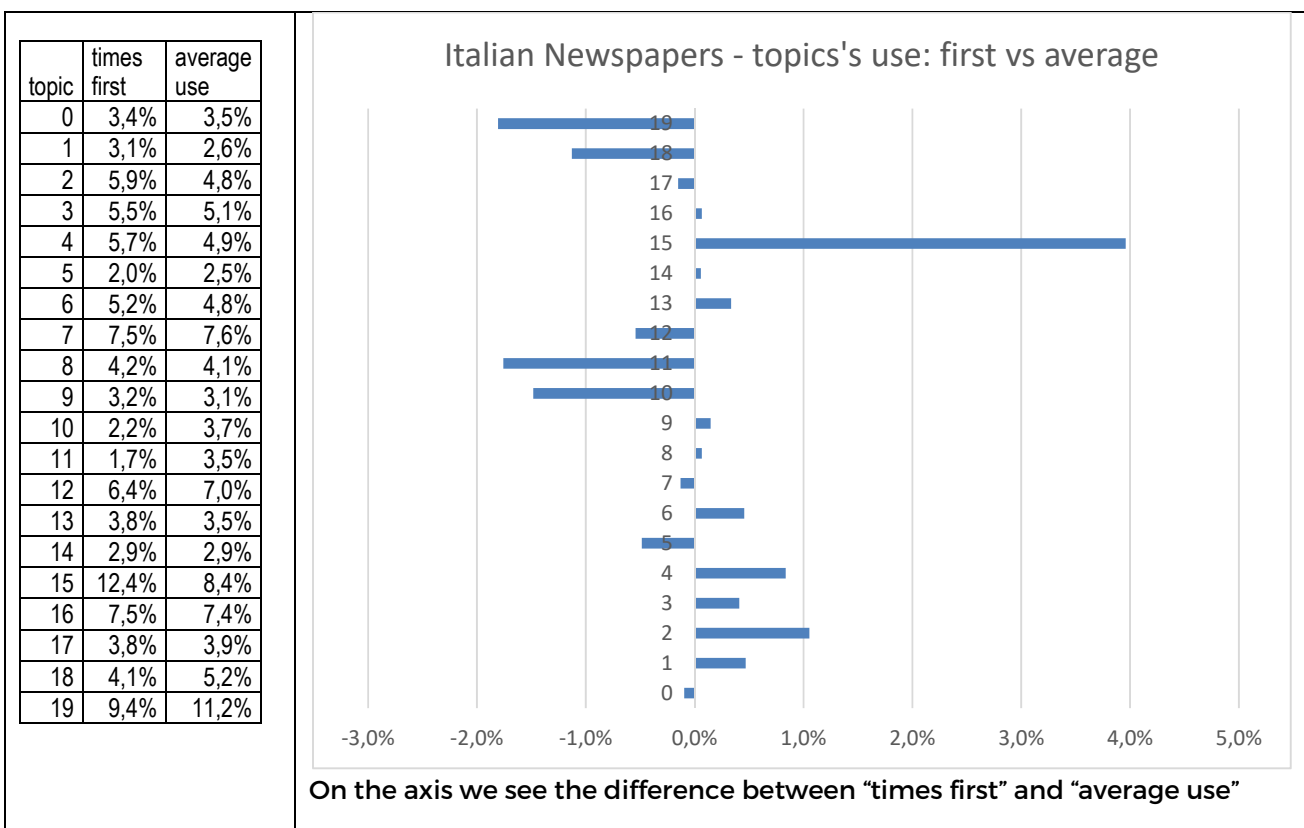


Average use of topics in Italian Newspapers: break-up by newspaper



PERCEIVE DEL. 5.3: 'REPORT DISCUSSING THE EMERGENT TOPICS IN IDENTITY RELEVANT DISCOURSE AT DIFFERENT LEVELS'

We can now analyze the way each newspaper makes use of different topics. Or, to see the same thing from a different perspective, how much is each topic used by each newspaper. As expected from the description of the topics, topic 15 is mostly used by Il Giornale di Calabria, as it constitutes on average about 36% of the articles of this newspaper. It is indeed a topic that deals with political struggles in Calabria Region, connected to European Union. The other regional newspaper, Il Resto del Carlino, mainly uses topic 2, that is about the effects that belonging to EU creates on regional agriculture and fishing. Other topics that are mostly used by Il Resto del Carlino are topic 7, that is used by Il Sole 24 Ore as well, and topic 8, that is used by Repubblica as well. The former deals with the development of domestic productive system, thank to European funds. The latter with structural funds and the development of cities. The business newspaper Il Sole 24 Ore is the newspaper that makes more use of three topics: 13, about European Institutions and the European economic growth; 16, about the management of structural funds, and 18, about the specificities of the southern part of Italy, called 'Mezzogiorno', especially related to development fostered by European funds. Finally, Il Sole 24 Ore uses, together with Il Corriere della Sera, topic 6, which is about Structural Funds and International Politics. Topic 4, that is about the role played by European Funds in the southern parts of Italy, is mainly used by Repubblica. This newspaper and Leggo are then the ones that use most Topic 3 that concerns Europe in the National Political debate. Finally, Leggo mostly uses topic 1, that is about divisive themes in the European Political debate, and topic 10, that concerns structural funds and solidarity.



Based on the previous table and figure, which compare the average usage of a topic in our corpus of articles, and the number of times in which that topic is the most important for an article, we can understand whether a topic characterizes a debate, or is mainly used as a secondary topic that integrate discourses dominated by other topics. In the table on the left of the graph, for each topic,

we report the percent usage of a topic ("average use") and the percent usage of a topic as a characterizing topic in the articles in which it appears ("times first"). In the graph, the value on the horizontal axis reports the difference between "times first" and "average use". Therefore, positive values on the axis highlight topic that more often characterize the articles in which they recur. Indeed, following Ferri *et al.* (2017), we can say that if a topic is widely used on average, but rarely is the most prevalent for articles, that topic is not a characterizing one. On the contrary, if a topic is on average used seldom, but when it is used is the most important for the articles in which it is used, than it really characterizes the sources where it is used. The three topics that are more often characterizing the articles they are used into are Topic 15, that deals with politic struggles in Regione Calabria, topic 2, that refers to Europe in the Regional discourse on fishing and agriculture, and topic 4, that is about the relationship between structural funds and southern regions. On the contrary, among the topics that support articles characterized by other topics, we find Topic 8, Topic 5, and Topic 0 that deal respectively with cooperation programmes, internal politics, and Cohesion Policy beneficiaries.

4.3.2 Austria

In the Austrian case we selected five newspapers, and searched through their archives with the following keywords: "(EU or europ*) fond*", "(eu or europäische union) and (regionalpolitik* or kohäsionspolitik*)", "(eu or europäische union) and investition* and region*", "eu and investition and regio*", "EU and Regionalpolitik*", "EU and strukturfond*", "eu Europäische Union Fonds", "regionalpolitik", "strukturfond"³. The list of the newspapers follows, together with the number of articles that we analyzed for each source, after removing empty ones:

1. **Der Standard**, as national quality newspapers: 1.084 articles analyzed
2. **Die Presse**, as national quality newspaper: 1.251 articles analyzed
3. **Wirtschaftsblatt**, as business newspaper: 1.284 articles analyzed
4. **Bvz**, as regional newspaper: 64 articles analyzed
5. **Kronen Zeitung**, as tabloid: 503 articles analyzed.

We then developed a stopword list, containing germanwords, that are not useful for eliciting the latent meaning space. Finally, we analyzed these articles through Mallet. Overall, our corpus of Austrian newspapers consists of 947.614 words (excluding words in the stopword list), the longest article is composed of 3.302 words. The following table presents a list of the 20 most important words for each topic, that we used, together with the colleague from WU, in order to make sense of each topic. Indeed, in this inductive phase of the analysis, we relied on the list of words per topic, and on the three most representative articles papers for each topic.

Topic 0 - COHESION POLICY BENEFICIARIES OR EU-SKEPTIC COUNTRIES Cohesion Policy beneficiaries or EU-sceptic countries: Most important words centre around "poland" (also "polish", "warsaw") and "italy" ("rome", "italian"), and "government", "years", "political", "end", "politicians", It is possible that this topic deals with refugee crisis.

Topic 1 - EU MEMBERSHIP/BORDERS: This topic includes notions of recent EU Members ("Romania", "Bulgaria", "Croatia"), but also non-EU members ("Russia", "Ukraine", "Serbia", "Kosovo") in the context of EU membership. More specifically, notions of "investors" and "accession" seem to pinpoint expansion-based topics while "corruption" suggests a more boundary-based discourse.

Topic 2 - CENTRAL AND EASTERN EUROPE (CEE) ECONOMY: This topic specifies countries such as "Austria", "Hungary", "Poland" (and also notions of "Eastern Europe") in the context of economic growth ("percentage", "investments", "economy", "growth", "companies", "GDP"). The three most relevant articles are figure-based reports explaining causes and effects of economic growth and downturn and comparing different countries in the EU. In line with this, all 20 key words denote 'neutral', 'factual' depictions.

Topic 3 - EU NEGOTIATIONS: The most important words of this topic include EU members such as "austria", "germany", "spain", "poland", and "great britain", as well as EU representatives such as "union" and "brussels". The use of key words such as "expansion", "proposal", and "reform", point into the direction of EU negotiations as label. The most relevant article supports this idea by describing Hungary's negotiations with the EU before accession.

³ Please see deliverable 5.2 for more details

topic	0	1	2	3	4	5	6	7	8	9
20 most important words	polen	türkei	prozent	österreich	wien	sei	dass	hahn	europäischen	uhr
	regierung	rumänien	österreich	union	stadt	wien	gibt	brüssel	entwicklung	kärnten
	italien	russland	jahr	brüssel	slowakei	österreich	muss	regionalpolitik	europa	steiermark
	jahren	bulgarien	investitionen	deutschland	ausbau	övp	geht	kommission	europäische	salzburg
	heute	kroatien	jahren	neuen	region	seien	gut	dass	neue	kärntner
	jahre	regierung	region	verhandlungen	bau	österreichischen	wollen	johannes	regionen	tourismus
	polnischen	land	wirtschaft	erweiterung	sagt	spö	österreich	eu-kommissar	zusammenarbeit	graz
	zwei	ukraine	osteuropa	kommission	kilometer	wiener	standard	eu-kommission	union	oberösterreich
	polens	serbien	wachstum	strukturfonds	bahn	müsse	ganz	europäischen	maßnahmen	land
	warschau	investoren	unternehmen	eu-kommission	bratislava	sagte	jahren	parlament	ziel	salzburger
	konnte	dass	ungarn	länder	jahren	österreichs	geben	kommissar	ländern	märz
	politischen	region	heuer	spanien	tschechien	könne	geld	juncker	wirtschaft	steirischen
	ohne	korruption	liegt	landwirtschaft	infrastruktur	pröll	sehen	barroso	regionalen	steirische
	rom	sei	deutlich	europäischen	ungarn	österreichische	sagen	neuen	europas	slowenien
	ende	sagt	dass	polen	österreich	haider	frage	eu-parlament	rahmen	klagenfurt
	vier	kosovo	rund	vorschlag	neuen	regierung	tun	könnte	umsetzung	gäste
	spanien	präsident	bip	eu-staaten	rund	sagt	gerade	ceta	bereich	peter
	italienischen	moskau	polen	staaten	neue	gebe	macht	barnier	gemeinsame	region
	politiker	wegen	laut	großbritannien	wiener	leitt	beispiel	präsident	länder	kultur
	leben	beitritt	zwei	reform	millionen	grünen	jahre	posten	wirtschaftliche	grazer

topic	10	11	12	13	14	15	16	17	18	19
20 most important words	energie	millionen	bank	unternehmen	euro	tirol	griechenland	usa	prozent	burgenland
	investitionen	bauern	banken	forschung	milliarden	tiroler	dass	china	regionen	seite
	strom	markt	prozent	kmu	millionen	gemeinden	euro	europa	ziel	ressort
	gas	prozent	fonds	betriebe	prozent	innsbruck	regierung	staaten	österreich	euro
	erneuerbare	umsatz	unternehmen	österreich	mrd	frauen	wachstum	welt	brüssel	morgen
	projekt	sagt	aktien	investitionen	jahr	wien	investitionen	iran	mrd	neue
	millionen	kunden	investoren	neue	rund	morgen	krise	indien	burgenland	land
	energien	landwirtschaft	europa	wien	geld	leistungen	länder	abkommen	förderungen	millionen
	jahr	rund	usa	bereich	mittel	seite	iwf	länder	rund	gemeinden
	erneuerbaren	jahren	europäischen	mitarbeiter	sei	orf	land	investitionen	gebiete	landeshauptmann
	wasser	produkte	anleger	wirtschaft	insgesamt	neue	deutschland	handel	förderung	niessl
	erneuerbarer	jahr	erste	gibt	mio	vsterreich	eurozone	internationalen	wien	bvz
	österreich	produktion	börse	sagt	dass	kassen	schulden	neue	schilling	region
	region	neue	fondsmanager	arbeitsplätze	laut	schweiz	steuern	afrika	regionalpolitik	regionen
	rund	preise	austria	projekte	projekte	ärzte	frankreich	ländern	projekte	hans
	ausbau	mitarbeiter	markt	niederösterreich	zwei	südtirol	reformen	asien	österreichs	ziel
	kosten	heuer	sei	industrie	schilling	rupprechter	muss	dollar	mio	dass
	unternehmen	betriebe	dollar	neuen	fünf	gestern	staat	europäische	mittel	o.ö
	biomasse	drei	kunden	firnen	pro	jahren	athen	ttip	programme	abend
	anteil	unternehmen	euro	millionen	seien	kosten	neue	globalen	ländlichen	bürgermeister

Topic 4 - INFRASTRUCTURE CONNECTING EASTERN NEIGHBOURS (Slovakia, Czech Republic): This topic is clearly centred on the field of infrastructure and expansion. Within the topic, the focus lies on connecting "vienna" to "slovakia", or "austria" to the "czech republic". Further important words are "kilometres" and "millions", showcasing the accomplishments of Cohesion Policy in terms of its vastness. Infrastructure in this sense describes both public transport and transportation by car.

Topic 5 - INTERNAL POLITICS: This topic centres around Austrian political parties such as "ÖVP", "SPÖ", and "grüne" and more general notions of "government". Similarly to topic 7 (EU politicians) discourse seems to emphasise single politicians such as "Pröll", "Haider", "Leitl" - suggesting a focus on single voices next to whole parties. The most relevant articles are all based on Johannes Hahn (who was the European Commissioner for Regional Policy) and accusations of plagiarism regarding his dissertation.

Topic 6 - NOISE: Includes noise such as "that", "is", "must", "goes", "want", "standard" (Austrian newspaper), "doing", words that are not part of the noise include "austria", "good", "years", "money". The relevant articles are very long in comparison to the others and include interviews with regional actors on taxes, reforms, women's quotas.

Topic 7 - (PROMINENT) EU POLITICIANS : Using "hahn", "johannes" (Johannes Hahn was the European Commissioner for Regional Policy from 2009-2014), "juncker", "barroso", "barnier", this topic clearly caters to prominent EU figures; with a special emphasis on Johannes Hahn as Austrian representative. In this vein, the importance of single voices (see topic 5) is showcased. In line with this approach, the most relevant articles are clearly centred on the persons embodying the EU presenting their career, predecessors, as well as the description of their tasks.

Topic 8 - COOPERATION: Based on variations of "europe/an, of europe", and "regions", this label describes both transregional and transnational cooperation. Recurring themes here are the introduction and description of EU policies by means of their "objectives" and underlying ideas of Cohesion Policy, redistribution, and "togetherness".

Topic 9 - EVENTS IN AUSTRIA_ A glance at the most relevant articles shows that this topic lists events in Austria (potentially financed by Cohesion Policy, for instance "Bad Tatzmannsdorf", "Boundless wandering" between Austria-Hungary, etc.). This listing explains the notion of "clock" as the most relevant word (e.g. "Friday, Nov 24th - 7 o'clock: Event in XYZ").

Topic 10 - RENEWABLE ENERGIES: The words of this centre clearly centre on notions of "energy", "investments", "electricity", "gas", "water", "renewable", "expansion", and "biomass". However, there are also notions of "costs", "millions", and "companies", suggesting that this topic is about Renewable energies including an economic perspective, potentially catering to companies and trying to emphasise the cost savings.

Topic 11 - AUSTRIAN INDUSTRIAL SECTORS AND COMPANIES (changes of production, turnover, clients over the years): While initially, the 20 most important words directed us towards 'agriculture' as a topic, reading through all keywords and the most relevant articles revealed a broader orientation towards Austrian industrial sectors - one of them representing agriculture. Interestingly, one of the articles describes Austrian printing companies struggling to compete with CEE countries that are receiving more funding by the EU (distortions of competition).

Topic 12 - STOCK MARKET, FUND MANAGEMENT IN GENERAL: This might be a language issue with the word "Fonds" - does not just denote "funding" in German, but funds in the sense of "fund management" in the context of stock exchanges. This topic does not belong to Cohesion Policy.

Topic 13 - (THE BENEFITS OF) R&D: This topic describes "research" in the sense of companies focusing on Research and Development. More specifically, the key words refer to the benefits or the impact thereof on "investments", "employees"/"jobs", the "economy" in general. In this sense, more companies are encouraged to engage with R&D.

Topic 14 - MONEY/PAYMENTS This topic refers to issues of money - in various forms. The key words used centre on notions of "euro", "billions", "year", "millions", and even refers to "schilling" - the Austrian currency prior to EU membership. The relevant articles are very much centred on issues of payments (and issues of fraud cases) and bureaucracy impeding the timely disbursement of funding.

Topic 15 - HEALTH INSURANCE RESTRUCTURING IN AUSTRIA: Probably this is a language issue with 'Strukturfonds' - was used in the restructuring of Austrian health insurances 2015/2016. Fits the provinces of "tyrol" and Western Austria because the health insurance providers in the West had issues with negative balances. This topic do not belong to Cohesion Policy.

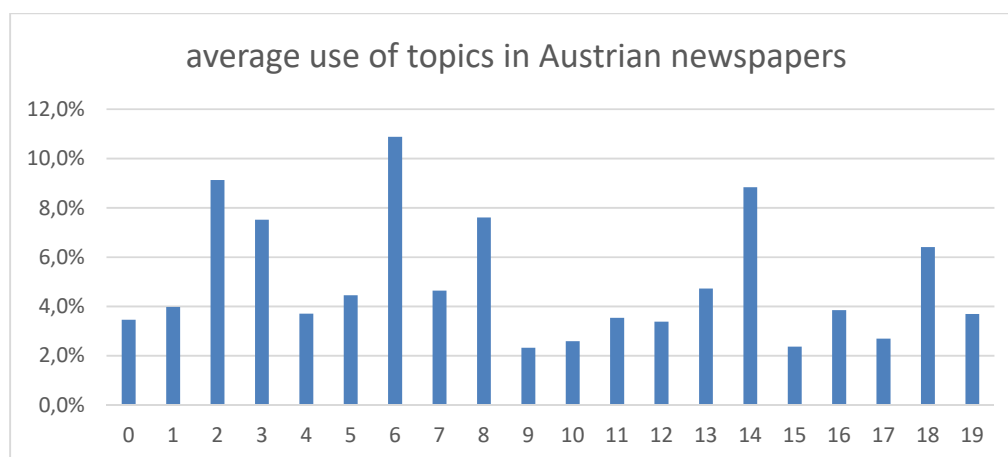
Topic 16 - (ECONOMIC) CRISIS AND NOTIONS OF HARDSHIP: With "Greece" at the beginning of the string of words, this topic refers to notions of "crisis", "debts", and "reforms". Further keywords of "growth", "taxes", and "investments" hint at ideas of or complaints of not sufficiently overcoming these. Numerous notions evoke a sense of long-term-orientation.

Topic 17 - INTERNATIONAL RELATIONS, FREE TRADE AGREEMENTS: At first glance, this topic does not seem to respond to EU Cohesion Policy to a large extent. The 20 most important words are centred on big economic players such as the "USA", "China", or "India" in combination with notions of "agreements", "investments", and "TTIP". This leads us to think that this string of words is centred on trade agreements as well as International Relations of Europe with the rest of the world.

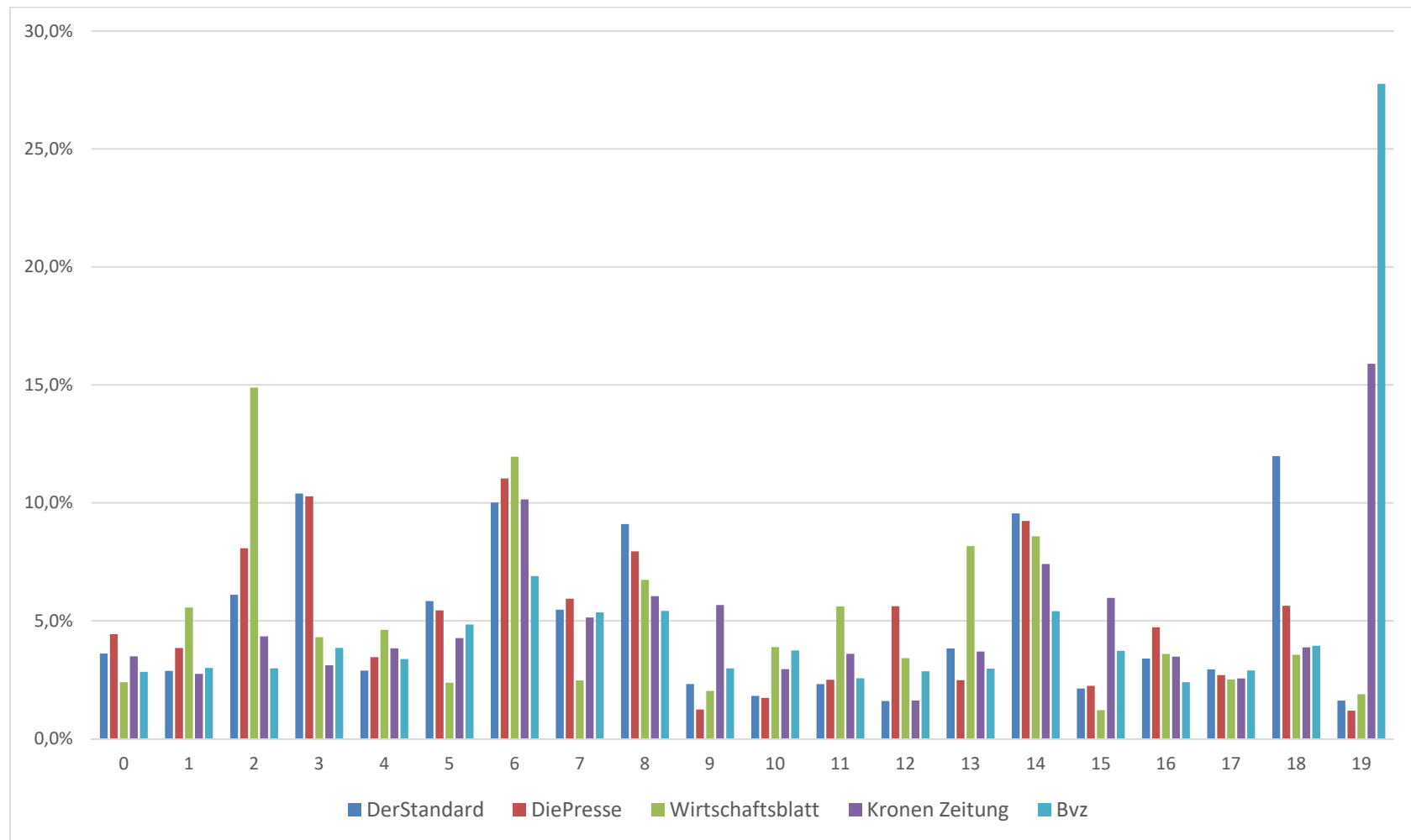
Topic 18 - OPERATIONAL PROGRAMMES, COHESION POLICY IN AUSTRIA: This topic seemingly encompasses Cohesion Policy as implemented in Austria. With an emphasis on "percentage", "regions", "objective" and "funding", the Operational Programmes of Cohesion Policy are introduced by means of the amount of funding and the legal framework of the Operational Programmes.

Topic 19 - (COHESION POLICY IN) BURGENLAND: This topic seems to be centred on the Austrian province of Burgenland: and in fact, the three most relevant articles describe projects implemented and the impact generated on the citizens of Burgenland. Notions of "euro" and "million" hint at an economic component within the coverage. Indeed, one of the relevant articles exemplarily mentions Burgenland trying to "get as much money as possible" in the upcoming programming period. Evident, too, is the emphasis on Hans Niessl, the Provincial governor ("Landeshauptmann") of Burgenland within the 20 keywords.

Beyond topic 6, that aggregates noise in order to improve the quality of the others topics, the topics that are more prevalent in our sample are topic 2, that is about the economy of central and eastern Europe, and topic 14, that is about issues of moneys and payments. Then there are topic 3, about EU negotiations, topic 8, that is about transregional and transnational cooperation, and topic 18, that is about the implementation of Cohesion Policy in Austria.



Average use of topics in Austrian Newspapers: break-up by newspaper



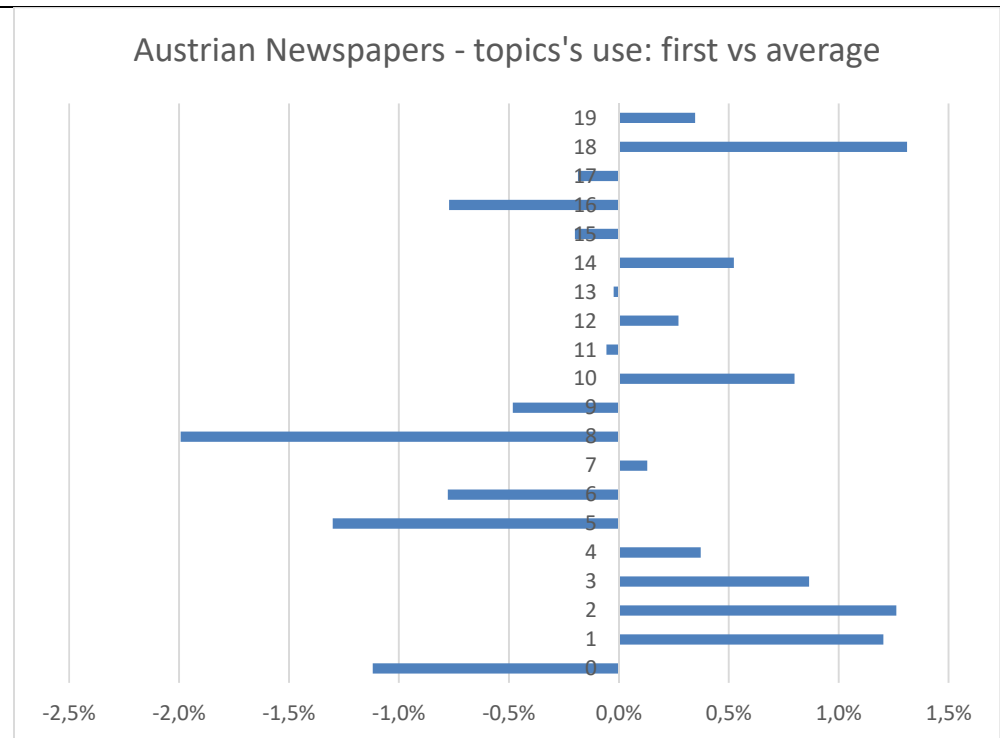
If we focus on the different usage made of topics by different newspapers, the most striking case regards topic 19, that is about Cohesion Policy in Burgenland. This topic constitutes about 16% of the articles in our sample published by Kronen Zeitung, and about 28% of the articles from BVZ. These two sources are together as the ones relying more on topic 15 as well, that is about health insurance restructuring in Austria. Moreover, Kronen Zeitung makes an use above the average of topic 9, that is about events in Austria. Wirtschaftsblatt, that is the business newspaper, is the one that makes more use of topic 11, which concerns Austrian Industrial sectors and companies, and topic 13, dealing with the benefits of R&D. On the contrary, this newspaper is the one that makes less use of topic 5, which is about internal politics, and topic 7, which is about prominent EU politicians. Topic number 2, which is the most important topic for our sample, and deals with the economy of central and Eastern Europe, is mostly used by Wirtschaftsblatt. Both national quality newspapers, then, use this topic, while BVZ is the one that uses topic 2 least. The most important topic for Die Presse is number 12, which addresses stock market, where the most important topic for Die Standard is topic 18, which speaks to Operational Programmes in Austria.

Based on the following table and figure, which compare the average usage of a topic in our corpus of articles, and the number of times in which that topic is the most important for an article, we can understand whether a topic characterizes a debate, or is mainly used as a secondary topic that integrates discourses dominated by other topics. In the table on the left of the graph, for each topic, we report the percent usage of a topic ("average use") and the percent usage of a topic as a characterizing topic in the articles in which it appears ("times first"). In the graph, the value on the horizontal axis reports the difference between "times first" and "average use". Therefore, positive values on the axis highlight topics that more often characterize the articles in which they recur. Indeed, following Ferri *et al.* (2017), we can say that if a topic is widely used on average, but rarely is the most prevalent for articles, that topic is not a characterizing one. On the contrary, if a topic is on average used seldom, but when it is used is the most important for the articles in which it is used, then it really characterizes the sources where it is used.

The three topics that are more often characterizing the articles they are used into are Topic 18, Topic 2, and Topic 1, that respectively deal with Operational programmes in Austria, Central and Eastern Europe, and EU membership. On the contrary, among the topics that support articles characterized by other topics, we find Topic 8, Topic 5, and Topic 0, that deal respectively with cooperation programmes, internal politics, and Cohesion Policy beneficiaries.

PERCEIVE DEL. 5.3: 'REPORT DISCUSSING THE EMERGENT TOPICS IN IDENTITY RELEVANT DISCOURSE AT DIFFERENT LEVELS'

topic	times first	average use
0	2,3%	3,5%
1	5,2%	4,0%
2	10,4%	9,1%
3	8,4%	7,5%
4	4,1%	3,7%
5	3,2%	4,5%
6	10,1%	10,9%
7	4,8%	4,6%
8	5,6%	7,6%
9	1,8%	2,3%
10	3,4%	2,6%
11	3,5%	3,5%
12	3,7%	3,4%
13	4,7%	4,7%
14	9,4%	8,8%
15	2,2%	2,4%
16	3,1%	3,9%
17	2,5%	2,7%
18	7,7%	6,4%
19	4,0%	3,7%



On the axis we see the difference between "times first" and "average use"

4.3.3 Poland

In the Polish case we selected six newspapers, and searched through their archives with the following keywords: "polityka regionalna ue", "polityk spójności", "fundusz ue", "polityk* spójno* or (polityk* regional* and europejsk*)", "fundus* struktural*", "polityka spójności", "Fundusze europejskie regionalnych europejski", "inwesty* struktural*" ⁴. The list of the newspapers follows, together with the number of articles that we analyzed for each source, after removing empty ones:

1. **Gazeta Wyborcza**, as national quality newspapers: 1.910 articles analyzed
2. **Rzeczpospolita**, as national quality newspaper: 2.758 articles analyzed
3. **gazeta Prawna**, as business newspaper: 716 articles analyzed
4. **gazeta Olsztyńska**, as regional newspaper: 923 articles analyzed
5. **Gazeta Wroclawska**, as regional newspaper: 279 articles analyzed
6. **Fakt**, as tabloid: 228 articles analyzed.

We then developed a stopwords list, containing Polish words, that are not useful for eliciting the latent meaning space. Finally, we analyzed these articles through Mallet. Overall, our corpus of Polish newspapers consists of 2.832.629 words (excluding words in the stopwords list), the longest article is composed of 6.981 words. The following table presents a list of the 20 most important words for each topic, that we used, together with the colleague from IAFE-NRI, in order to make sense of each topic. Indeed, in this inductive phase of the analysis, we relied on the list of words per topic, and on the three most representative articles papers for each topic. Our interpretation of topics follows the table. Please note that, thanks to our Polish partner, in the tables there are keywords highlighted in yellow, which are especially important for undersyanding the meaning of a specific topic. That keywords are translated in English in the last rows of each table. This is meant to overcome problems in interpreting Polish declination, which can be hard to understand for polish non speakers.

⁴ Please see deliverable 5.2 for more details

PERCEIVE DEL. 5.3: 'REPORT DISCUSSING THE EMERGENT TOPICS IN IDENTITY RELEVANT DISCOURSE AT DIFFERENT LEVELS'

topic	0	1	2	3	4	5	6	7	8	9
20 most important words	proc	mln	euro	godz	mówi	rolnictwa	konferencja	euro	mln	projektu
	pkb	mld	mld	zdrowia	mamy	unii	uczelni	unii	dróg	dofinansowanie
	mld	proc	funduszy	badania	chodzi	rolników	prof	budżetu	drogi	pomocy
	finansów	spółki	pieniędzy	ciąży	choć	wsł	studia	mld	inwestycji	wniosków
	wzrost	gazu	mln	szpitala	mieć	dopłat	nauki	polska	budowę	ramach
	rząd	energii	pieniądze	olsztynie	temu	produkcji	europejskiej	brukseli	budowy	programu
	wzrostu	tys	rozwoju	kobiet	problem	wiejskich	gospodarki	europejskiej	budowa	dotacje
	euro	akcji	unijnych	dzieci	oczywiście	dopłaty	studentów	polski	infrastruktury	wsparcie
	latach	pap	proc	badanie	czas	rolnych	studiów	komisji	transportu	wniosku
	pracy	euro	środków	nfz	będziemy	rolnicy	forum	spójności	autostrad	pomoc
	gospodarki	spółka	projektów	miejskiego	pieniędzy	mln	konferencji	państw	linii	dotacji
	państwa	prezes	regionalnego	badań	jesteśmy	polski	centrum	polityki	inwestycje	projektów
	publicznych	rynku	projekty	ogólne	pieniądze	polska	wyniki	krajów	pkp	kosztów
	polsce	emisji	unijne	tydzień	strony	rolnej	uniwersytetu	komisja	sieci	przedsiębiorcy
	rok	dol	lata	usg	takich	tys	prasowa	budżet	projekt	funduszy
	budżetu	reuters	polska	niepodległości	tylę	obszarów	m.in	kraje	warszawy	proc
	wydatków	raporcje	fundusze	szpital	stanie	pomocy	polsce	funduszy	miasta	dofinansowania
	wydatki	grupy	inwestycje	telefoniczna	polsce	polsce	firmy	sprawie	autostrady	inwestycji
	deficytu	firmy	strukturalnych	morfologia	chce	członkostwa	rady	europejska	ruchu	wnioski
	gospodarczego	polsce	ministerstwo	życia	trudno	polskich	spotkanie	komisarz	zostanie	tys
PL										
1 PKB	Spółki	Fundusze	zdrowie	problem	rolnictwo		budżet	drogi	projekt	
2 FINANSE	EURO	Wzrost	badania	czas	unia		Bruksela	budowa	dofinansowanie	
3 WZROST	Rynek	Unijne	ciąża	pieniądze	dopłaty		Komisja	pkp	programu	
4 publiczne	Firmy	Inwestycje	szpital		członkostwo		Spójność	autostrada	inwestycje	
ENG										
1 GDP	Companies	Funds	health	problem	agriculture		budget	roads	project	
2 Finances	Euro	Growth	medical examination	time	UE		Brussels	building	support	
3 Growth	Market	EU	pregnancy	money	payments		Committee	rail	program	
4 public	Firms	Investment	hospital		membership		Cohesion	highway	investment	

PERCEIVE DEL. 5.3: 'REPORT DISCUSSING THE EMERGENT TOPICS IN IDENTITY RELEVANT DISCOURSE AT DIFFERENT LEVELS'

topic	10	11	12	13	14	15	16	17	18	19
20 most important words	unii	rozwoju	ustawy	województwa	godz	firm	gość	pracy	art	pis
	polski	rozwój	sprawie	miasta	kultury	firmy	naruszenie	osób	środków	poseł
	europy	polityki	prawa	gminy	miejsce	inwestycji	treści	ramach	ust	rządu
	polska	środków	projekt	młn	muzeum	rynku	zgłoś	swoją	ustawy	marek
	europejskiej	ramach	publicznych	gmin	maja	przedsiębiorstw	skomentuj	szkół	podatku	premier
	europie	działania	ministra	mieszkańców	dni	bank	komentarz	projektu	pkt	prezydenta
	kraju	gospodarki	ustawa	miast	zespół	przedsiębiorców	wniosek	stronę	wydatków	minister
	krajów	infrastruktury	życie	tys	centrum	banku	całość	szkoły	przypadku	komisji
	polsce	programu	poz	centrum	m.in	kredytu	form	dzieci	podstawie	partii
	państw	projektów	komisji	miasto	sztuki	przedsiębiorstwa	dziecko	europejskiego	vat	mówił
	polityki	zakresie	kontroli	projekt	olsztynie	firma	forum	funduszu	wydatki	śld
	kraje	program	państwa	samorządów	zdjęcia	proc	tytuł	pochwal	należy	przewodniczący
	unia	projekty	prawo	gmina	warmii	małych	podpis	osoby	kosztów	andrzej
	europa	realizacji	rozporządzenie	m.in	dziejstwa	przedsiębiorcy	regulamin	uczniów	finansów	psl
	polaków	strategii	przepisów	dzięki	europejskich	kredyt	dodając	naszym	środki	szeł
	kraj	spójności	pracy	samorządy	koncert	tys	wrocławiu	szkolenia	zgodnie	rząd
	wobec	współpracy	radę	marszałek	elblągu	pożyczki	komentarza	informacje	umowy	premiera
	integracji	programów	administracji	regionu	sierpnia	średnich	zaloguj	społecznej	publicznych	wyborach
	polityka	środki	przepisy	regionalnego	zespołu	kredytów	akceptujesz	udział	dotacji	prezydent
	polskiej	sieci	zmianie	urzędu	dzieci	prezes	dodajesz	napisz	strukturalnych	panie
PL										
1	unia	rozwój	ustawa	województwo	kultura	firma		praca	art(ykół)	pis
2	polska	polityka	prawo	miasto	muzeum	inwestycje		szkoła	ustawa	poseł
3	europa	realizacja	publiczne	gmina	zespół	kredyt		dzieci	podatek	rządu
4	kraj	strategi	minister	mieszkańcy	sztuki	bank		europejskiego	VAT	premier
ENG					dziejstwa					
1	UE	development	act	voivodeship	Culture, entertainment, festival	firm		job	article	Law and Justice party
2	Poland	policy	law	city	museum	investment		school	act	deputy
3	Europe	implementation	public	commune	band	loan		children	tax	government
4	Country	strategy	ministry	inhabitants	art.	bank		EU	VAT	Prime minister

Topic 0 - INCREASE OF GDP: Forecasted increase of GDP in PL economy. Negative factors: lower dynamics of domestic demand and public investment. The favorable situation on the labor market and demographic factors will be conducive to the recovery of demand and the resumption of prices in the housing market. Growth of Investment activity of enterprises will continue, which will be supported by an intense inflow of foreign direct investment and EU structural funds to support the development of enterprises

Topic 1 - EU FUNDS FOR SMEs/COMPANIES: 336 million euro was allocated to the company's 'technological bonuses' (support to investments in companies). In the first call, so many proposals were made that the next 2 planned calls will be short of funds. Bank Gospodarstwa Krajowego is looking for intermediaries who will offer companies loans from the Union. It is about financial intermediaries, which will provide the so-called global loan. The largest Polish province struggles for funds for the development of the region The Mazovia has the chance to hit the so-called phasing-out region category (where GDP per capita is 75-90 percent of EU average GDP).

Topic 2 - STRUCTURAL FUNDS (REGIONS, INFRASTRUCTURE ENVIRONMENT): Next year, local governments will spend PLN 9 billion. So far money has been flowing into Poland very slowly - only 0.4% was paid. One of the government's ways to tackle the crisis is to make efficient use of EU funds. Until 2013 we have to use 270 billion zł. Since 2008 we have spent 66% of this amount

Topic 3 - PRENATAL HEALTH CARE PROJECT: The project "Improvement of prenatal health care in the subregion of Olsztyn" implemented in the Olsztyn Hospital is extended until the end of 2016. The success of the project reported by the hospital director. Cofinanced by EOG and Norway Grants.

Topic 4 - POLISH SCIENCE/NATIONAL PRIORITY PROJECTS: Keywords here were not helpful, but reading the most important articles lead us to an understanding of this paper, that is based on

keywords present in most coded articles: Infrastructure, EU, Science, Priority, Projects. Polish science: Rectors at the inauguration boast mainly new investments and university infrastructure (from EU funds), aside from scientific achievements. The list of priority investments in the country to be subsidized by the EU funds changes like in a kaleidoscope. The Ministry continues to make significant changes to the list of key projects (because of election?).

Topic 5 - CAP, RDP, EU FUNDS FOR AGRICULTURE: Food processors without opportunities to support from the structural funds. Discussion in Parliament about the CAP measures. Difficult but profitable adjustment Polish agriculture is currently not adapted to EU standards, mainly due to the large number of employees, low income of farmers and their very low labor productivity. The Feast of the Harvest is a time to thank the farmers and villagers for the hard work they put into the whole year. The local gov. to honor the best farmers in the poviát. The development of the farm is based on the own resources, and funds of RDP "young farmer".

Topic 6 - ADS AND CONTENTS: Private University advertisement and 2 tables of contents

Topic 7 - COHESION POLICY: € 74bn of cohesion policy foreseen for Poland in the latest EU budget for 2014-2020. Poland could lose as much as € 6bn from structural funds in 2007 - 2013. Our money is at risk. The UK is preparing a cuts plan in the EU budget. Hungary will not support the British proposal for the 2007-13 budget of the European Union, reducing funding for the development of new member states

Topic 8 - ERDF FOR ROAD: The reconstruction of the road crossing of PLN 13.4 million will end in the middle of next year. Project co-financed by the European Union under the European Regional Development Fund. Project (road reconstruction) financed under the Operational Program Infrastructure and Environment 2007-2013. City Road Administration has announced the biggest tender for the reconstruction of the street, will take about 300 million PLN.

Topic 9 -EU GRANTS FOR SMEs FOR INNOVATION, ADVISORY: Companies wishing to implement the invention (innovation) in their activity may apply for an EU grant from the Innovative Economy Operational Program. SMEs owners may apply for a grant for advisory and investment purposes co-financed by Phare 2002.

Topic 10 - BILATERAL RELATIONS BETWEEN POLAND AND ITS NEIGHBORS: The German media is widely commenting on the meeting of Chancellor Angela Merkel with Prime Minister Beata Szydło. ININTERREG III Phare "We can always find some negatives of our countries in the European Union, eg someone will complain that they can not sell crooked cucumbers." The truth is that without the EU, Poland and Slovakia would not be where they are. "There are important things in Europe and they are not waiting for Poland. At today's Brussels summit the EU leaders will be in a strong majority for the EU constitution and expect that Poland will act responsibly, that is, the constitution will not block.

Topic 11 - STRATEGIC DOCUMENTS/PLANNING: The Council of Ministers has just adopted a draft law amending certain acts in connection with the implementation of the Structural Funds and the Cohesion Fund. An important aspect of the new regulations is the ordering of the strategic programming system and spatial development of the country. National Strategic Reference Framework is a key document defining the main development goals of Poland for the next seven years. Regions, cities, rural areas "Regardless of what the EU budget will look like for 2014-2020, municipalities will have to develop, invest and acquire. To this end, Poland has become the recipient of the European Union's largest support in the history of the European Union, which makes it a specific laboratory for the efficacy and effectiveness of the so-called "cohesion policy".

Topic 12 - JOURNAL OF LAWS: Announcement of the Marshal of the Sejm (Chamber of Deputies) of the Republic of Poland of 11 June 2015 on the publication of the uniform text of the Customs Service

Act. Regulation of the Minister of Development of 11 January 2016 on checking leakage of refrigeration, air conditioning and heat pump equipment and fire protection systems. Act of 11 July 2014 on the implementation of cohesion policy programs financed in the financial perspective 2014-2020

Topic 13 - WATER CONSUMPTION AND USE (EU FUNDS FOR SEWAGE SYSTEMS, WATER TREATMENT STATION, WATER POOL): "About 120 kilometers of sewage system was created. Improving the quality of life of the city residents as well as protecting the environment and waters of the Odra river. The modernization of the water treatment station has been completed. Works on the finishing of the modern sports and recreation complex at ul. Moniuszko. The four swimming pools, the sauna area, the whirlpool, the water paradise with lots of surprises for the little ones, are just some of the attractions you will find in the newly built Water Recreation Center as part of the Regional Operational Program."

Topic 14 - CULTURE, ENTERTAINMENT, FESTIVAL: Elbląg Feast of Bread - a three-day event filled with the richness of flavors and aromas of freshly baked bread. Fair of regional products with handicrafts and folk art, concerts, exhibitions, artistic presentations, historical concerts, recreation area, concerts of old and folk music groups, traditional jazz band, dragon boat races on the Elbląg river. During the festival Olsztyn will see performances of many fine groups theatrical and the amphitheater of Krystyna Janda's music monodrama and recital

Topic 15 - BANK'S CREDIT LINES FOR FIRMS: Bank offer: Bridge loan to cover eligible expenditures supported by EU funds. Investment loans, bridging, supplementary, for the benefit of EU funds Bank offer. Bank Pekao is the second Polish bank, which this year received support from the European Investment Fund. Thanks to it, he will be able to launch credit lines worth over PLN 1.2 billion.

Topic 16 - ANNOUNCEMENTS AND TABLES OF CONTENTS. These are announcements and tables of contents eg.: Regional Blood Donation and Blood Donation Center calls for blood donation. In September in Lower Silesia, expert assistance will be available in the field of obtaining EU grants. Regional Family Support Center in Kłodzko will receive money for the project for the Roma community

Topic 17 - UNEMPLOYED AND YOUTH: Three-month paid placements for the unemployed. Begin school year at pre-school: children from all preschool points received backpacks, briefcases, pens, glitter and slippers. The "Good Start" project is co-financed by the European Social Fund under the Operational Program Human Capital. With the support of the European Social Fund, the aim of the project is to increase the professional and social activity of people threatened with social exclusion in the age of 15-24, integration trip. individual and group meetings with a professional counselor, psychologist, sociotherapist, art classes

Topic 18 - TAXES: Amendment of the Act on Corporate Income Tax and Natural Persons, i.e. Law on tax havens. It introduces a number of changes, but the most important and most controversial of them is the Controlled Foreign Corporation (CFC) and thin capitalization. Comment includes all recent changes introduced to the CIT Act. Depreciation charges made prior to receiving the aid is the total cost of revenue, while at the time of receipt of the aid, Art. Article 16 1 point 48 of the CIT Act obliging to exclude - starting from that moment - from the costs of obtaining the income of this part of depreciation write-offs, which corresponds to the value of received co-financing

Topic 19 - ELECTION: Voters will choose from 161 candidates (name list). Stenogram of the 78th meeting of the PKN Orlen Investigative Commission to investigate allegations of irregularities in the supervision of the Ministry of Treasury over the representatives of the Treasury in PKN Orlen S.A. and allegations of the use of the Special Services (UOP) for illegal pressures on the judiciary to obtain provisions to put pressure on the Management Board members of PKN Orlen S.A. The appeal

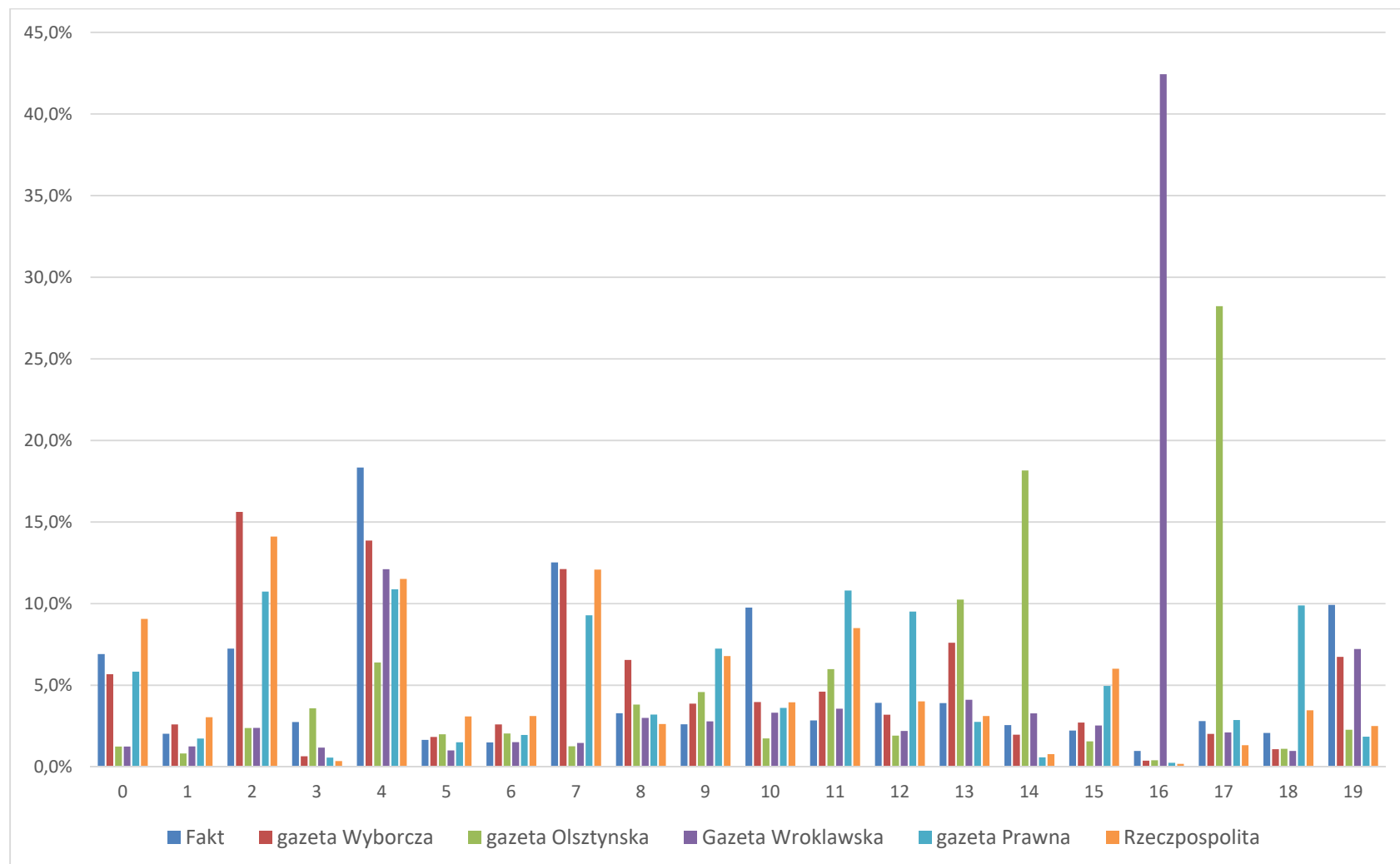
against the censorship of the court was published on the 22nd of November in the Rzeczpospolita daily. To date, more than 2,400 people have signed it. Next we remind the content of the letter and publish the signatures submitted under it. Sociologist prof. Andrzej Zybertowicz was sentenced by a final sentence for a sentence that appeared in his newspaper article in Rzeczpospolita. It sounded like: "Adam Michnik repeatedly said: I have been in prison for so many years now, I'm right now."



Topics that are mostly used in our sample are 2, that refers to Structural Funds in terms of money available, 4, that refers to projects funded in Poland thanks to EU funds, especially referring to education, and 7, that refers explicitly to Cohesion Policies and to the amount of money available for Polish Institutions.

If we analyze the prevalence of topics in the different newspapers, we can see that The regional newspapers, that are Gazeta Olsztynska and Gazeta Wroclawska, if compared to the other sources, underuse topics 0, about the increase of GDP, 7 and 2, which explicitly refers to Cohesion Policies and Structural Funds. Gazeta Olsztynska is mainly composed by topic 17, which is about unemployment and youth, 14, about culture, entertainment and festival, and 13, about the use of EU funds for improving water consumption. Gazeta Wroclawska, interestingly, appears to be mainly composed of topic 16, which groups together words appearing in announcements and tables of contents. This fact probably means that EU-related words only appear in this kind of items, in Gazeta Wroclawska. Gazeta Wyborcza makes use especially of topic 2 and topic 8, which is about political relations between Poland and its neighbours. The Tabloid Fakts is the newspapers mostly using topics 19, that refers to elections, 10, that again is about political relations between Poland and other countries, and 4, that is about projects to be funded by the EU. Topic 12, that is about laws, and topic 18, that is about taxes, are mostly used by the business newspaper Gazeta Prawna. This newspapers, together with Rzeczpospolita, makes use as well of topics 9, that is about EU grants for SMEs, and topic 11, that is about strategic planning. See details on the following figure.

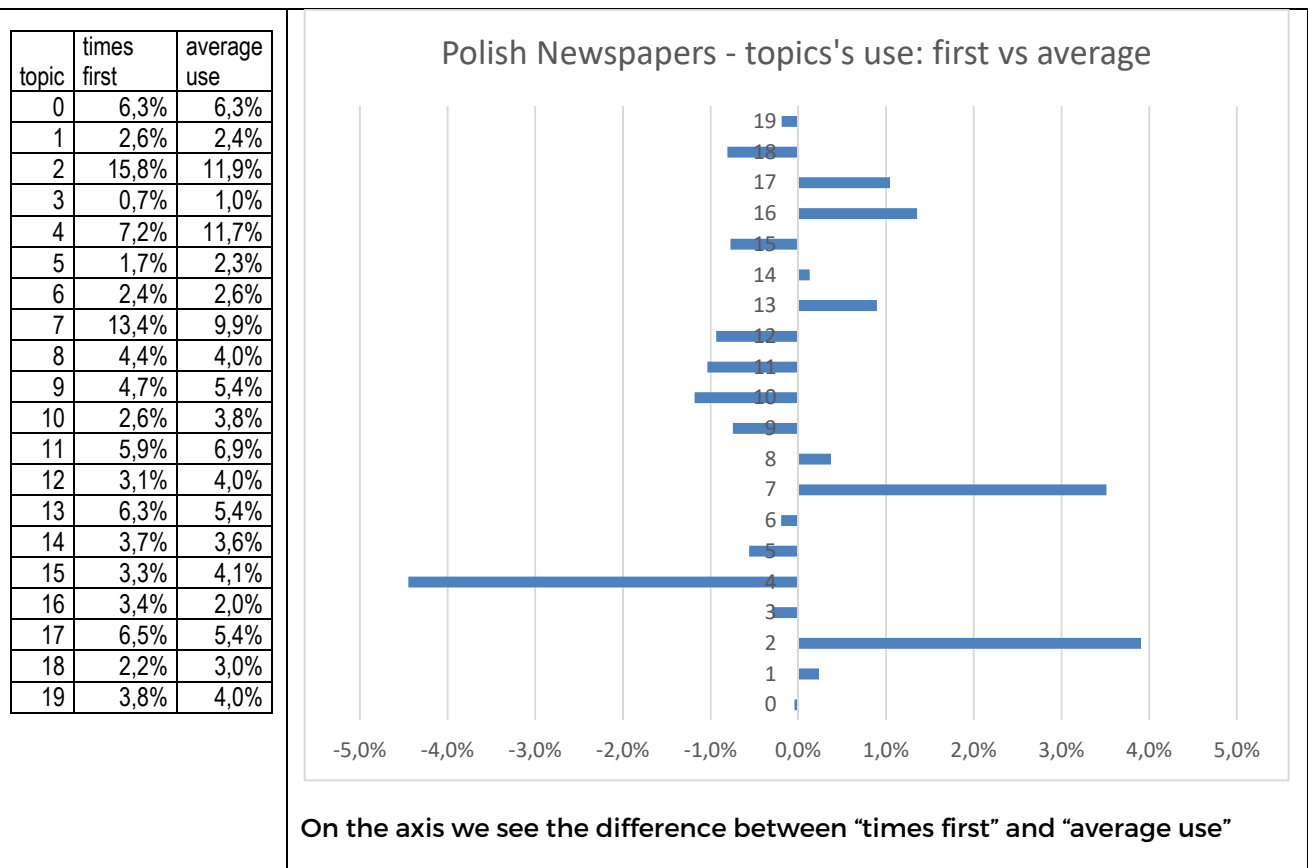
Average use of topics in Polish Newspapers: break-up by newspaper



PERCEIVE DEL. 5.3: 'REPORT DISCUSSING THE EMERGENT TOPICS IN IDENTITY RELEVANT DISCOURSE AT DIFFERENT LEVELS'

Based on the following table and figure, which compare the average usage of a topic in our corpus of articles, and the number of times in which that topic is the most important for an article, we can understand whether a topic characterizes a debate, or is mainly used as a secondary topic that integrates discourses dominated by other topics. In the table on the left of the graph, for each topic, we report the percent usage of a topic ("average use") and the percent usage of a topic as a characterizing topic in the articles in which it appears ("times first"). In the graph, the value on the horizontal axis reports the difference between "times first" and "average use". Therefore, positive values on the axis highlight topics that more often characterize the articles in which they recur. Indeed, following Ferri *et al.* (2017), we can say that if a topic is widely used on average, but rarely is the most prevalent for articles, that topic is not a characterizing one. On the contrary, if a topic is on average used seldom, but when it is used is the most important for the articles in which it is used, then it really characterizes the sources where it is used.

It is interesting to note that the two topics that are more often characterizing the articles they are used into are Topic 2 and Topic 7, which respectively deal with Structural Funds and Cohesion Policy. On the contrary, Topic 4 that is about projects to use EU money for composes on average 11,7% of articles, but is the most important topic only for 7,2% of articles, meaning probably that projects are discussed in several articles referring to the use of EU funds.



4.3.4 Romania

In the Romanian case, we selected six newspapers, and searched through their archives with the following keywords: "fond structural", "fonduri europene", "fonduri structural", "fondurile structurale", "politic regional europ", "politic regional europe", "politic regional ue", "politica regionala", "uniunea europeana"⁵. The list of the newspapers follows, together with the number of articles that we analyzed for each source, after removing empty ones:

1. **Adevarul**, as national quality newspapers: 3.440 articles analyzed
2. **Journalu National**, as national quality newspaper: 3.912 articles analyzed
3. **Ziarul Financiar**, as business newspaper: 1.935 articles analyzed
4. **Objectiv Tulcea**, as regional newspaper: 815 articles analyzed
5. **Viata Libera Galati**, as regional newspaper: 226 articles analyzed
6. **Libertatea**, as tabloid: 475 articles analyzed.

We then developed a stopword list, containing Rumanian words, that are not useful for eliciting the latent meaning space. Finally, we analyzed these articles through Mallet. Overall, our corpus of Rumanian newspapers consists of 2.984.153 words (excluding words in the stopwords list), the longest article is composed of 151.205 words. The following table presents a list of the 20 most important words for each topic, that we used, together with the colleague from IEA, in order to make sense of each topic. Indeed, in this inductive phase of the analysis, we relied on the list of words per topic, and on the three most representative articles papers for each topic. Our interpretation of topics follows the table.

topic	0	1	2	3	4	5	6	7	8	9
20 most important words	trebuie	milioane	tulcea	psd	românia	euro	lei	s-a	lei	galai
	românia	euro	dunării	ponta	european	europene	milioane	ani	miliarde	lei
	ani	kilometri	europene	ministrul	europene	fondurilor	proiect	s-au	euro	fonduri
	însă	transport	delta	premierul	europeană	miliarde	județean	erau	anul	europene
	așa	lucrările	fonduri	ministru	europa	fonduri	proiectul	i-a	milioane	dac
	există	lei	județean	spus	membre	românia	proiectului	l-a	pib	ani
	făcut	transporturilor	s-a	guvern	uniunii	fondurile	primăria	politic	creștere	s-a
	spus	drumuri	consiliului	guvernul	statele	milioane	apă	partid	stat	dup
	spune	autostrada	proiecte	dragnea	româniei	proiecte	fonduri	politice	față	image
	decât	proiectul	proiect	europene	state	europeană	finanțare	devenit	românia	milioane
	bani	cnadnr	dezvoltare	guvernului	uniunea	comisia	primarul	fiind	fmi	primarul
	lucru	autostradă	locale	victor	bulgaria	ministrul	s_a	timpul	anului	proiect
	cred	compania	fiind	pnl	țări	programul	județul	ion	economică	euro
	facă	bucurești	deltei	băsescu	locul	structurale	reabilitarea	românia	bugetul	proiecte
	încă	lucrărilor	horia	declarat	marea	ministerul	lucrările	luat	buget	click
	își	autostrăzi	amănunte	președintele	polonia	perioada	valoare	omul	investiții	dou
	atât	lucrări	teodorescu	ministerul	germania	comisiei	valoarea	urma	trecut	imaginea
	s-a	anul	cotidianului	liviu	loc	absorbție	europene	ziua	creșterea	open

⁵ Please see deliverable 5.2 for more details

PERCEIVE DEL. 5.3: 'REPORT DISCUSSING THE EMERGENT TOPICS IN IDENTITY RELEVANT DISCOURSE AT DIFFERENT LEVELS'

	trebui	fonduri	fondurilor	traian	grecia	bugetul	proiecte	membru	mari	sut
	banii	cfr	ediția	pdl	bruxelles	bani	euro	primit	economiei	anul

topic	10	11	12	13	14	15	16	17	18	19
20 most important words	europene	dna	muncă	citește	publice	euro	udrea	false	ani	romania
	fonduri	lei	persoane	s-a	privind	fonduri	elena	w:lsdexception	metri	pana
	financiar	procurorii	proiect	președintele	cadrlul	europene	turismului	name	zonă	europene
	data	srl	muncii	exclusiv	precum	milioane	euro	locked	zona	trebuie
	ziarului	fonduri	ani	își	europene	afaceri	ministerul	priority	anul	romaniei
	lei	europene	cercetare	național	dezvoltare	agriculturii	mdrt	semihidden	cetatea	europena
	corporate	dosarul	educației	așa	domeniul	agricole	milioane	unhidewhenused	centrul	doua
	documente	dosar	copii	s-au	nivel	agricultură	obreja	accent	parcul	s-a
	publicat	ani	profesională	bucurești	nivelul	dezvoltare	bute	medium	locuri	exista
	false	bani	proiectului	investiții	locale	trebuie	gala	list	cultural	tara
	articol	euro	proiectul	ani	vedere	rurală	turism	grid	fiind	ani
	tipărită	cadrlul	locuri	românia	trebuie	anul	promovare	shading	centru	fonduri
	ediția	potrivit	sociale	finanțare	naționale	ani	regionale	true	foto	decat
	declarații	judcată	cadrlul	față	dezvoltarea	produse	promovarea	qformat	turiști	euro
	nedrept	firma	învățământ	europene	publică	fermieri	firma	light	fonduri	national
	prezentarea	fostul	copiii	mulți	proiectul	hectare	s-a	colorful	putea	facut
	rezultat	persoane	formare	mihai	proiect	pndr	box	false"unhidewhenused	turistic	piata
	obținerea	contracte	cursuri	fonduri	public	finanțare	rudel	toc	turistică	putea
	inexacte	fiind	tineri	arată	măsuri	mici	potrivit	heading	turistice	presedintele
	abonare	contract	medicale	puțin	național	investiții	turistic	m:val	proiect	spus

Topic 0 - ROMANIAN POLITICS: This topic relates to how politics interfered with the organisation of local public institutions involved in attracting European funds and also how politicians' interests hinder the process of economic development, absorption of European funds and other major infrastructure projects.

Topic 1 -INFRASTRUCTURE: This topic relates to major infrastructure projects which are to be financed from European funds and national budget, mainly highways, but also modernization of Bucharest's metro system, and highlights some of the problems encountered during the public auctions for contracting the works, like consecutive delays of the process

Topic 2 - EU FUNDING: It refers to the different aspects related to the European Strategy for Danube's Region and the Durable Development Strategy for the Danube' s Delta, a pilot territorial development instrument designed for the Danube Delta and Constanta Metropolitan area. These two strategic documents support the development of naval transport, promotes culture and tourism and management of environmental risk.

Topic 3 - ROMANIAN POLITICS: this topic follows the political decisions of the ruling majority party, the Socio Democratic Party, regarding the list of ministers and associated portfolios for several governments but also some changes made this year related to Ministry of Justice, European Funds, Economy and Business Environment.

Topic 4 - EU POLITICS AND ENLARGEMENT: The topic follows different EU politics issues, like the support of German Cancellor Angela Merkel for anti corruption fight in Romania and the decision of

the EC announced by Jean-Claude Juncker regarding the list of European Commissaries, but also the talks between France and Turkey about the admission of Turkey to EU.

Topic 5 - EU FUNDING PROBLEMS: The topic highlights some of the problems regarding the EU funding, namely the EC decision of pre-suspension for several Operational Programs in Romania, including Transport, Regional, Economic Competitiveness, Environment and Human Resources, based on the deficiencies discovered by the Romanian Audit Authority and experts from Brussels

Topic 6 - EU AND NATIONAL BUDGET FUNDED PROJECTS: The topic follows some projects funded through the European Regional Development Fund in different counties/regions from Romania, aimed at improving the social infrastructure and the endowment of the emergency situations intervention structures (Sud Muntenia Region), integrated solid waste management in Calarasi county but also investments from the national budget for transport, utilities, health and education infrastructure in Bacau county

Topic 7 - NOISE: The topic follows some historical events from Romania and Republic of Moldova

Topic 8- BUDGETARY DEFICIT: The topic refers to the budgetary deficit of Romania during 2012 and 2015, whose levels were among the lowest ones since Romania joined the EU. These low levels of budgetary deficit translated into a reduction of investments thus delaying major development programs at national level.

Topic 9 -INFRASTRUCTURE: The topic follows the process of infrastructure development in 2 communes from Galati county and Galati town, situated in Sud Est region. It highlights the main infrastructure problems of in these localities and the efforts of the local administration to initiate development projects based on European funds and national and local budget in the field of transport, water supply and sewage system and education infrastructure.

Topic 10 - BUSINESS DEVELOPMENT: The topic follows the development process of both private and public companies from Romania from the field of production (auto parts) and postal services. It highlights the investment plans to be financed both from own resources and European funds, but also the problem of employing qualified work force. In the case of the postal services, the funds were based on a bank credit to be used for financing the working capital.

Topic 11 - CORRUPTION: The topic refers to the investigation of corruption facts by the National Anti Corruption Direction, connected to high level politicians, members of the ruling political party, which exerted their influence so that a specific contractor, close to them, would obtain a major infrastructure contract in Prahova county.

Topic 12 - EDUCATION AND TRAINING: The topic refers to two projects co financed by the European Social Fund, one at national level and one in Bucharest, aimed at supporting the persons in search of a job by offering counseling services and vocational training, but also support for children and young people, from vulnerable groups, by counseling, social (re) integration, non formal education and professional training.

Topic 13 - NOISE: The sample of articles refers to news information that are not correlated.

Topic 14 - NOISE: The sample of articles refers to news information that are not correlated.

Topic 15 - AGRICULTURE AND RURAL DEVELOPMENT: The topic relates to the main opportunities presented by the National Rural Development Program (receiving EU funds) that support the development of family farms, especially oriented towards young farmers and the conditions they have to respect in order to receive funding for the development of agricultural activities.

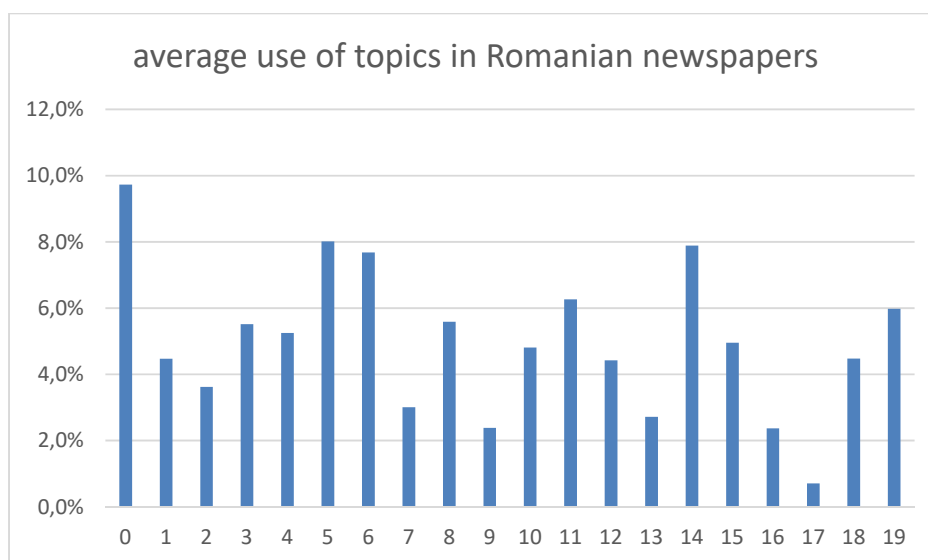
Topic 16 - NOISE: Although the items in the topic are strongly connected to a famous case of corruption involving European funds being used for organizing a sporting event in Romania (a boxing gala), the sample of articles relates to other aspects, not correlated with the topic.

Topic 17 - NOISE: The items in the topic collects parts of the codes used for collecting articles, which remained in the final files. It is expected from Mallet to group noise like this in one topic, in order to improve the other topics.

Topic 18 - CULTURE AND HERITAGE: The topic relates to different cultural and heritage projects, funded from EU funds in Brasov and Bistrita counties, including a museum, a center for traditional art and also the promotion of local heritage.

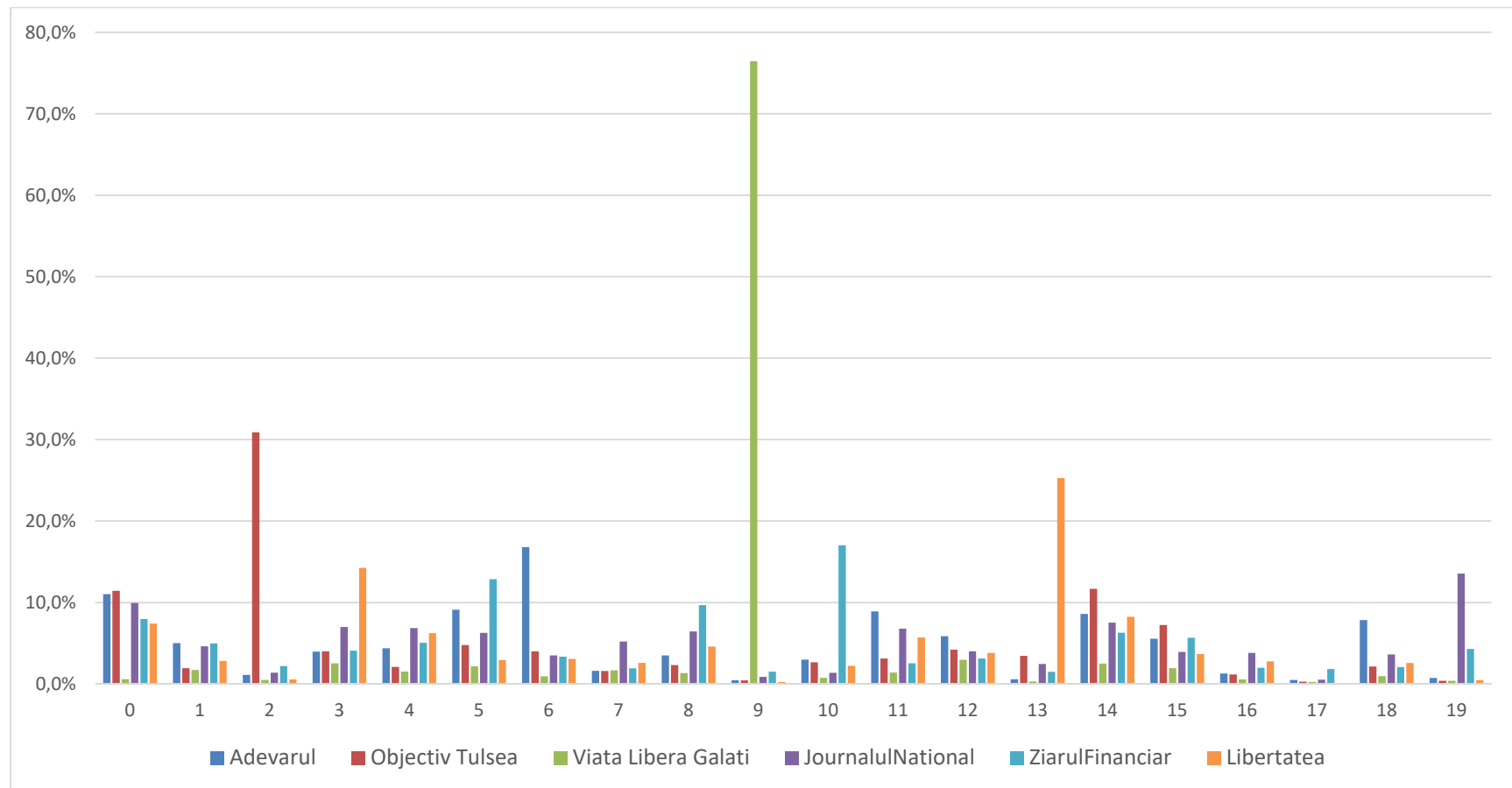
Topic 19 - EU FUNDS MANAGEMENT CAPABILITY: The topic approaches the management performance of European Funds, 4 years after the accession to EU, reclaiming the inefficiency and lack of performance of Romanian institutions, but also how the population perceives this capacity, many of them associating the national distribution of EU funds with corruption and fraud.

Overall, we see that the Topic that is used most across our sample is Topic number 0, that regards Romanian Politics, but there is not a real prevalence in the public discourse of a specific topic.. Less used topics are generally constituted by "noise".



By analyzing the following table we can understand whether a topic is present in the same ways in all the sources, or whether it characterizes a specific newspaper. In particular, topic 0- Romanian Politics, is virtually absent from Viata Libera Galati, which is a regional newspaper. Topic 2, EU funding, is mostly present in the regional newspaper Objective Tulsea. Topic 3, that follows the decision of the most important government party, is used mainly by the tabloid Libertatea. Both the regional newspapers make scarce use of topic 4 that regards EU politics and enlargement. Ziarul Financiar, the business newspaper, together with Adevarul, is the place where topic 5, regarding EU funding problems, is more present. Topic 6, EU and national budget funded projects, is present on Adevarul, whereas topic 8, budgetary deficit, is present on Ziarul Financiar. Topic 9, regarding infrastructures, constitutes a wide percentage of the articles of the regional newspaper Viata Libera Galati, whereas topic 10, business development, is present on Ziarul Financiar. It is then interesting to note that topic 18, on culture and heritage, is mostly present on Adevarul, whereas topic 19, on EU funds management capacity, is present especially on Jurnalul National and then on Ziarul Financiar.

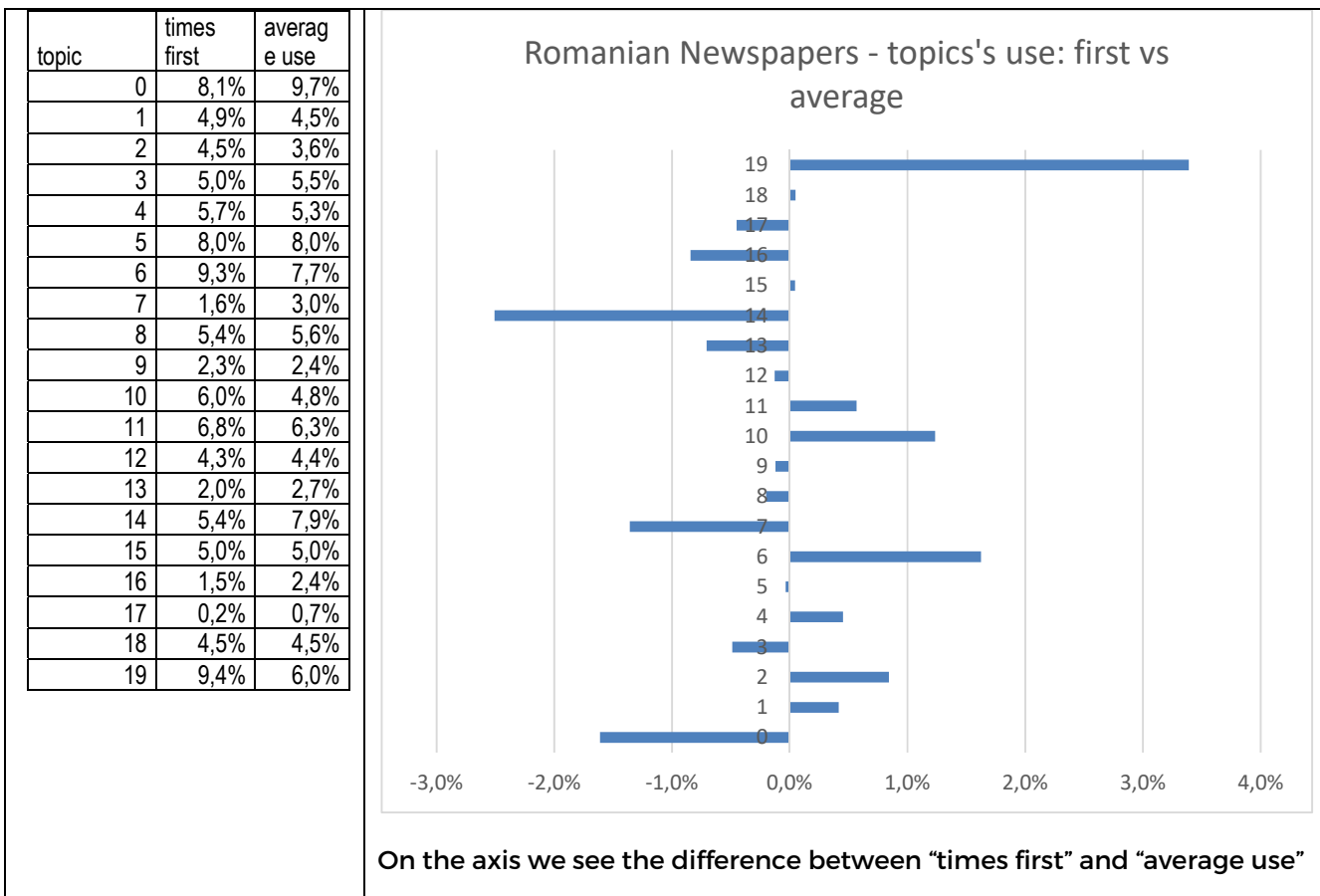
Average use of topics in Romanian Newspapers: break-up by newspaper



PERCEIVE DEL. 5.3: 'REPORT DISCUSSING THE EMERGENT TOPICS IN IDENTITY RELEVANT DISCOURSE AT DIFFERENT LEVELS'

Based on the following table and figure, which compare the average usage of a topic in our corpus of articles, and the number of times in which that topic is the most important for an article, we can understand whether a topic characterizes a debate, or is mainly used as a secondary topic that integrates discourses dominated by other topics. In the table on the left of the graph, for each topic, we report the percent usage of a topic ("average use") and the percent usage of a topic as a characterizing topic in the articles in which it appears ("times first"). In the graph, the value on the horizontal axis reports the difference between "times first" and "average use". Therefore, positive values on the axis highlight topics that more often characterize the articles in which they recur. Indeed, following Ferri *et al.* (2017), we can say that if a topic is widely used on average, but rarely is the most prevalent for articles, that topic is not a characterizing one. On the contrary, if a topic is on average used seldom, but when it is used is the most important for the articles in which it is used, then it really characterizes the sources where it is used.

In example, Topic 19, which relates to EU funds management capacity, is the most important topic for 9.4% of the articles, but on average composes 6.0% of our corpus. It is then used mainly on articles that really deal with EU funds management capacity. On the contrary, both topics that relate to Romanian Politics, that are topic 0 and topic 3, compose on average 9.7% and 5.5% of our sample, but they are the most important topics only 8.1% and 5.0% of times. This fact means that we will probably find them in articles that do not necessarily deal with Romanian Politics, but where Romanian Politics is invoked in reference to other phenomena. The other "specialistic topics", that are used on articles that really deal with them, relate to funding. They are Topic 2, EU funding, Topic 6, EU and national budget funded projects, and topic 10, business development.



4.3.5 Sweden

In the Swedish case we selected six newspapers, and searched through their archives with the following keywords: "eu fonder", "Europeiska investerings", "fond* (eu or europeiska unionen)", "investering and (eu or europeiska unionen)", "regional* and (eu or europeiska unionen)", "regionalpolitik eu", "regionalpolitiken", "regionalpolitiken eu", "Sammanhållningspolitiken", "strukturfond eu", "strukturfond*", "strukturfonder⁶. The list of the newspapers follows, together with the number of articles that we analyzed for each source, after removing empty ones:

1. **Svenska Dagbladet**, as national quality newspapers: 2.017 articles analyzed
2. **Dt**, as national quality newspaper: 228 articles analyzed
3. **Dagens Industri**, as business newspaper: 740 articles analyzed
4. **Dagens Nyheter**, as regional newspaper: 2.101 articles analyzed
5. **Gefle Dagblad**, as regional newspaper: 145 articles analyzed
6. **Aftonbladet**, as tabloid: 171 articles analyzed.

We then developed a stopwords list, containing Swedish words, that are not useful for eliciting the latent meaning space. Finally, we analyzed these articles through Mallet. Overall, our corpus of swedish newspapers consists of 1.290.234 words (excluding words in the stopwords list), the longest article is composed of 4.783 words. The following table presents a list of the 20 most important words for each topic, that we used, together with the colleague from UGOT, in order to make sense of each topic. Indeed, in this inductive phase of the analysis, we relied on the list of words per topic, and on the three most representative articles papers for each topic. Our interpretation of topics follows the table.

topic	0	1	2	3	4	5	6	7	8	9
20 most important words	jobb	företag	saab	grekland	ryssland	ser	eu:s	fonder	sverige	europa
	människor	nya	eib	europeiska	ukraina	tror	bryssel	svenska	bör	turkiet
	procent	svenska	europeiska	tyskland	ryska	hela	eu-kommissionen	aktier	europa	människor
	robotar	företagen	kronor	euro	martin	kanske	länder	bolag	länder	länder
	arbetskraft	kina	miljoner	miljarder	president	tycker	nya	procent	svenska	rättigheter
	offentliga	sverige	investeringsbanken	länder	bildt	just	kommissionen	pengar	både	europeiska
	anställda	usa	regeringen	euron	putin	gång	europeiska	bankerna	nya	mänskliga
	utvecklingen	investeringar	saabs	tyska	rysslands	ändå	unionen	nya	behöver	flyktingar
	arbetslöshet	näringslivet	miljarder	italien	mederyd	väldigt	sverige	kronor	ekonomiska	unionen
	antalet	ser	muller	krisen	nato	tid	förslag	företag	politiska	landet
	tror	procent	lån	spanien	krim	vet	medlemsländerna	sverige	sätt	demokrati
	framtiden	största	spyker	europa	carl	tillbaka	förhandlingarna	bank	exempel	ungern
	sverige	produkter	bilar	banker	sanktioner	fortfarande	länderna	fonden	regeringen	eu:s
	utbildning	forskning	antonov	ekonomiska	usa	folk	svenska	banken	samtidigt	emot
	nya	exempel	svenska	irland	östra	sätt	polen	banker	problem	land
	jobben	anställda	victor	ecb	skriver	tiden	unionens	finansiella	egna	stöd
	företag	medelstora	pengar	pengar	utrikesminister	står	medlemsländer	fond	land	världen
	arbetsmarknaden	jobb	riksgälden	portugal	ukrainska	väl	eu-kommissionens	nordea	innebär	asylsökande
	ser	tillväxt	koenigsegg	grekiska	ukrainas	svårt	ordförande	kapital	frågan	gränser
	samtidigt	kinesiska	volvo	merkel	rapporterar	fall	förslaget	sälja	europeiska	demokratiska

⁶ Please see deliverable 5.2 for more details

PERCEIVE DEL. 5.3: 'REPORT DISCUSSING THE EMERGENT TOPICS IN IDENTITY RELEVANT DISCOURSE AT DIFFERENT LEVELS'

topic	10	11	12	13	14	15	16	17	18	19
20 most important words	regeringen	kronor	procent	rumänien	storbritannien	för	hej	energi	the	kronor
	göran	miljoner	usa	miljoner	brittiska	auml;r	pension	sverige	data	miljarder
	sverige	bolaget	senaste	gävle	brexit	på	skatt	bygga	and	sverige
	persson	miljarder	ekonomin	dalarna	lämna	säger	pengar	kronor	harry	eu:s
	socialdemokraterna	procent	april	pengar	procent	saab	pensionen	procent	thomas	pengar
	partiet	nya	samtidigt	annons	bryssel	från	välja	miljoner	kulturen	regeringen
	riksdagen	största	amerikanska	nya	britterna	så	kronor	största	union	miljoner
	borgerliga	volvo	bnp	kommunen	storbritanniens	ndash	sverige	norge	kultur	stöd
	svenska	mkr	lägre	romer	premiärminister	när	kvinnor	per	norge	procent
	reinfeldt	bolag	väntas	stockholm	unionen	också	barn	vattenfall	bok	nya
	moderaterna	ericsson	steg	region	cameron	måste	tar	nya	skriver	svenska
	parti	styrelsen	kina	kommun	folkomröstningen	få	universitet	östersjön	ledare	regionala
	johansson	ordförande	medan	barn	folkomröstning	regeringen	betalar	utsläppen	europiska	pengarna
	politik	ägare	breivik	projektet	london	volvo	behöver	ton	talet	per
	partierna	aktier	ser	visa	david	får	hela	utsläpp	boken	mål
	centern	anställda	dollar	kronor	stanna	svenska	spara	minska	nordiska	regioner
	statsminister	investering	kraftigt	projekt	parlamentet	auml;ven	ålder	världens	for	projekt
	menar	sas	kronan	eu:s	rösta	aring;r	systemet	hela	all	hela
	löfven	cirka	marknaden	dölj	röstade	här	professor	miljarder	musik	kommuner
	maria	bolagets	tillväxten	bildtext	landet	lån	procent	norska	svd	landet

Topic 0 - EMPLOYMENT: words associated with jobs and workforce development.

Topic 1 - INTERNATIONAL TRADE: Swedish trade with other large countries like USA and China.

Topic 2 - AUTO INDUSTRY INVESTMENTS: all associated with auto companies and investments.

Topic 3 - EUROPEAN FINANCIAL CRISIS: European countries and words associated with financial crises.

Topic 4 - RUSSIAN-WESTERN SUMMIT MEETING: Russian, Ukrainian and Western (Swedish and others) actors meeting for a summit.

Topic 5 - EXPERIENCE: words that are associated with experiencing/feeling things.

Topic 6 - EU COMMISSION: all words having to do with EU Commission and member states.

Topic 7 - SWEDISH FINANCIAL INVESTMENT: finance and investment words.

Topic 8 - SWEDISH-EU MUTUAL ECONOMIC INTEGRATION: words having to do with European and Swedish mutual economic integration.

Topic 9 - HUMAN RIGHTS FOR ASYLUM SEEKERS: all words about asylum seeking and EU values like democracy and human rights.

Topic 10 - SWEDISH GOVERNMENT PARTIES AND LEADERS: list of major Swedish parties and politicians, from 2002-2006 government.

Topic 11 - FINANCIAL INVESTMENT: financial investment list and Swedish companies.

Topic 12 - INTERNATIONAL CURRENCY & GROWTH COMPARISON: seems like words associated comparing economic development, growth and currencies across countries.

Topic 13 - PROJECTS FOR ROMA INCLUSION IN SWEDISH REGIONS impact of gypsy (Roma) migration into Swedish areas.

Topic 14 - BREXIT: Brexit list.

Topic 15 - AUTOMOBILE POLICY: list of Swedish auto companies and words associated with policy, plus noise.

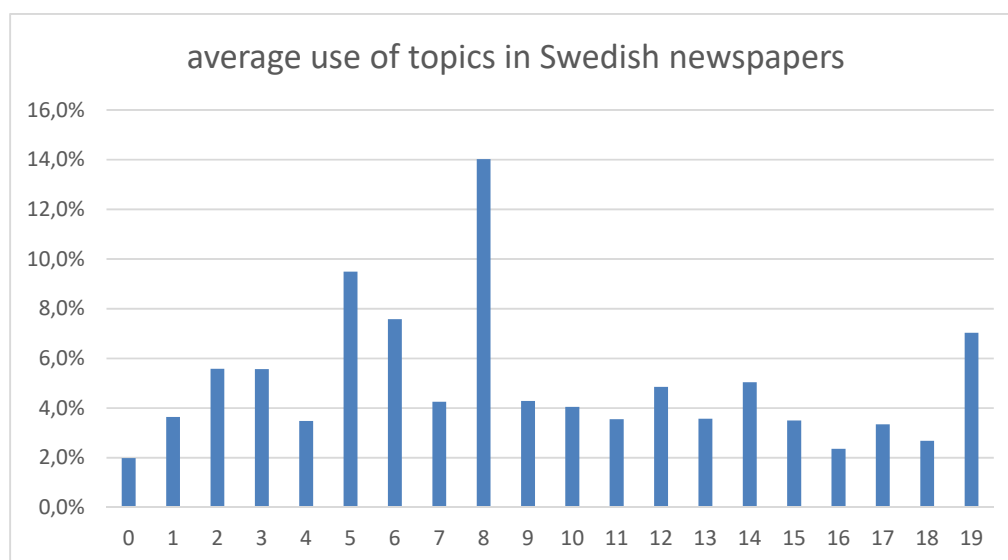
Topic 16 - SOCIAL WELFARE AND TAXES: list of social welfare policy key words.

Topic 17 – ENERGY AND ENVIRONMENT: all words having to do with energy, environment and costs associated.

Topic 18 - NORDIC CULTURE: Apart from the words in English, this topic is associated with Nordic culture.

Topic 19 - SWEDISH REGIONAL POLICY INVESTMENTS: financial words and words about projects, regions and Sweden.

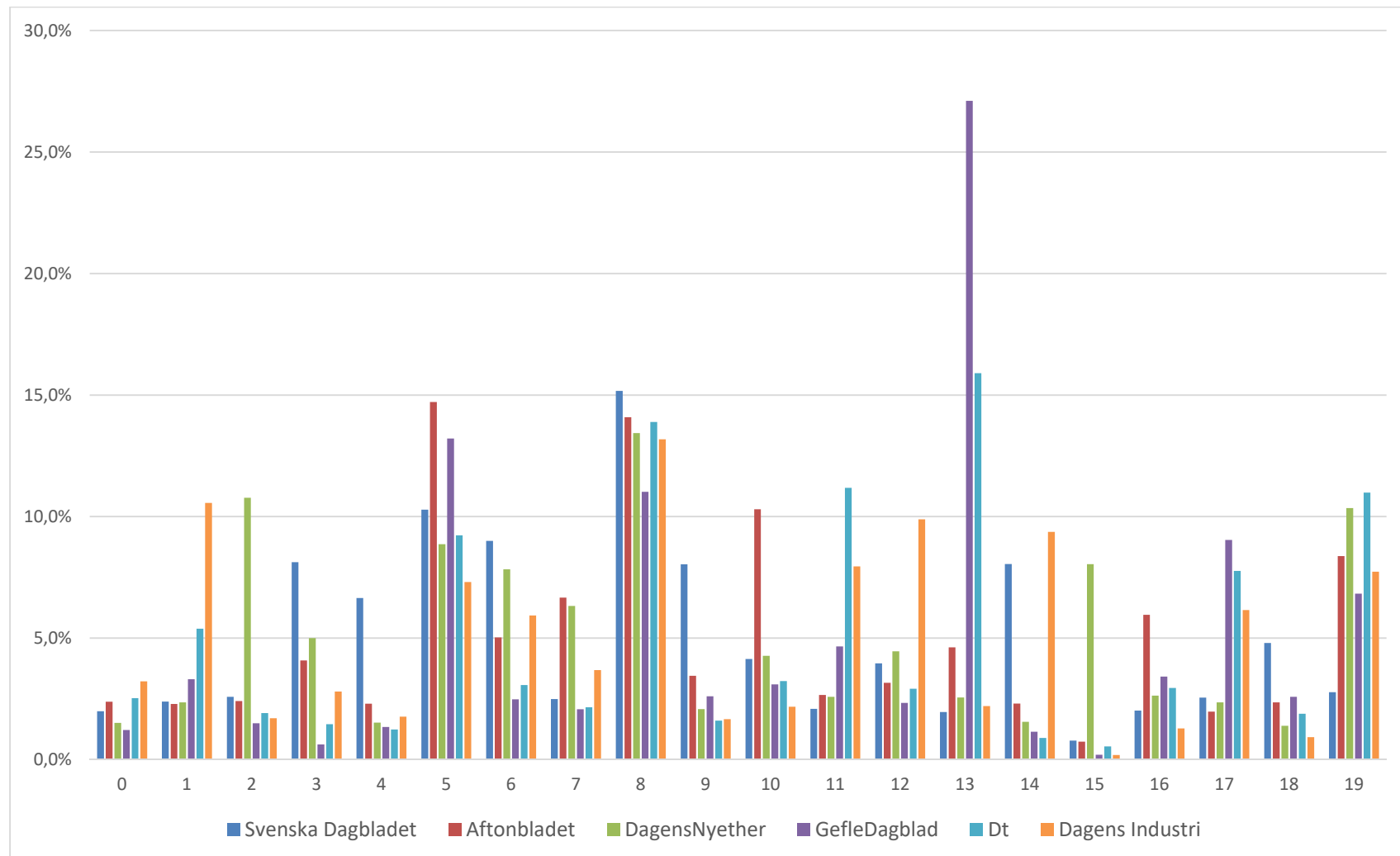
The topic that is mostly used in our sample of Swedish newspapers' articles is topic 8, which deals with Swedish-EU mutual economic integration. Another important topic is number 6, which is about the EU commission.



Topic 8, 19, and 5 are used by all the newspapers in our sample. Topic 8 is about the mutual economic integration of Sweden and the EU. Topic 19 is about Swedish regional policy investments, while topic 5 is related to experience. Then newspapers differ according to the use they make of other topics. Dagens Industri, the business newspaper, relies especially on topic 1, that is about international trade with large countries, and on topic 12, that is about development and growth across countries. Then, together with Dt, uses topic 11, about financial investments. Dagens Industri and Gefle Dagblat are the newspapers that are mostly using topic 14, which is about Brexit.

The national quality newspaper Svenska Dagbladet is the one that makes more use of topic 3, on the European Financial Crisis, topic 4, on a Russian-Western summit, and topic 9, regarding human rights for asylum seekers. Topic 13, that is about projects regarding gypsies in Swedish regions, is very important for Dt and Gefle Dagblad. These two newspapers, together with Dagens Industri, are the ones using topic 17, that is about energy and environment. Dagens Nyheter, the other regional newspaper, is the one that makes more use of topics 2, on auto industry investments, 15, on automobile policy, and 7, regarding Swedish financial investments. This topic is used as well by Aftonbladet, which most important topics are 16, on social welfare and taxes, and, even more, 10, that is the one dealing with Swedish government parties and leaders.

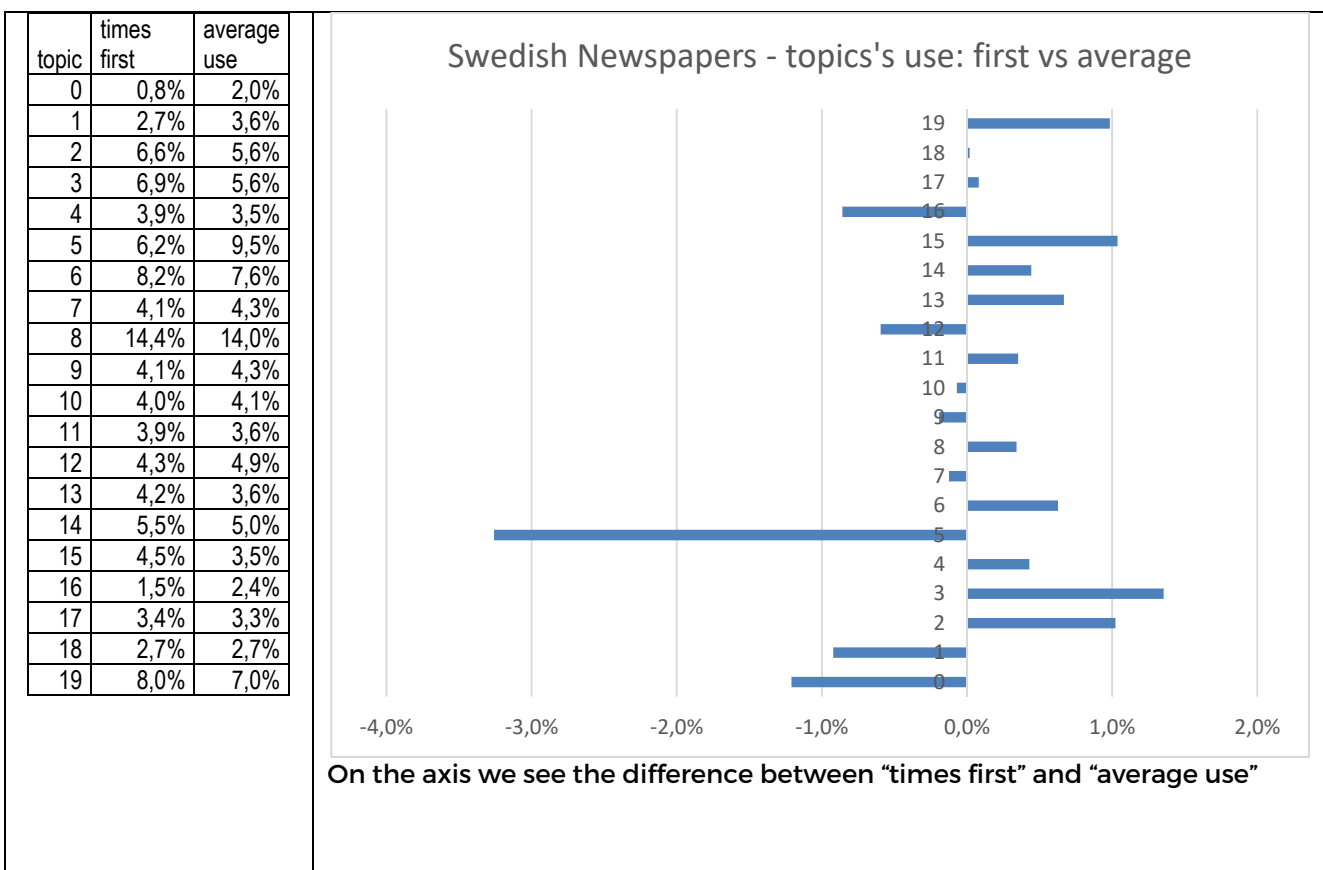
Average use of topics in Swedish Newspapers: break-up by newspaper



PERCEIVE DEL. 5.3: 'REPORT DISCUSSING THE EMERGENT TOPICS IN IDENTITY RELEVANT DISCOURSE AT DIFFERENT LEVELS'

Based on the following table and figure, which compare the average usage of a topic in our corpus of articles, and the number of times in which that topic is the most important for an article, we can understand whether a topic characterizes a debate, or is mainly used as a secondary topic that integrates discourses dominated by other topics. In the table on the left of the graph, for each topic, we report the percent usage of a topic ("average use") and the percent usage of a topic as a characterizing topic in the articles in which it appears ("times first"). In the graph, the value on the horizontal axis reports the difference between "times first" and "average use". Therefore, positive values on the axis highlight topics that more often characterize the articles in which they recur. Indeed, following Ferri *et al.* (2017), we can say that if a topic is widely used on average, but rarely is the most prevalent for articles, that topic is not a characterizing one. On the contrary, if a topic is on average used seldom, but when it is used is the most important for the articles in which it is used, then it really characterizes the sources where it is used.

The topic that most often characterizes text where it is used is topic number 3 that is about the European Financial crisis. In a similar situation are topics 2 and 15, regarding automobile's industry, and topic 19, that is about Swedish regional policy investments. Topic 5, somehow connected to the idea of experience, rarely is the most important for an article, but is often present in articles.



4.3.6 Spain

In the Romanian case we selected six newspapers, and searched through their archives with the following keywords: "(politica Regional) OR (politica* de cohesion) AND UE", "fondos estructurales", "fondos europeos and regional*", "fondos europeos regional", "politica de cohesion".⁷ The list of the newspapers follows, together with the number of articles that we analyzed for each source, after removing empty ones:

1. **El País**, as national quality newspapers: 1.767 articles analyzed
2. **EL Mundo**, as national quality newspaper: 2.827 articles analyzed
3. **Expansión**, as business newspaper: 1.428 articles analyzed
4. **Hoy**, as regional newspaper: 3.740 articles analyzed
5. **El Periódico**, as regional newspaper: 1.052 articles analyzed
6. **20 Minutos**, as tabloid: 39 articles analyzed.

We then developed a stopwords list, containing Polish words, that are not useful for eliciting the latent meaning space. Finally, we analyzed these articles through Mallet. Overall, our corpus of Polish newspapers consists of 3.612.314 words (excluding words in the stopwords list), the longest article is composed of 5.299 words. The following table presents a list of the 20 most important words for each topic, that we used, together with the colleague from UB, in order to make sense of each topic. Indeed, in this inductive phase of the analysis, we relied on the list of words per topic, and on the three most representative articles papers for each topic. Our interpretation of topics follows the table.

topic	0	1	2	3	4	5	6	7	8	9
20 most important words	ministro	más	más	empresas	personas	rural	fondos	partido	extremadura	más
	presidente	política	está	desarrollo	social	agricultura	caso	psoe	junta	españa
	europa	europa	ahora	proyectos	universidad	ayudas	comisión	política	region	economía
	europea	políticas	qué	fondos	más	sector	según	elecciones	ayer	crecimiento
	primer	europea	años	plan	sanidad	medio	tribunal	socialista	situacion	años
	país	social	mucho	programa	salud	desarrollo	empresa	socialistas	vara	mercado
	europeo	debe	menos	investigación	centros	agricultores	informe	popular	cohesion	año
	bruselas	modelo	están	sector	mujeres	pac	general	andalucía	presidente	sector
	gobierno	sistema	hecho	inversiones	sociales	ambiente	galicia	regional	también	española
	polonia	futuro	sino	infraestructuras	educación	euros	gestión	electoral	extremeño	mayor
	asuntos	unión	nada	innovación	servicios	más	pasado	candidato	financiacion	países
	política	ciudadanos	tan	inversión	centro	agraria	europeos	madrid	union	crisis
	años	mayor	decir	millones	educacion	campo	investigación	general	comision	también
	alemania	común	vez	empresarial	años	millones	euros	años	economica	pib
	exteriores	proceso	crisis	financiación	igualdad	zonas	parte	izquierda	monago	últimos
	comisario	ello	problema	economía	laboral	año	justicia	presidente	fernández	país
	parlamento	instituciones	parece	más	alumnos	pesca	había	secretario	gobierno	menos
	francia	económica	política	objetivo	calidad	ministerio	ayer	votos	hoy	aunque
	república	competencias	mismo	creación	además	medidas	también	parlamento	parte	informe
	francés	sino	momento	empresa	sistema	agrarias	trabajadores	partidos	social	empresas

⁷ Please see deliverable 5.2 for more details

PERCEIVE DEL. 5.3: 'REPORT DISCUSSING THE EMERGENT TOPICS IN IDENTITY RELEVANT DISCOURSE AT DIFFERENT LEVELS'

topic	10	11	12	13	14	15	16	17	18	19
20 most important words	millones	proyecto	españa	país	grecia	más	gobierno	león	comunidad	gobierno
	fondos	euros	países	guerra	deuda	años	zapatero	junta	valenciana	millones
	euros	millones	europea	internacional	europeo	día	presidente	castilla	agua	año
	más	obras	comisión	países	euro	madrid	rajoy	gobierno	generalitat	déficit
	regiones	ayuntamiento	unión	unidos	fondo	vida	españa	presidente	valencia	presupuestos
	ayudas	ciudad	fondos	seguridad	reformas	gran	josé	comunidad	trasvase	euros
	españa	fondos	propuesta	presidente	crecimiento	historia	rodríguez	ayer	gobierno	gasto
	fondo	centro	ampliación	más	medidas	año	ejecutivo	regional	ayer	medidas
	media	más	europeo	irak	crisis	también	psoe	herrera	medio	más
	europea	año	alemania	política	países	españa	crisis	valladolid	ambiente	cuentas
	periodo	también	bruselas	mundo	rescate	mundo	congreso	josé	camps	ley
	renta	infraestructuras	ayer	paz	banco	horas	partido	aseguró	presidente	fiscal
	objetivo	proyectos	política	rusia	millones	juan	cataluña	juan	europea	impuestos
	total	portugal	más	relaciones	fmi	cultura	líder	consejero	plan	sistema
	según	obra	estructurales	eeuu	gobierno	pueblo	luis	apoyo	ebro	ingresos
	regional	ave	acuerdo	turquía	españa	carlos	país	región	cataluña	reforma
	desarrollo	europeos	miembros	terrorismo	europea	hoy	también	dijo	fondos	público
	cohesión	alcalde	presupuesto	sur	estructurales	ciudad	mariano	también	proyecto	economía
	presupuesto	está	cohesión	nueva	presidente	personas	españoles	recordó	alicante	hacienda
	europeos	cáceres	francia	américa	economía	después	más	sólo	valenciano	ejecutivo

Topic 0 - POLITICSL BODIES: Main positions that take decisions in the European Commission. European political bodies of both the European Commission and member countries

Topic 1 - EUROPEAN POLICIES: European policies that should aim to increase European unity. Dimensions in which policies should be intensified (social, economic, institutional)

Topic 2 - NOISE

Topic 3 - AREAS AND KEY AGENTS TO BE DEVELOPED IN THE EU FRAMEWORK: The key players are companies, in terms of financing and business creation. Likewise, funds are required for development projects in research and infrastructure, especially.

Topic 4 - SOCIETY AND SERVICES: The social area stands out, with special attention to women, students, quality of work and equality. The key sectors in it are: health, education, university, and labor market.

Topic 5 - AGRARIAN SECTOR: Importance of the agricultural and fishing sector (and its workers), and its relationship with the environment. The aid-financing to it for its development is highlighted

Topic 6 - MISUSE OF EU FUNDING. This topic deals with judicial investigation on the diversion of money from the EU.

Topic 7 - SOCIALIST POLITICS: Topics related to the politicians of the left parties in general and socialist in particular, in its various facets: territorial (Madrid, Andalusia), organizational structure (candidates, presidents, secretaries), and elections.

Topic 8 - REGIONAL GOVERNMENT POLICIES IN EXTREMADURA: Topic related to the policies of the regional government of Extremadura, at the institutional level (parliament, commissions, and regional government-Junta de Extremadura), at the level of major issues to be addressed (cohesion, financing, economic situation), and at the level of specific politicians (presidents of the regional government-Junta de Extremadura)

Topic 9 - SPANISH ECONOMY: Analysis of the Spanish economy in recent years, analyzing both the crisis and the economic recovery. Analysis of sectors, companies and GDP.

Topic 10 – REGIONAL COHESION FUNDS: Analysis of European regional funds, both at the budgetary level and the funds provided to improve regional development and cohesion. Regional and comparative analysis with other regions, and the Spanish and European average.

Topic 11 – PROJECTS CO-FINANCED WITH FUNDS: Economic-financial analysis of projects related to specific cities financed by the European Union. They highlight specific issues (potentially fundable) associated with these funds such as high-speed train, infrastructure, ... in Extremadura.

Topic 12 – EUROPEAN POLICY RELATED TO COMMUNITY FUNDS: Analysis of the community policy, and its interlocutors, relating Spain with those agents (especially France and Germany, the European Commission) and its instruments (funds, and budget).

Topic 13 – INTERNATIONAL POLICY OF THE EUROPEAN UNION: Analysis of the relevant issues of foreign policy of the EU. In particular, the relations with specific countries (Iraq, Russia, USA, America), as well as with topics of interest (security, peace, terrorism, war) are analyzed.

Topic 14 – ECONOMIC CRISIS IN THE EU: Analysis of the relevant internal economic topics that took place in the recession period. The main topics discussed are the Greek situation, the debt incurred by the countries, the need for internal reforms, the existence of crises, bank rescues, etc. It also includes the vision of the IMF and the Spanish government

Topic 15 – NOISE: mostly related to media show schedule.

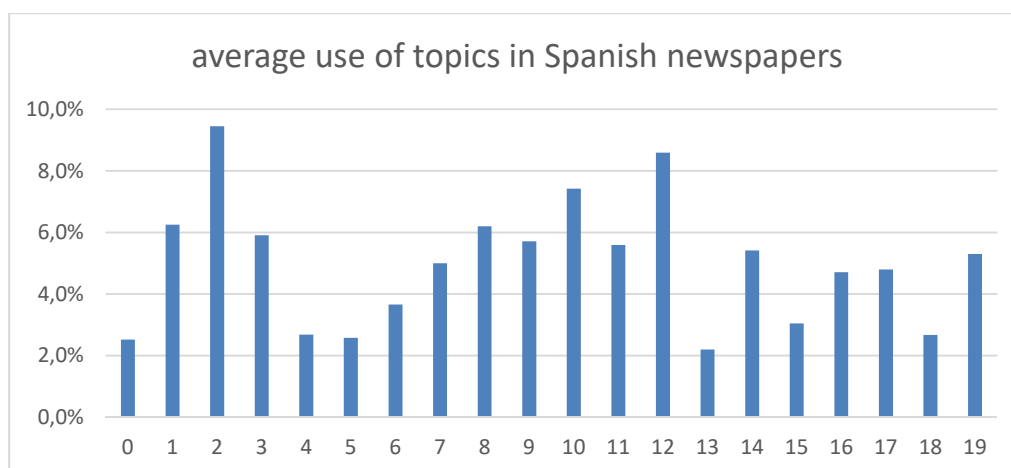
Topic 16 – SPANISH POLITICIANS, PRIME MINISTERS: There are references to the position of the last two presidents of the Spanish government (JL Rodríguez-Zapatero and Mariano Rajoy).

Topic 17 – POLICY OF THE JUNTA DE CASTILLA-LEÓN (REGIONAL GOVERNMENT): Analysis of the Junta de Castilla-León, autonomous community of Spain. Analysis of such region and the opinion of its representatives.

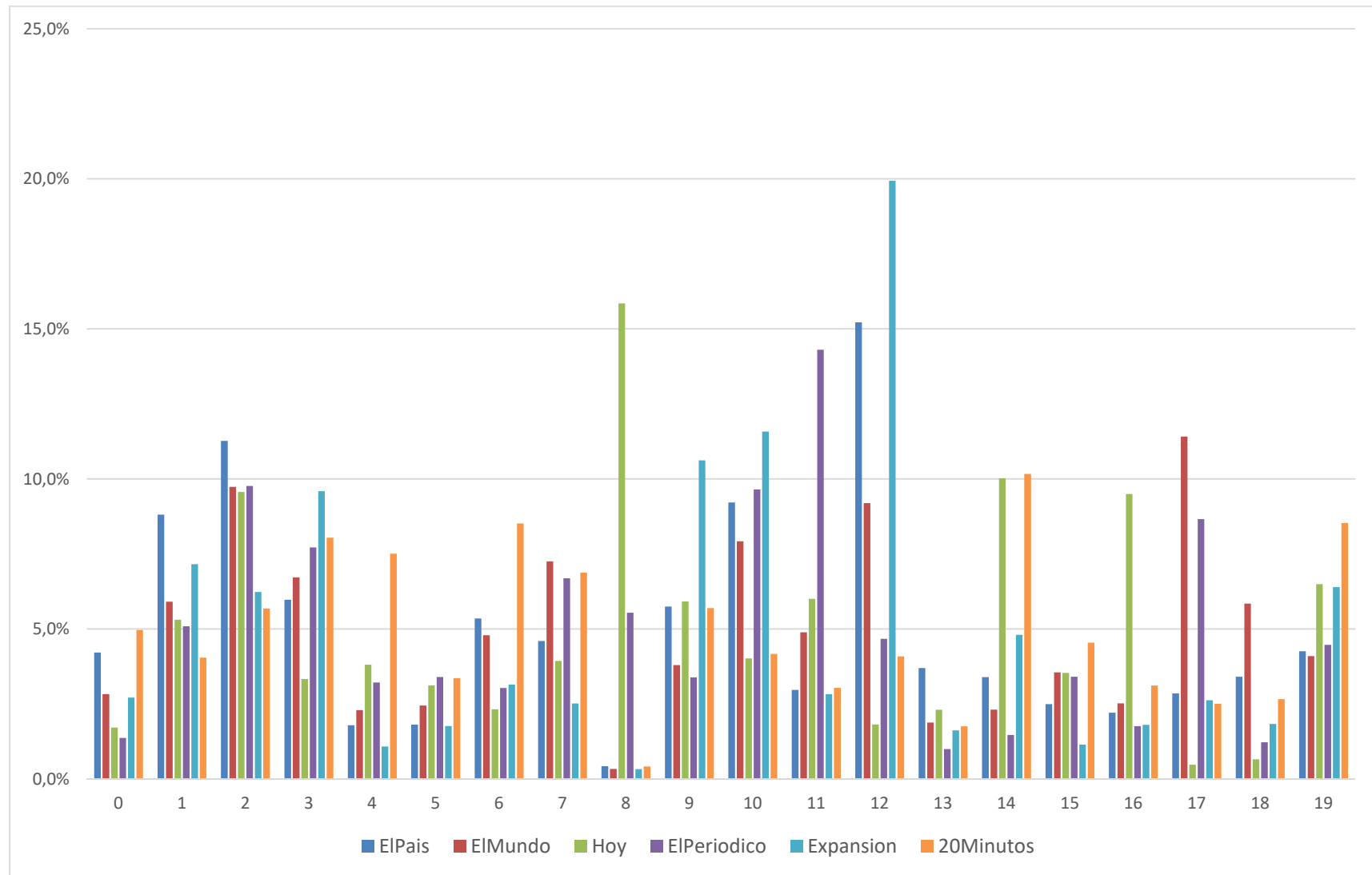
Topic 18 – POLITICS OF THE REGIONAL GOVERNMENT OF THE VALENCIAN COMMUNITY: Analysis of the regional policy carried out by the Generalitat Valenciana, autonomous community of Spain. Analysis of such region and the opinion of its representatives. Of special interest is the topic of water (transfer) and its relationship with the environment.

Topic 19 – ANALYSIS OF BUDGET ISSUES: Analysis of topics related to the financial situation, in its facets of income and expenses. Analysis of taxation, tax system, budget deficit, tax system, and its reform.

Excluding topics that collect noise, in order to improve other topics, the most important part of the debate is constituted by topic 12, which analyses the European Policy, as connected to Community funds. Here it is highlighted the relationship of Spain with other countries and European Institutions. Another important topic is 10, on Regional cohesion funds.



Average use of topics in Spanish Newspapers: break-up by newspaper



We can now analyze how the different newspapers make use of the topics. It is probably well expected that topic 8, that deals with Regional government policies in Extremadura, is used mostly (or almost completely) by the regional newspapers Hoy and El Periódico. This topic emphasizes policies of the regional government of Extremadura, issues to be tackled, and most important actors. Hoy, then, is the newspapers using more topic 16, which refers to Spanish national politicians, in particular former and actual prime ministers. Hoy and 20 minutos, then, are the newspapers that make most use of topic 14, that deals with the effect of the economic crisis in the European Union. El Periódico, instead, uses more topic 11, that is about projects co-finance with European funds.

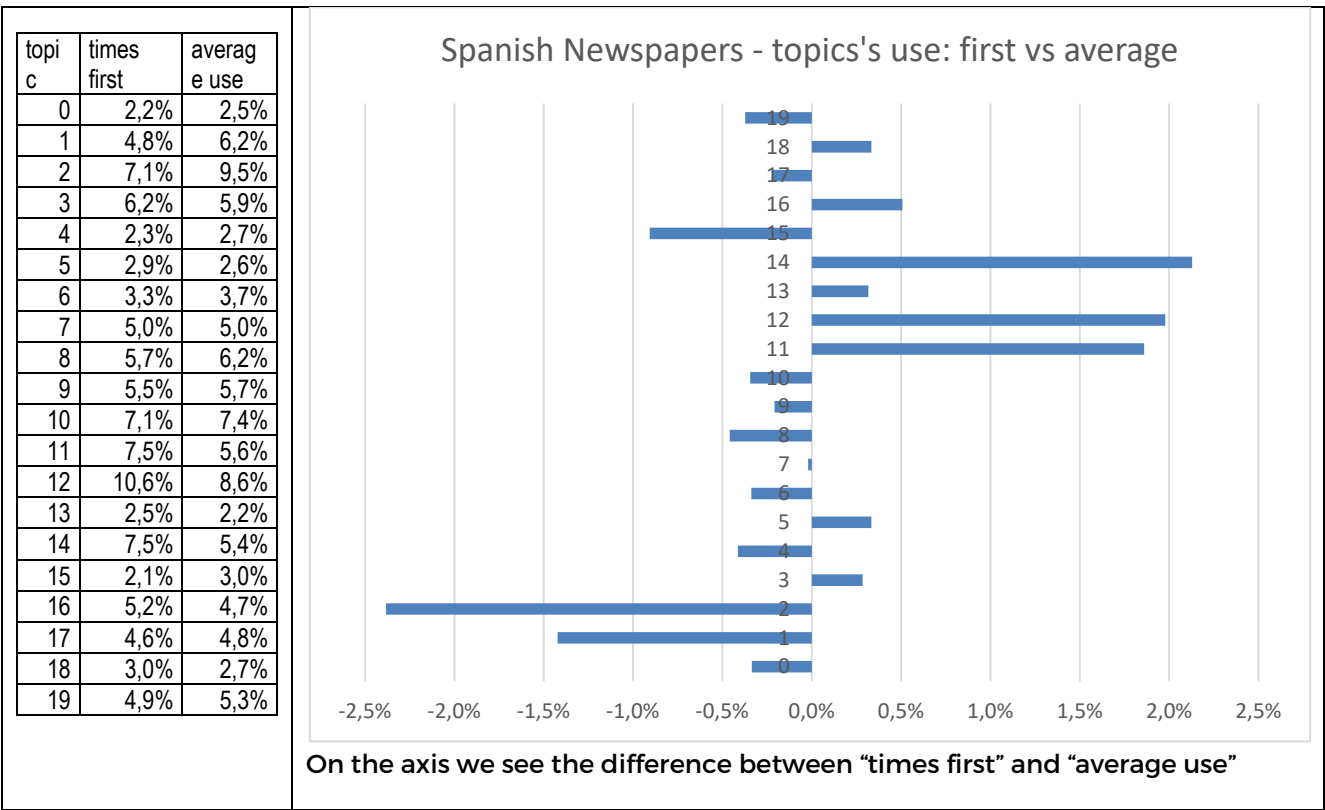
20 minutos is the newspaper that makes more use of topics 4 and 6. The former deals with society and services, with special attention to several socio-cultural sectors. Topic 6 is very interesting, as it is the one dealing with investigations and judicial actions on possible cases of corruption and misuse of European funds. 20 minutos is the paper that makes most use of topic 19, regarding analysis of budget issues. The business newspaper Expansión makes a vast use of topic 12, on European policy related to Community funds. Together with El País, then, Expansión is the one that relies more on topic 9, which is used to describe Spanish Economy. Several newspapers use topic 3, on agents and key areas to be developed in the EU framework, and topic 10, on Regional Cohesion Funds, but Expansión is the newspaper that is mostly using them.

Both the national quality newspapers have a balanced use of topics, but El País is the newspaper that is slightly more using topic 0, on political bodies, and topic 1, on European Policies. El Mundo, instead, focuses more on topic 17 and 18, which are respectively referring to the Policy of the Junta de Castilla-León and to the Politics of the regional government of the Valencian Community.

Based on the following table and figure, which compare the average usage of a topic in our corpus of articles, and the number of times in which that topic is the most important for an article, we can understand whether a topic characterizes a debate, or is mainly used as a secondary topic that integrate discourses dominated by other topics. In the table on the left of the graph, for each topic, we report the percent usage of a topic ("average use") and the percent usage of a topic as a characterizing topic in the articles in which it appears ("times first"). In the graph, the value on the horizontal axis reports the difference between "times first" and "average use". Therefore, positive values on the axis highlight topic that more often characterize the articles in which they recur. Indeed, following Ferri *et al.* (2017), we can say that if a topic is widely used on average, but rarely is the most prevalent for articles, that topic is not a characterizing one. On the contrary, if a topic is on average used seldom, but when it is used is the most important for the articles in which it is used, than it really characterizes the sources where it is used.

The topics that most often characterize texts where they are used are topics 14, that deals with the economic crisis in the EU, topic 12, on the European Policy related to community funds, and topic 11, on projects co-financed with funds.

PERCEIVE DEL. 5.3: 'REPORT DISCUSSING THE EMERGENT TOPICS IN IDENTITY RELEVANT DISCOURSE AT DIFFERENT LEVELS'



4.3.7 United Kingdom

In the case of the United Kingdom we selected six newspapers, and searched through their archives with the following keywords: "(eu or european union) and (structural fund* or structural investment*)", "(eu or european union) and fund* and regional", "(euro or eu or european) investment* or (euro or eu or european) fund*", "(european or EU) and (regional policy or regional policies)", "(funds and eu) or (funds and europe*)", "(investment* and europ*) or (investment* and eu)", "(regional polic* or cohesion polic*) and (eu or european union)", "cohesion policy or european cohesion or eu cohesion* or cohesion fund* or (cohesion and eu polic*)", "eu and structural fund*", "eu funds or european funds", "eu policy or european policy or europolicy", "investment* and region* and (european union)", "structural fund*" ⁸. The list of the newspapers follows, together with the number of articles that we analyzed for each source, after removing empty ones:

1. **The Guardian**, as national quality newspapers: 891 articles analyzed
2. **The times**, as national quality newspaper: 1.200 articles analyzed
3. **Financial Times**, as business newspaper: 1.334 articles analyzed
4. **The Echo**, as regional newspaper: 186 articles analyzed
5. **Brentwood Gazette**, as regional newspaper: 444 articles analyzed
6. **The Sun**, as tabloid: 614 articles analyzed.

We then developed a stopword list, containing English words, that are not useful for eliciting the latent meaning space. Finally, we analyzed these articles through Mallet. Overall, our corpus of english newspapers consists of 2.446.860 words (excluding words in the stopword list), the longest article is composed of 7.209 words. The following table presents a list of the 20 most important words for each topic, that we used, together with the colleague from PBS, in order to make sense of each topic. Indeed, in this inductive phase of the analysis, we relied on the list of words per topic, and on the three most representative articles papers for each topic. Our interpretation of topics follows the table.

⁸ Please see deliverable 5.2 for more details

PERCEIVE DEL. 5.3: 'REPORT DISCUSSING THE EMERGENT TOPICS IN IDENTITY RELEVANT DISCOURSE AT DIFFERENT LEVELS'

topic	0	1	2	3	4	5	6	7	8	9
20 most important words	lab	people	will	school	companies	will	will	european	party	european
	vote	time	tax	university	investment	time	russia	will	election	commission
	ireland	years	government	research	business	may	war	europe	french	government
	total	day	cent	education	market	need	security	states	political	funds
	irish	because	economic	students	funds	years	president	budget	government	money
	ukip	world	new	work	capital	political	international	countries	minister	report
	majority	home	year	schools	investors	europe	military	member	president	funding
	electorate	old	public	universities	fund	because	foreign	britain	france	public
	turnout	week	growth	new	financial	far	turkey	brussels	elections	year
	swing	life	economy	children	bank	change	people	new	spain	court
	member	family	regional	health	banks	must	world	commission	prime	aid
	hold	good	spending	year	european	good	police	union	leader	yesterday
	maj	man	business	funding	private	future	border	germany	spanish	rules
	elected	year	jobs	years	markets	less	peace	france	parliament	regional
	seat	big	budget	training	year	policy	russian	eu's	national	fund
	dublin	went	investment	people	sector	country	iraq	policy	parties	brussels
	seats	told	years	staff	cent	important	rights	funds	power	times
	former	british	sector	centre	equity	big	east	british	state	state
	votes	team	regions	science	company	better	ukraine	treaty	former	projects
	ind	days	labour	student	new	world	nato	president	voters	officials

topic	10	11	12	13	14	15	16	17	18	19
20 most important words	will	block-time	will	greece	will	trade	million	services	cent	block-time
	local	published-time	hall	greek	labour	world	cent	director	poland	published-time
	council	bst	brentwood	eurozone	brexit	china	pounds	executive	european	bst
	new	growth	club	debt	party	countries	group	chief	countries	gmt
	essex	markets	members	crisis	vote	energy	billion	community	year	will
	city	economy	church	bank	government	will	company	education	europe	updated-timeupdated
	london	year	meeting	european	britain	global	year	john	eastern	may
	people	will	road	will	referendum	oil	will	service	new	hash
	town	rate	saturday	banks	people	new	profits	professor	country	it's
	years	gmt	new	government	scotland	chinese	sales	formerly	polish	corbyn
	centre	market	group	euro	election	investment	page	london	central	photograph
	road	bank	details	finance	scottish	food	expected	david	foreign	today
	transport	prices	welcome	minister	leave	power	reported	officer	euros	don't
	area	hash	information	athens	may	industry	new	industry	economic	people
	residents	inflation	school	bailout	cameron	international	euro	head	will	minister
	airport	brexit	billericay	financial	conservative	india	shares	people	years	that's
	homes	data	village	imf	tory	climate	executive	chairman	region	government
	development	month	ingatestone	monetary	campaign	farmers	rise	royal	greece	i'm
	cities	expected	available	economic	david	emissions	deal	university	hungary	jeremy
	county	may	visit	german	minister	economic	british	business	funds	deal

Topic 0 - UK GENERAL ELECTION RESULTS 2005: the topic is the UK General Election results 2005 - breakdown by constituency - including total voter numbers, share of votes received and some information on those standing for election. Some repetition in 'corrections' to previously published results.

Topic 1 - NOISE: This array of words seems to be disconnected. It is difficult to elicit a topic.

Topic 2 - NATIONAL ECONOMY/FINANCE: This topic elicits the discourse concerning UK Budget announcements and industrial strategies announced by the UK government. Transcripts from the House of Commons

Topic 3 - NOISE: UNIVERSITY GUIDE: the collected articles report descriptions of academic programmes in UK.

Topic 4 - HEDGE FUNDS AND PRIVATE BANKING: Descriptions of the location and investment activities of hedge funds and private banking institutions. The topic captures the discourse on how change in European financial institutions influences the strategy of banks and hedge funds. For example, one article mentions how the growing pressure from regulators and tax authorities in the US and European Union push banks to move their operations in Asia. Another article compares the attitude of the German government towards the activity of hedge funds with that of, in general, the EU as a whole. The former is more prone to regulate the activity while the latter has refused to countenance tougher regulation.

Topic 5 - SUCCESSFUL INSTITUTIONS: Positive discussion of decisions made at the EU and other international organizations (e.g. IMF). The topic pulls together discourses that appreciate the role of international institutions. In this line, the topic emphasizes the role played by the institutions of European Union in preserving free trade. More specifically, the ability of politicians such as Barroso, Lamy, Monti and Delors is mentioned and their ability to stand for the principles underpinning the Union rather than abide to national interests and political pressures. The topic considers the concept of regional policy in a historical perspective, as the results of Delors' capacity to resist national interests.

Topic 6 - WORLD NEWS SHORT SUMMARIES: The topic reports world news and short summaries. These summaries often refer to EU. For example, EU regional policy commissioner quoted regarding funding for Pompeii archaeological site hit by flooding.

Topic 7 - UK REBATE: Negotiations of UK rebate in the context of EU enlargement and the Common Agricultural Policy (CAP). More specifically, the topic captures long-standing debates among members of the EU. Some articles, for example, report the quarrel between UK and France concerning "UK rebate". The rebate - defined by Chirac "the British cheque" - is the amount of EU funds that is given back to UK. This amount is the 66% of the difference between contributions to the EU budget and payments received by the EU. France, in the first decade of the 21st century suggested that these funds could be used to back roll EU's enlargement. On the other hand, UK used to bring up to France the large amount of EU funds directed to French farmers according to the Common Agricultural Policy.

Topic 8 - RIGHTWING / CONSERVATIVE MOVEMENT: The topic reports the discussion of the pan-European movement to the political right - the rise in popularity and election success - and how the established, or centre ground, parties are responding. Some discussion of Euro-skepticism, nationalism and xenophobia.

Topic 9 - AUDITING OF EU BUDGET: The topic captures discourses concerning errors, fraud, missing paperwork and missing money uncovered in EU funding by auditors. The articles collected as well report specific cases of structural funds mismanagement, for example, in the Scottish regions of Highlands and Islands.

Topic 10 - INVESTMENT IN ESSEX REGION: The topic reports of expected large investment projects in the Essex region. This includes "nature zones", logistical centers, city-centre redevelopment and infrastructure projects.

Topic 11 - FINANCIAL NEWS AND MARKET REPORTS: The topics pull together economics and financial news and market reports. Appears to be from Guardian 'business live' newsfeed.

Topic 12 - LOCAL EVENTS: Community announcements, social and charity event details from local news - mostly in the Billericay and Brentwood area.

Topic 13 - EUROZONE BAILOUTS: Discussion of the bailout of certain crisis hit countries in the EU. Some discussion of the wider ramifications of this and an emphasis on which countries would be paying the most.

Topic 14 - UK POLITICAL UPHEAVAL: The topic reports stories relating to the changing leadership and power struggles within UK politics. In particular, those relating to independence - Scotland from England, the Great Britain from the EU.

Topic 15 - TECHNOLOGICAL INNOVATION: The topic crystallizes a discourse on technological innovation in manufacturing. As examples, newspapers' articles report cases of technological innovation in manufacturing (motor industry) and the use of by-products (hazelnut shells). In the latter case, a connection with EU funds emerges. It is reported the case of the Italian chocolate producer - Ferrero - finding a way for putting waste hazelnut shells to practical use. The article reports a joint venture among Ferrero, the renewable packaging company Stora Enso and the German Research institute PTS to develop the so-called EcoPaper. The project is 50% funded by the European Union.

Topic 16 - NOISE: STOCK MARKET REPORTS: The topic reports a financial and economic discourse. A number of stock market reports are collected within the topic. In the discourse the EU recurs as an actor that may influence the value and the strategies of large firms. In one of the collected articles, for example, Neelie Kroes, the EU Competition Commissioner, claims that BT is being charged only a fraction of the business rates that it ought to pay. In this light, European Commission has an impact on BT, the UK's biggest telecoms group. Another article reports that "The European Commission is this week expected to propose "better co-ordinated management" of the European Union's oil and gas stocks to hedge against disruptions in supply". The case of Utilities British Energy is reported in another article that mentions a long-term aid package approved by the European Union.

Topic 17 - NEW YEARS HONOURS: The topic collects the New Year Honours list names new members of orders of chivalry and recipients of other official honours. This happens as part of the British honours system, on the 1st January (New Year's Day) every year.

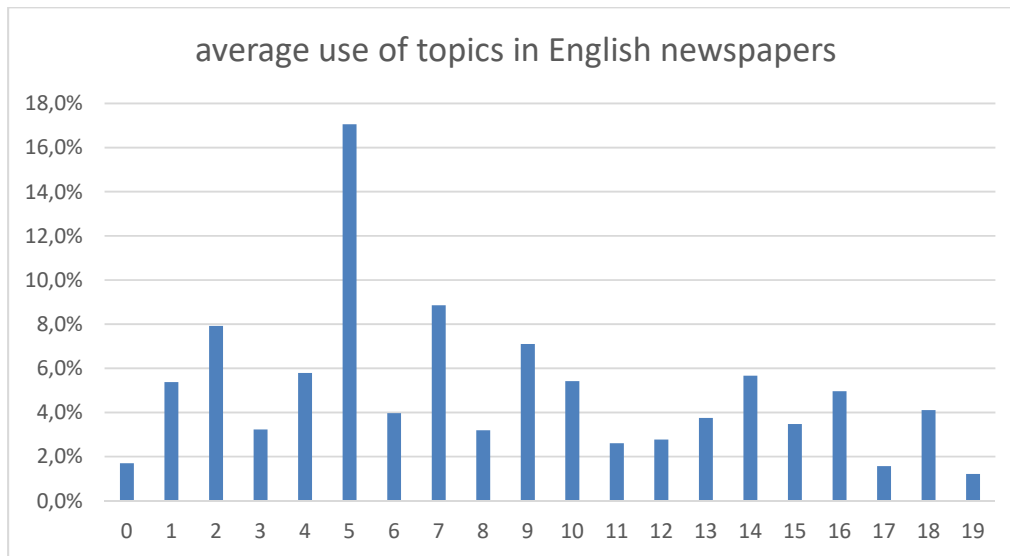
Topic 18 - EU ENLARGEMENT - CENTRAL AND EASTERN EUROPEAN COUNTRIES: The topic elicits discussion on various aspects of EU enlargement from the perspective of Central and Eastern European ascension states. For example, the potential impact of joining, the change from independence, the current transport links being funded by the EU, etc.

Topic 19 - PARIS CLIMATE SUMMIT: The topic reports the discourse on Paris Climate Summit - coverage of the talks and protests. The emphasis on the UK politician present, both as attendees and protestors. The discourse includes the debate on Scotland's vote to remain within the European Union.

The most prevalent topic in our sample is topic 5, which interestingly emphasizes in a positive way the role of EU and other institutions, such as IMF, in preserving free trade. The second topic, in terms of usage, is the number 7, that focuses on the negotiations of UK rebate in the context of EU enlargement and the CAP. Then we have topics 2 and 9. The former focuses on UK Budget announcements and industrial strategies announced by the UK government. These are transcripts

from the House of Commons. The latter topic, probably more interestingly, focuses on auditing of the EU budget and, in particular, on errors, fraud, missing paperwork and missing money uncovered in EU funding by auditors.

There are at least 10 topics that deals with EU and EU finding: topic 5, on successful institutions, topic 7, on UK rebate, topic 10, on the rise of rightwing parties across EU, topic 9, about EU budget, topic 10, about EU funded investments in Essex, topic 13, about Eurozone bailouts, topic 14, about UK politics, topic 15, about techno logical innovation, topic 16, about stock market, and topic 18, about EU enlargement.

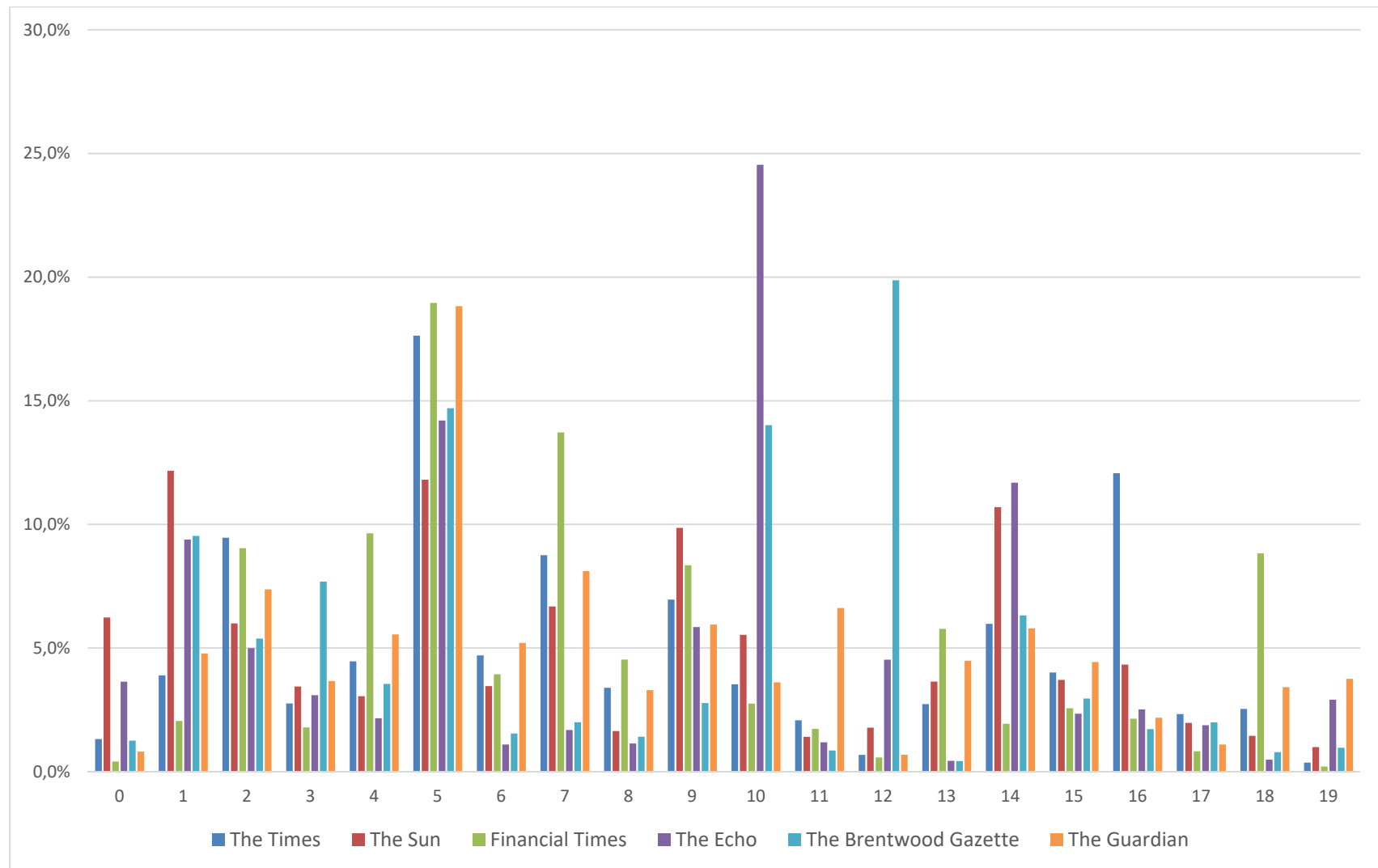


We can now focus on the different usage of topic by sources. Topic 5, that is the topic used most, is indeed used by all our sources. The business newspaper Financial Times uses most topics that are slightly used by regional newspapers The Echo and Brentwood Gazette. This the case of four topics: i) topic 18, that discusses various aspects of EU enlargement; ii) topic 13, that discusses the bailouts of certain crisis hit countries in the EU, iii) topic 8, that tackles the pan-European movement to the radical right, and iv) topic 7, that is about negotiations of UK rebate. Topic 4, on hedge funds and private bankings, is used by the Financial Times, but is present on other newspapers as well.

Regional newspapers are the most important users of topic 10, which deals with investments in Essex Regions. The Brentwood Gazette, then, makes use as well of topic 3 that deals with University and, most importantly, with topic 12, that deals with community announcements, and social and charity event details in the Billericay and Brentwood area. Almost 20% of our sample from the Brentwood Gazette is composed by this topic. The Echo, instead, together with the Sun, makes a wide use of topic 14, which is about stories related to political struggles and changing leaderships in UK politics. The tabloid The Sun is the newspapers that makes more use of topic 0, regarding 2005 UK general elections, and 1, loosely connected to EU funding.

Finally, we can say that both the national quality newspapers have a balanced use of the elicited topic. Yet, The Times has a prevalence on the use of topic 16, that is about stock market reports, while The Guardian has a prevalence on the use of topics 11, on financial news and market reports, and 19, regarding the Paris Climate Summit.

Average use of topics in English Newspapers: break-up by newspaper

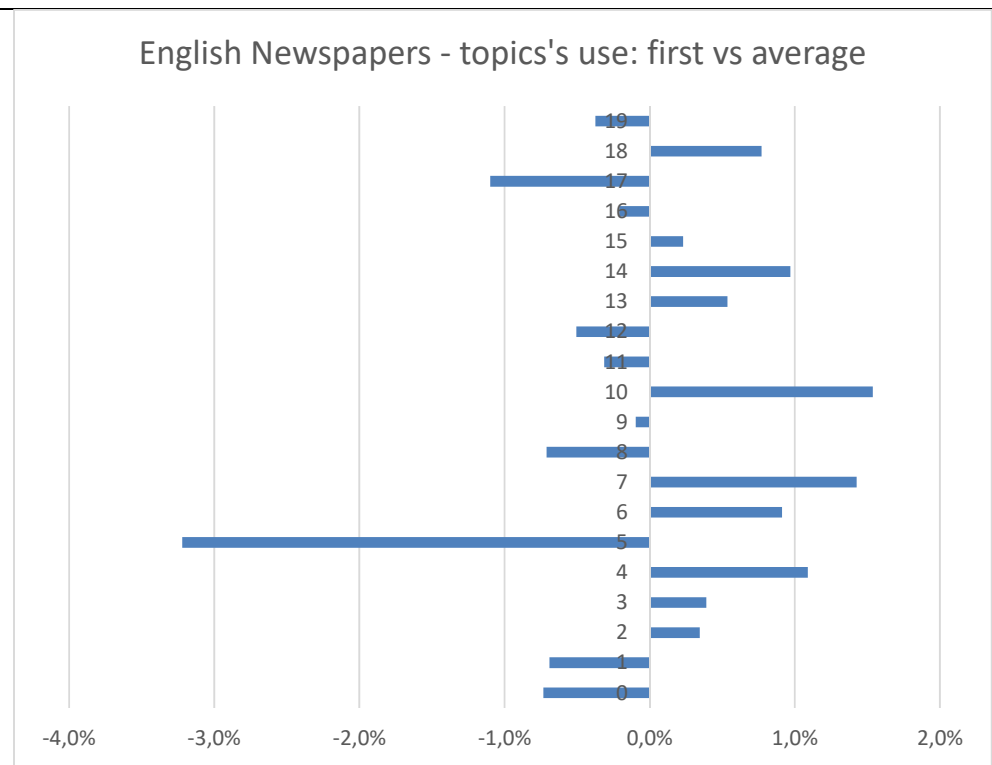


PERCEIVE DEL. 5.3: 'REPORT DISCUSSING THE EMERGENT TOPICS IN IDENTITY RELEVANT DISCOURSE AT DIFFERENT LEVELS'

Based on the following table and figure, which compare the average usage of a topic in our corpus of articles, and the number of times in which that topic is the most important for an article, we can understand whether a topic characterizes a debate, or is mainly used as a secondary topic that integrates discourses dominated by other topics. In the table on the left of the graph, for each topic, we report the percent usage of a topic ("average use") and the percent usage of a topic as a characterizing topic in the articles in which it appears ("times first"). In the graph, the value on the horizontal axis reports the difference between "times first" and "average use". Therefore, positive values on the axis highlight topics that more often characterize the articles in which they recur. Indeed, following Ferri *et al.* (2017), we can say that if a topic is widely used on average, but rarely is the most prevalent for articles, that topic is not a characterizing one. On the contrary, if a topic is on average used seldom, but when it is used is the most important for the articles in which it is used, then it really characterizes the sources where it is used.

Among the characterizing topics in our sample we find topic number 10, which regards investments in Essex, Topic 7, about UK rebate, topic 14, about political struggles within UK politics, and topic 4, on hedge funds and private banking. On the contrary, topic 5, the most used topic in the whole sample, tends to be used in all the discourses, being its average use higher than the number of times it is the most important topic.

topic	times first	average use
0	1,0%	1,7%
1	4,7%	5,4%
2	8,3%	7,9%
3	3,6%	3,2%
4	6,9%	5,8%
5	13,8%	17,1%
6	4,9%	4,0%
7	10,3%	8,9%
8	2,5%	3,2%
9	7,0%	7,1%
10	7,0%	5,4%
11	2,3%	2,6%
12	2,3%	2,8%
13	4,3%	3,7%
14	6,6%	5,7%
15	3,7%	3,5%
16	4,8%	5,0%
17	0,5%	1,6%
18	4,9%	4,1%
19	0,8%	1,2%



On the axis we see the difference between "times first" and "average use"

4.4 Social media: Facebook

The last level of analysis regards social media and, in particular, Facebook. For each Local Managing Authority in the selected case study regions, we downloaded all the posts and comments in their Facebook profiles to elicit the content of the discourses enacted by institutions, through posts, and citizens, through comments. In the following paragraph we will describe the results of the analysis, case by case. Only in UK LMAs did not have an official Facebook profile, so it was not possible to collect data. Finally, we collected Facebook posts and comments from official pages owned by European Institutions dealing with Cohesion Policy, and from our own Facebook profiles. The analysis of these data is in the last paragraph.

4.4.1 Italy

In reference to the Italian case, we downloaded posts and comments from two sources, which are involved in the managing of EU funds:

- Regione Emilia Romagna. In this case, the local managing authority does not have a specific Facebook Profile for the management and communication of Cohesion Policy. Instead, the general profile of the Region is used.
- Regione Calabria POR. This is the specific profile, managed by Regione Calabria, that deals with communication and managing of European funds under Cohesion Policy.

After removing words contained in the same stopword list that we used for newspapers, we analyzed both posts and comments. Overall, our corpus consists of 190.499 words, and the longest source is composed by 1.559 words. The following table presents a list of the 20 most important words for each topic, that we used to make sense of each topic. Indeed, in this inductive phase of the analysis, we relied on the list of words per topic, and on the three most representative comments/posts for each topic. The interpretation of topics follows the table.

PERCEIVE DEL. 5.3: 'REPORT DISCUSSING THE EMERGENT TOPICS IN IDENTITY RELEVANT DISCOURSE AT DIFFERENT LEVELS'

topic	0	1	2	3	4	5	6	7	8	9
20 most important words	bonaccini	c'è	terremoto	salute	rifiuti	emilia	regione	zanzare	regione	bambini
	stefano	anni	sisma	sanità	già	comune	eventi	cittadini	così	vaccini
	bologna	già	ricostruzione	azienda	treni	bologna	musica	può	dare	figli
	presidente	tempo	presidente	usl	raccolta	reggio	programma	possono	soldi	vaccino
	emilia-romagna	vero	errani	tempi	nuovi	modena	sito	comune	parole	genitori
	http://bit.ly	casa	regione	servizio	servizio	romagna	cinema	zanzara	romagna	può
	notizia	lavoro	vasco	regione	primi	parma	teatro	problema	risposta	nido
	leggi	perché	colpiti	sanitario	trasporto	ferrara	cultura	lotta	italiani	così
	regione	soldi	maggio	venturi	linea	piacenza	completo	comuni	giorno	contro
	corriere	vuole	colpite	esami	anni	rimini	festival	tigre	spero	vaccinati
	resto	può	contributo	aziende	donini	ravenna	edizione	acqua	bisogno	malattie
	carlino	pubblici	commissario	sanitarie	differenziata	provincia	iniziative	disinfestazione	speriamo	vaccinazioni
	repubblica	mesi	comuni	persone	treno	http://bit.ly	emilia-romagna	l'attenzione	persone	anni
	gazzetta	anno	zone	cittadini	pubblico	regione	incontri	anno	tante	figlio
	nuova	scritto	conto	visite	nuovo	sport	calendario	caso	buona	c'è
	costi	lavorare	mirandola	visita	mese	nuova	luglio	pubbliche	bella	sistema
	stampa	vanno	fondi	giorni	mezzi	igp	appuntamenti	fine	casa	ricordo
	l'assessore	giro	case	medico	dicembre	dop	maggio	mettere	credo	famiglie
	agenzia	dipendenti	comune	sangue	bici	forlì	bologna	momento	anni	vaccinazione
	andrea	strada	edifici	medici	mobilità	coppa	manifestazione	anni	presto	legge

topic	10	11	12	13	14	15	16	17	18	19
20 most important words	expo	bologna	informazioni	calabria	lavoro	euro	civile	regione	www.youtube.com/watch?v	comuni
	milano	regione	bando	imprese	giovani	milioni	protezione	emilia-romagna	grande	voto
	italia	scuola	domande	regione	formazione	regione	regionale	regionale	complimenti	sito
	turismo	diretta	numero	ricerca	persone	risorse	gazzolo	http://bit.ly	bravi	elezioni
	emilia-romagna	emilia-romagna	sito	por	anni	interventi	maltempo	legge	buon	risultati
	regione	università	verde	europea	dati	progetti	paola	notizia	forza	cittadini
	prodotti	giornata	online	sviluppo	regione	imprese	comuni	leggi	cuore	nuovo
	agricoltura	studenti	può	calabriaeuropa .regione.calabria .it/website/view/ news	sociale	bando	regione	legislativa	lombardia	regionali
	http://bit.ly	scuole	servizi	regionale	corsi	emilia-romagna	province	servizi	mille	votare
	territorio	presso	domanda	bandi	posti	http://bit.ly	territorio	giunta	gioiosa	domenica
	caselli	studio	presentazione	sistema	lavoratori	fondi	nazionale	associazioni	veneto	presidente
	padiglione	progetto	possono	programma	percorsi	comuni	provincia	territorio	regioni	sindaco
	simona	web	pagina	programmazione	occupazione	territorio	volontari	petitti	emiliani	caso
	rer	programma	partecipare	scopri	reddito	servizi	danni	contro	ottimo	italia
	puntata	convegno	sezione	innovazione	attività	entro	interventi	emma	jonica	notizie
	food	video	pubblico	fesr	rapporto	regionale	emergenza	progetto	città	cittadino

PERCEIVE DEL. 5.3: 'REPORT DISCUSSING THE EMERGENT TOPICS IN IDENTITY RELEVANT DISCOURSE AT DIFFERENT LEVELS'

	expodavicino	lavori	modalità	opportunità	emilia-romagna	piano	già	donne	san	politica
	dell'emilia-romagna	regionale	buongiorno	europeo	crescita	contributi	sicurezza	l'assessore	l'emilia	stessa
	valley	marzo	servizio	commissione	famiglie	regionali	aree	piano	agosto	può
	mondo	scolastico	entro	progetti	imprese	domande	giorni	lavoro	risultato	piace

Topic 0 - REGIONAL POLITICS IN EMILIA ROMAGNA: The topic reports the debate on the politics of the Emilia Romagna politics and the connected debate on the political administration of the city of Bologna, the region capital. The name of the president of the region's administration recurs (Bonaccini). More specifically, the topic associates issue of local politics to media. Names of newspapers and media agencies are mentioned.

Topic 1 - GENERAL COMPLAINTS: This topic collects words used in general complaints pointed at LMAs. In example, the comment most coded at this topic is: "what a nice idea to throw away money! Did you ask for our opinion before doing this stupid thing?"

Topic 2 - EUROPE AND THE EARTHQUAKE: The topic mentions structural fund in the light of the debate that followed the allocation of structural funds to support the Italian areas interested by earthquakes in recent years.

Topic 3 - HEALTH CARE ADMINISTRATION: The topic addresses the debate on health care administration. Words such as "test", "blood", "doctor", "prevention", "health" and "health caring" are associated to "regional" and to the word "ticket", this latter pointing at the controversial introduction of a "payment" that citizens need to do to cover portions of caring expenses. The topic captures the debate on the choice to associate private and state health care.

Topic 4 - INFRASTRUCTURES: The topic reports the debate on the local management of a number of typically challenging issues. Recurring themes in the topic are transportation, train, garbage collection and recycling.

Topic 5 - EMILIA ROMAGNA REGION: The topic collects names and labels that refer to towns in Emilia Romagna. Interestingly, however, to the sequence of names of geographical locations, words that refer to local specific characteristics follow. The word "dop" is mentioned that refers to the labelling of wines to indicate their specific local origin, or their terroir. The word "igp" is also reported that refers to the labelling of food to indicate their geographical origin. Both "dop" and "igp" labelling systems are assigned by the European Union. In addition, the topic includes the label "food & wine" and the word "enogastronomic". This association of words suggests that the collection of geographical indications are used in texts in which local specificities are described in the context of the labelling systems at work in the European Union.

Topic 6 - LOCAL CULTURAL POLICY: The topic mentions an array of cultural activities typically managed, funded, sponsored or patrocinised by local authorities. The topic seems to represents the communication of the cultural policy or, in general, the cultural activity of regional authorities.

Topic 7 - DISINFESTATION: The topic repots a recurring debate that relates to the management of disinfestation. Typically, in the summer, local adminsitratons face the reactions of citizens to the real or perceived increase in mosquitos. Often, administrations cut in expenses for disinfestation and citiznes suffer increase in mosquitos. However, at times, citizensi commplaints are not justified by real cut in expenses for disinfestation. Recently, the debate on a new species of mosquitos animated the debate. The so called "tiger-mosquitos", an apparently more aggressive mosquitos, started in the last decade to populate Italian regions creating concern and attention. Interestingly, the debate on mosuitos, far from being politically neutral, is loaded with political meaning. In particular, the fear of the "tiger-mosquitos" came to crystallise, and symbolise, the menace stemming from the invasion of exotic forms of life. The mosquitos is a symbol for the threat that comes from weakened borders.

The danger of a physical contagion from the mosquitos, which is mentioned in the topic, in the public political discourse, is the most visible example of the need to be protected within own borders. In this light, the debate on contagion often veils xenophobic attitudes towards the openness of borders.

Topic 8 - SPECIFIC COMPLAINTS: This topic collects words used in complaints, mostly referred to Regione Emilia Romagna, on specific activities or decisions taken by the Region. In example, the first comment want Emilia Romagna to publish a specific budget referred to the activities of reconstruction after the 2012 earthquake. The second comments complaints about specific activities adopted to foster the development of a town in the Appennini.

Topic 9 - VACCINE: The topic picks up another recent debate that was at the centre of public debate in recent months. The issue regards associations of parents that gave rise to a grass-root social movements to abolish the mandatory vaccine for children in primary school. The movement based their protest on allegedly scientific researches that claim to have proven the role of specific vaccines in the development of particular dangerous health problems.

Topic 10 - EMILIA ROMAGNA AND THE EXPO: The topic captures the debate that took place in Emilia Romagna in reference to the Expo world fair based in Milano in 2015. The topic reports discourse on food and agricultural products. The word "quality", "culture" and "excellence" point at the role of Emilia Romagna in the presentation of Italian culture at the Milano Expo. As well, a number of words revolve around the issue of tourism suggesting that the topic covers the relationship between the EXPO and the opportunity for Emilia Romagna region to foster the economic activity connected to foreign tourism.

Topic 11 - LOCAL EDUCATION POLICY: The topic reports debate on education. It refers to specific initiatives, such as conferences and workshops, on education. Both graduate and post-graduate education is mentioned.

Topic 12 - MANAGING STRUCTURAL FUNDS IN CALABRIA: The topic gathers words that refer to the management of structural funds. Words such as "submission of application", "call", "application"; "information", "web site", "rules of participation" and URP, which is the acronym for the office in charge of the relationships with citizens. Interestingly, the topic seems to speak to the problem of communication between local managing authorities and citizens. The explicit reference to the web site of Calabria region suggest that the topic is especially connected to text collected in the region.

Topic 13 - USING STRUCTURAL FUNDS IN CALABRIA: The topic collects words that refer both to technical issues connected to structural funds and to words that describe research, innovation and economic activity. For example, among the technical terms, are "calls", "POR" (acronym for regional operative programmes), "FESR" (italian acronym for European Regional Development Fund) and "programming period". On the other hand, the technical terms are associated to words such as "enterprises", "research", "opportunity", "development", "projects" and "innovation". In the topic the explicit connection to the European Union emerges in the words "European" and "Commission". The explicit reference to the web site of Calabria region suggests that the topic is especially connected to text collected in the region.

Topic 14 - YOUTH UNEMPLOYMENT: The topic describes debate around youth unemployment at local level. In the debate, an association emerges between training programmes and employment. The reference to Emilia Romagna suggests that the texts that talk about youth unemployment were collected mostly in the region.

Topic 15 - USING STRUCTURAL FUNDS IN EMILIA ROMAGNA: The topic collects words that generally describe the opportunities for funding such as "millions", "Euro", "funds" and "calls". To these words, words that describe research, innovation and economic activity are associated. For example, the

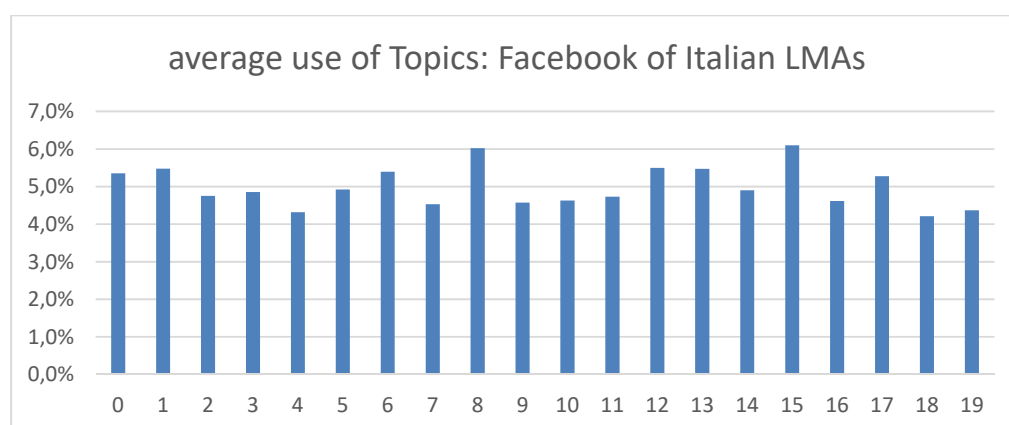
topic includes words such as "enterprises", "resources", and "projects". The reference to Emilia Romagna region suggests that the topic is especially connected to text collected in the region.

Topic 16 - PAOLA GAZZOLO: The topic seems to refer specifically to the political discourse held by Paola Gazzola in her Facebook page and shared by the LMa's page. Paola Gazzola is the responsible for the protection of the territory and the coast of Emilia Romagna region. Words such as "emergency", "bad weather", "security" and "territory" speaks to the specific area of political and administrative activity or Paola Gazzola.

Topic 17 - GENDER EQUALITY: This topic mainly advertises regarding action, taken by Regione Emilia Romagna in order to pronote gender equality.

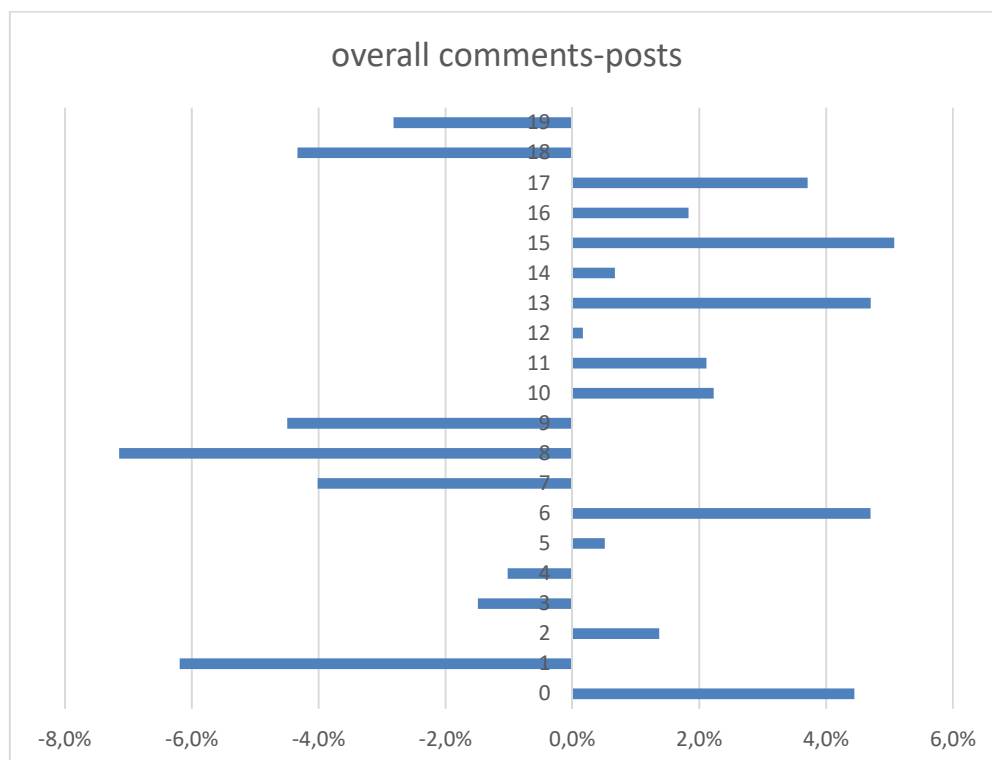
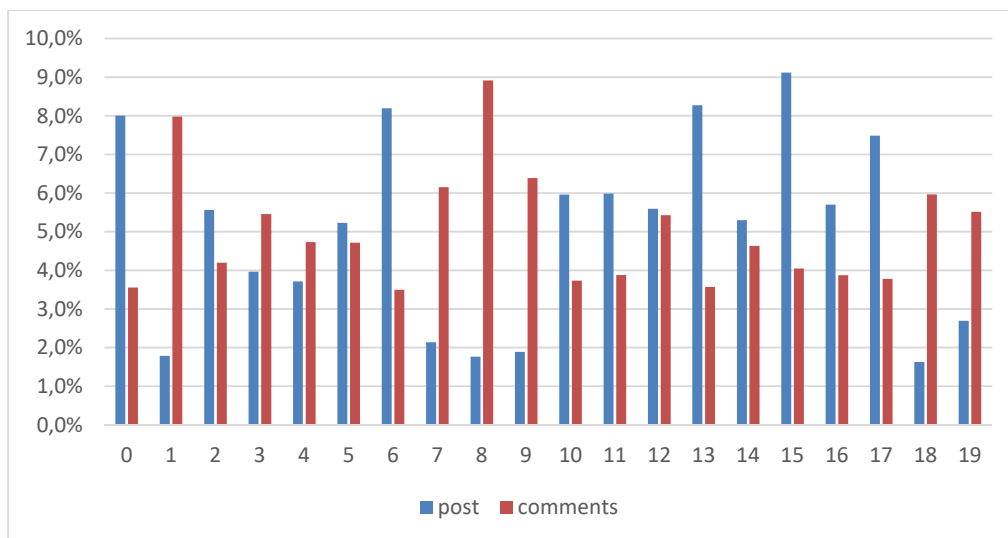
Topic 18 - NOISE

Topic 19 - REGIONAL VOTING: The topic reports the discourse on specifici election held in Emilia Romagna region. "Votes", "election" and "results" are the most important words that characterise the topic.



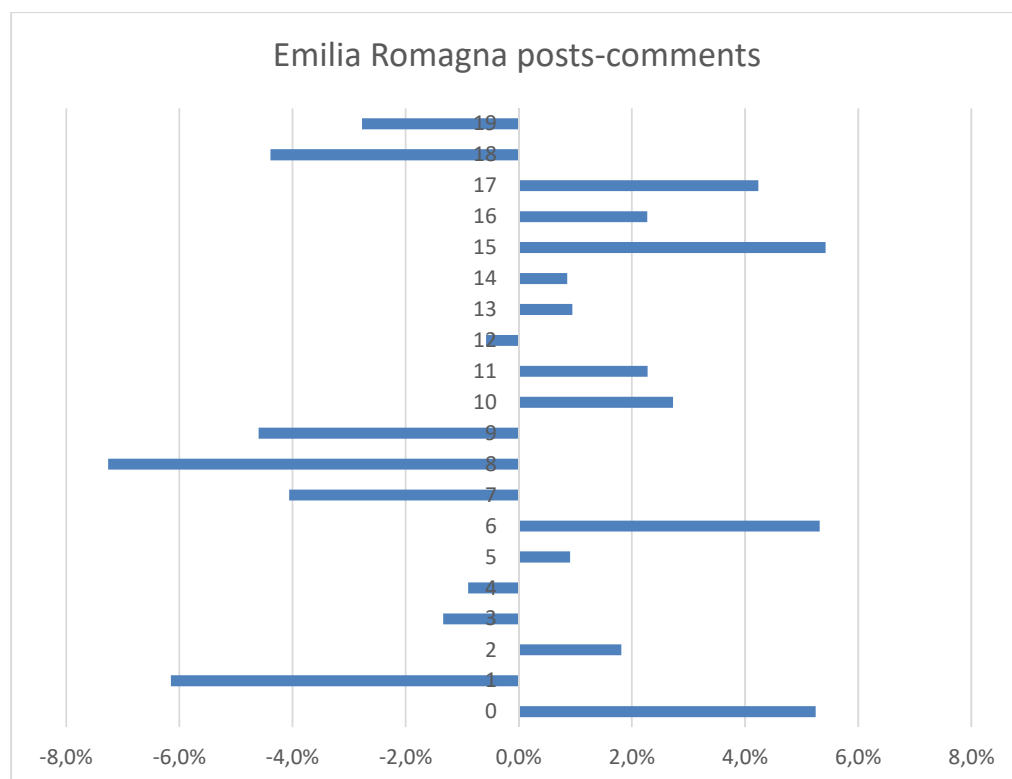
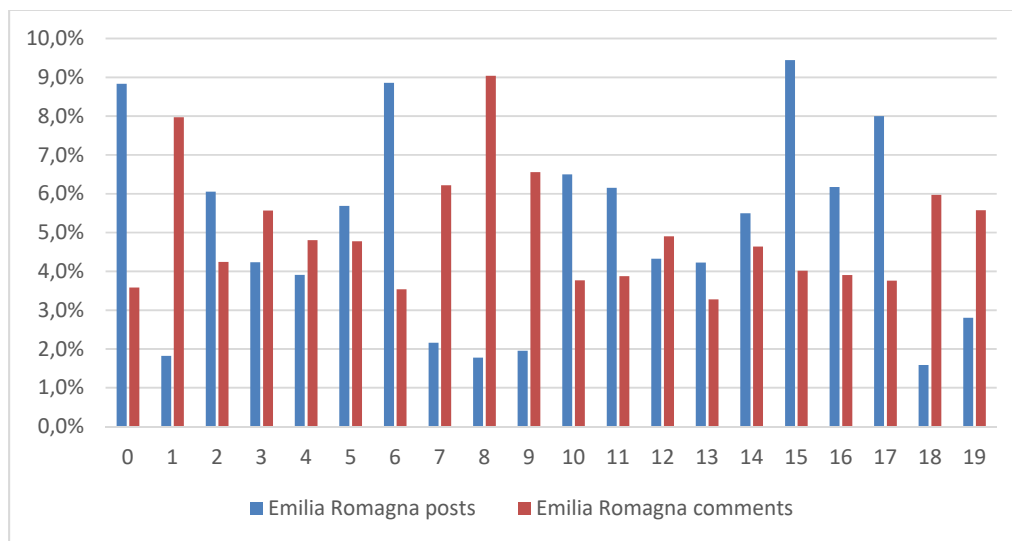
Overall, topics' usage is quite balanced, with almost all the topics constituting on average between 4.5% and 6% of the debate. It is then more interesting to focus on the different usage of topics by posts and comments. If we analyze the following two figures, we can notice that posts mostly rely on topics 0, 6, 13, and 15. Topic 0 is about regional politics in Emilia Romagna. Topic 6 is about cultural activities supported by institutions. Topics 13 and topic 15 regards, respectively, the use of structural funds in Regione Emilia Romagna and in Regione Calabria. Comments are mostly composed by topic 8, that collects specific complaints, and topic 1, that collects generic complaints. Other topic that are relevant for comments are topic 7, 9, and 19: these are topics about disinfestations, vaccines, and regional votes. These themes are three issues that engendered heated debates between adverse factions.

PERCEIVE DEL. 5.3: 'REPORT DISCUSSING THE EMERGENT TOPICS IN IDENTITY RELEVANT DISCOURSE AT DIFFERENT LEVELS'



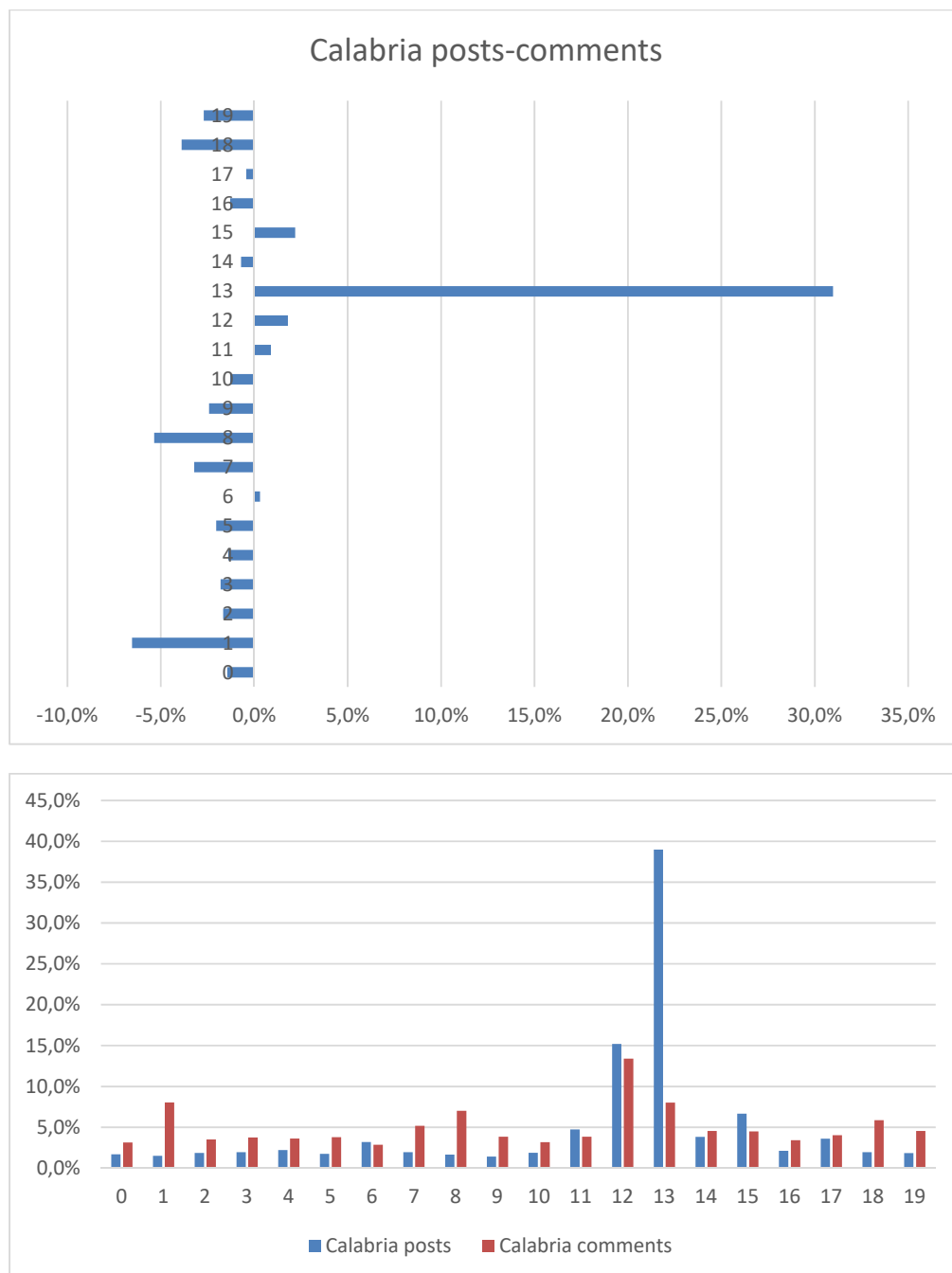
If we move to the analysis of the regional Facebook profiles, we can notice that the analysis for Emilia Romagna's Facebook basically mirrors the one that we just made for the overall sample: both topics most used for comments and for posts are the ones that we just described.

PERCEIVE DEL. 5.3: 'REPORT DISCUSSING THE EMERGENT TOPICS IN IDENTITY RELEVANT DISCOURSE AT DIFFERENT LEVELS'



The situation in Calabria is quite different: comments keeps being based mainly of topics 1 and 8, which refer to generic and specific complaints. While specific complaint were more important in the case of Emilia Romagna, though, here the topic that collect generic complaints is more prevalent. Regarding institutional communication is widely based on topic 13, that refer to the use of structural funds in Regione Calabria. This topic refers both to technical issues connected to structural funds and to words that describe research, innovation and economic activity. The explicit reference to the web site of Calabria region, that we noted, confirms the usage made of this topic by the same Regione. Other topics, which are used for posts in Calabria's Facebook, are 11, on local education policy, 12, on managing structural funds in Calabria, and 15, on using structural funds in

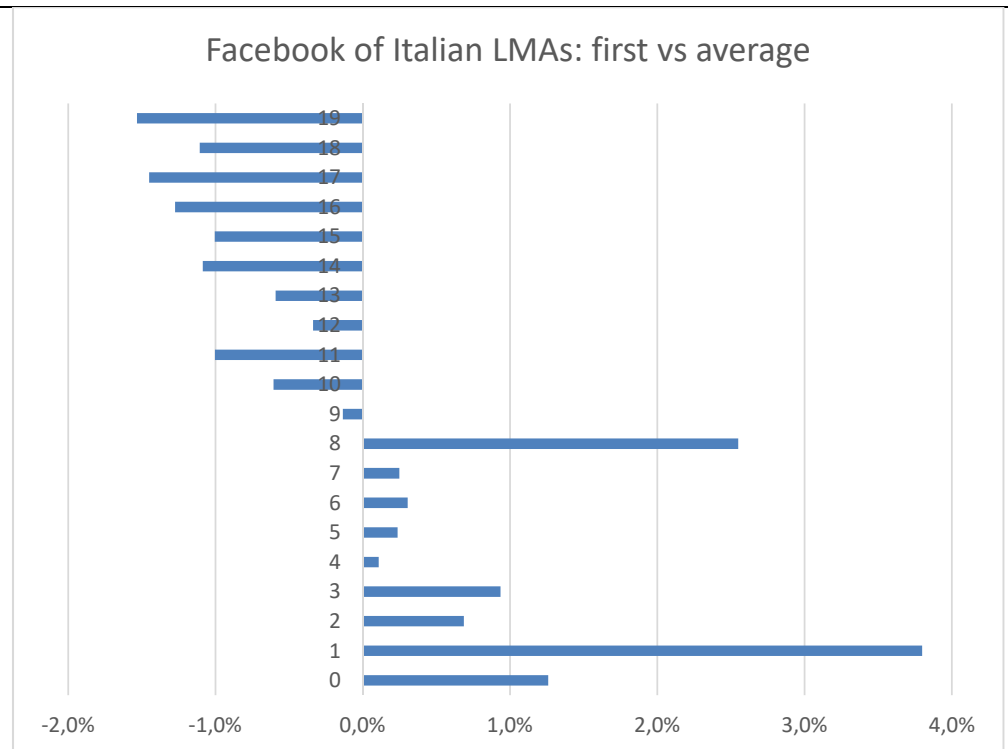
Emilia Romagna. This reference probably depends on the fact that Emilia Romagna is cited as a provider of good practices.



Topics that mostly characterize texts where they are used are topic 1 and 8. Both these topics deals with complaints by citizen. Then we have other topics, which are used especially in text that deals exactly with those topics. As expected, these topics are quite specific: there is topic 0, on regional politics in Emilia Romagna, topic 2, on the aid given by Europe to recover from the earthquake, and topic 3, which deals with health care and administration.

PERCEIVE DEL. 5.3: 'REPORT DISCUSSING THE EMERGENT TOPICS IN IDENTITY RELEVANT DISCOURSE AT DIFFERENT LEVELS'

topic	times first	average use
0	6,6%	5,4%
1	9,3%	5,5%
2	5,4%	4,7%
3	5,8%	4,9%
4	4,4%	4,3%
5	5,2%	4,9%
6	5,7%	5,4%
7	4,8%	4,5%
8	8,6%	6,0%
9	4,4%	4,6%
10	4,0%	4,6%
11	3,7%	4,7%
12	5,2%	5,5%
13	4,9%	5,5%
14	3,8%	4,9%
15	5,1%	6,1%
16	3,3%	4,6%
17	3,8%	5,3%
18	3,1%	4,2%
19	2,8%	4,4%



On the axis we see the difference between "times first" and "average use"

4.4.2 Austria

In reference to the Austrian case, we downloaded posts and comments from the official Facebook Profile of the Local Managing Authority Regionalmanagement Burgenland GmbH.

After removing words contained in the same stopword list that we used for newspapers, we analyzed both posts and comments. Overall, our corpus consists of 7.984 words, and the longest source is composed by 87 words. The following table presents a list of the 20 most important words for each topic, which we used, together with the colleague from WU, in order to make sense of each topic. Indeed, in this inductive phase of the analysis, we relied on the list of words per topic, and on the three most representative comments/posts for each topic. The interpretation of topics follows the table.

Topic 0 - COVERAGE OF PRESS ANNOUNCEMENTS: references to "orf" (austrian broadcasting)

Topic 1 - ACTORS/SOCIAL RELATIONSHIPS: references to "colleagues", "people", "visiting".

Topic 2 - LUDIC EVENTS: the vocabulary of this topic seems to point to some ludic event where EU was communicated.

Topic 3 - INFORMAL SETTING AT WORK: presenting employees, congratulating employees on the birth of their baby publically.

Topic 4 - SPECIALIST EVENTS (RESEARCH, CLIMATE PROTECTION): topic concerning renewable energies (probably again events) and Burgenland, the PERCEIVE case study region for Austria.

Topic 5 - SOMMERFEST WITH MUSICIANS: a sommer event in Eisenstadt, Burgenland's capital, involving live music. An uncorrelated a women protection theme could be part of it as well.

Topic 6 - COMMUNICATING EUROPE: events for communicators and Cohesion policy implementers

Topic 7 - BATH TOUR DURING SUMMER: another EU campaigning event organized by RMB, the LMA in Burgenland and involving a tour of swimming pools or lake stations.

Topic 8 - ANNOUNCEMENTS: "there is xyz amount of money for new technologies (e.g.). If you are interested, click here!"

Topic 9 - COOPERATION/TOGETHER: emphasis on community network between municipalities in Burgenland

Topic 10 - BEING PROUD, CONGRATULATIONS: congratulating with somebody about an apparently successful project. Could involve "mobilitätszentrale" - a mobility central.

Topic 11 - THE PRESIDENT OF THE REGION: Hans Niessl as important representative

Topic 12 - "RMB WILL BE AT xyz THIS YEAR!" the local managing authority performing a series of initiative. Positive sentiment "freut" to be pleased.

Topic 13 - SOCIAL FUND AND COOPERATION: mixture of positive feeling potentially referring to European collaboration and themes covered by the social fund such as youth unemployment and the name of 2007-13 OP phasing out

Topic 14 - INITIATIVES WITH SCHOOLS: in particular looking at relevant articles: competitions, board game "wachsen mit europa"

Topic 15 - CROSS-BORDER PROJECTS: cross-border projects with Hungary and Slovakia. Possible reference to video communication

Topic 16 - NOISE: also looking into the articles could be referred to introducing departments of RMB

Topic 17 - IMPRESSIONS FROM A RECENT EVENT: might be linking to pictures/videos. "here are some impressions of yesterday's events"

Topic 18 - POSSIBILITY TO WIN SOMETHING, GETTING SOMETHING FOR FREE FROM RMB: a mix of winning something and EU funding programs

Topic 19 - "TODAY, AGAIN, WE ARE DOING xyz..." positive feelings, informing potential beneficiaries, initiatives with schools.

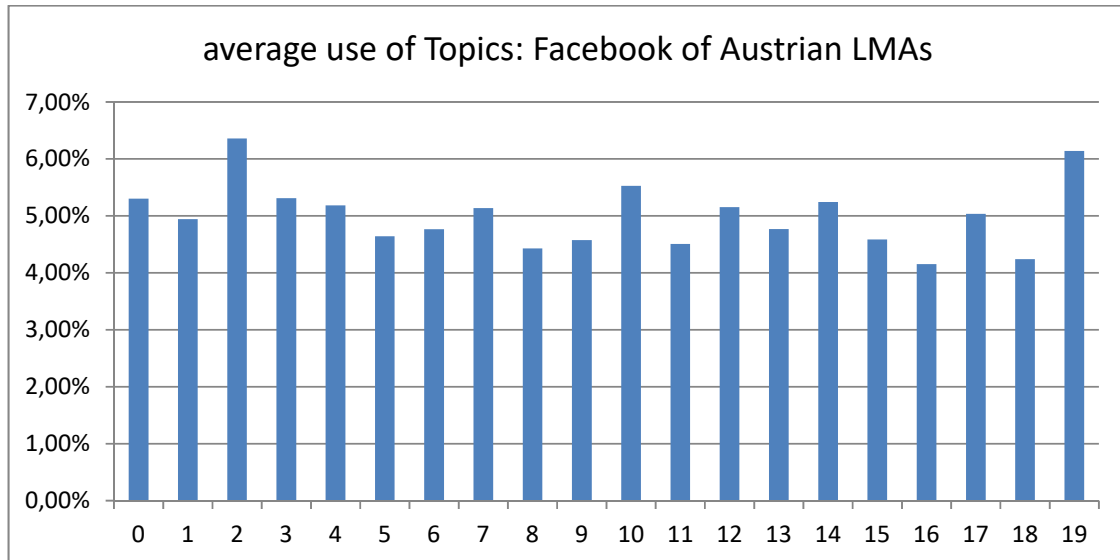
PERCEIVE DEL. 5.3: 'REPORT DISCUSSING THE EMERGENT TOPICS IN IDENTITY RELEVANT DISCOURSE AT DIFFERENT LEVELS'

topic	0	1	2	3	4	5	6	7	8	9
20 most important words	geht	infos	eu-glücksrad	kollegin	thema	eisenstadt	danke	heute	bereit	burgenländischen
	bericht	projekte	freuen	freuen	statt	diesmal	europa	findet	informieren	projekt
	pressekonzferenz	kollegen	uhr	neuen	findet	besuch	eu-gemeinderäte	team	euro	rmb
	online	nähere	infostand	pinkafeld	freuen	herzlich	österreich	freibad	idee	betreut
	heutigen	eu-geförderten	orf-sommerfest	rmb-team	burgenländische	unterstützt	europäische	juli	förderung	naturparke
	orf	bereich	freitag	andrea	forschung	gibts	ort	bädertour	millionen	gemeinsam
	anlässlich	möchte	gast	liebe	unternehmen	domplatz	jahre	toll	stehen	bisschen
	beitrag	homepage	wetter	büro	roadshow	sommerfest	peter	oberwart	http://www.phasing-out.at/de/uebergangsregion	land
	schnell	kolleginnen	frauenlauf	neue	energien	frau	podiumsdiskussion	südburgenland	loslegen	gemeindenetzwerke
	thema	besuchen	heuer	wünschen	redl	mag	außenministerium	mal	förderwerberinnen	gemeinden
	orf-burgenland	stelle	glücksrad	erfolg	kerstin	schlagerstar	österreichisches	station	fördergeldern	süd
	foto	noah	burg	wochenende	fachveranstaltung	astrid	kommunizieren	gestern	buchpräsentation	stellt
	projekträger	rmb-infostand	sonntag	mail	energie	landesrätin	gols	see	investitionen	gemeinsamen
	burgenländischer	esf-call	forchtenstein	lieben	erneuerbare	eisenkopf	christian	woche	entwicklung	ziel
	brüssel	menschen	forfel	zuständig	präsentiert	vorgestellt	filzmaier	margarethen	ausbau	arge
	kollege	freut	eu-infostand	jänner	zeit	willkommen	diskutieren	familypark	april	liegt
	link	möchten	dreht	macht	umwelt	gitti	richtig	jennersdorf	innovative	informationen
	bild	the	besucher	europatagsveranstaltung	innovation	jazz	dunst	besuch	endlich	steht
	karin	eu-gemeinderätinnen	preise	verraten	letzten	ende	georg	einkaufszentrum	neuer	centrope
	regionale	große	besucht	naturparkbroschüre	koordiniert	dank	ttip	rust	unternehmen	mittelburgenland

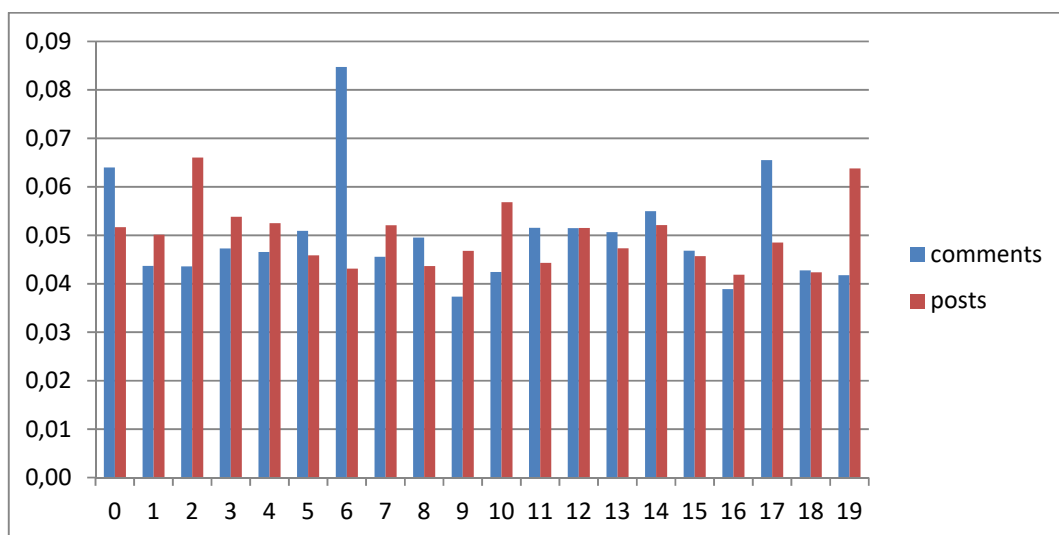
PERCEIVE DEL. 5.3: 'REPORT DISCUSSING THE EMERGENT TOPICS IN IDENTITY RELEVANT DISCOURSE AT DIFFERENT LEVELS'

topic	10	11	12	13	14	15	16	17	18	19
20 most important words	burgenland	burgenland	rmb	europäischen	europa	burgenland	abteilung	paar	gibt	heute
	mobilitätszentrale	mag	zahlreiche	zusammenarbeit	wachsen	rahmen	arbeiten	fotos	gewinnen	rmb
	team	niessl	freut	esf	neue	veranstaltung	erste	eindrücke	bitte	freuen
	gerne	pressekonzferenz	freuen	burgenländischen	nms	projekts	stellen	tolle	kostenlos	team
	beschäftigung	harald	stand	kommission	schulwettbewerb	recom	dass	danke	kinder	morgen
	landes	kreutzer	vertreten	gute	einsatz	dietmar	landesregierung	gäste	rmb-süd	oberwart
	dachmarke	hans	jahr	union	märz	regionalmanagement	bgld	gestern	hilft	ganz
	pakt	horvath	rund	september	schulen	drei	ersten	inkl	anmeldung	dass
	projekt	eu-förderungen	besucher	eu-verwaltungsbehörde	regionalen	baurecht	nächsten	aktion	geschriebenstein	europainformation
	news	andreas	wien	phasing	gymnasium	grenzüberschreitenden	möchten	zwei	aktuelle	edi
	service	tourismus	heuer	durchführung	neusiedl	video	monitoring	projekte	neusiedler	burgenland
	stolz	gmbh	gäste	u.a	schattendorf	zumdorf	roman	eisenstadt	pananet	tag
	gratulieren	landeshauptmann	inform	veranstaltung	starten	mittwoch	förderperiode	partnern	gratis	betreuen
	sandra	wertschöpfung	naturparkerlebnisse	haus	brettspiel	wirtschaft	tagen	präsentation	eu-förderprogramm	bildungsmesse
	dürfen	studie	halle	rmb	mittelschule	präsentieren	job	gestrigen	frage	vorbei
	gehts	partner	gewinnspiel	förderstellen	steht	oktober	sehen	europäischer	erhältlich	schüler
	schön	chef	golser	spannende	montag	projektes	amt	gibt's	weinidylle	geht's
	toi	petschnig	großen	sozialministerium	großpetersdorf	ausstellung	mag.a	wünscht	umsetzung	gemeindetag
	lernen	zukunft	zahlreichen	jugendarbeitslosigkeit	landesfinale	bratislava	kreativwirtschaft	gibt	spaß	abend
	gearbeitet	consulting	volksfest	vertreter	oberpullendorf	hu-at	naturschutz	sieht	vielfalt	besucht

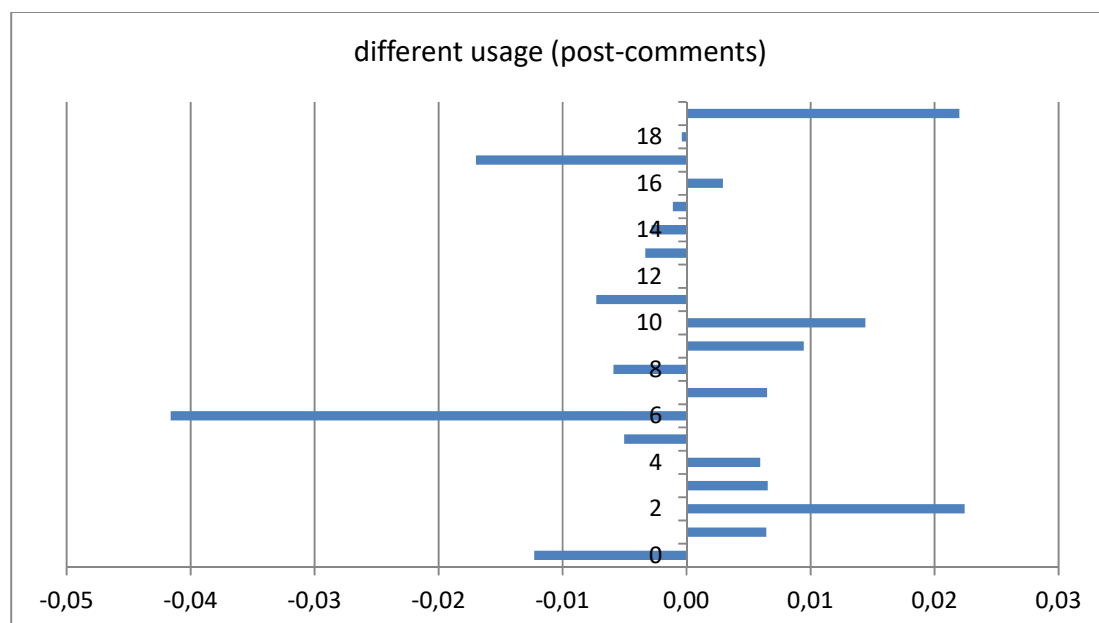
Overall, topics are used in a balanced way. With a slight prevalence of topic 2 and 19, that both advertise about events related to EU.



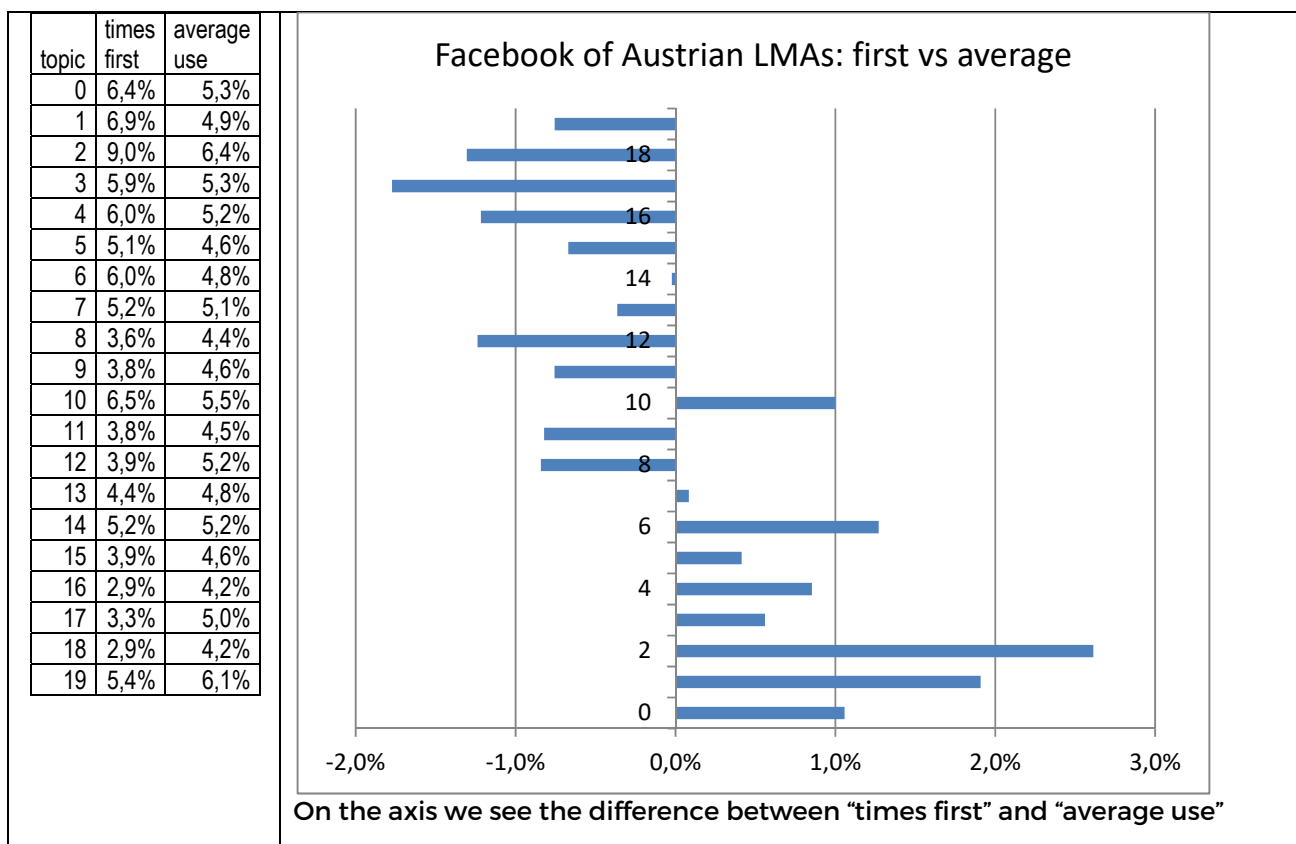
These two topics, together with topic number 10, which congratulates on successful projects, are the topics most present in posts. On the contrary, topic that are mostly used in comments are topic number 6, that is about events for communicators and Cohesion Policy implementers, topic number 17, that collects impressions from a recent event, and topic number 0, that is about press announcements.



PERCEIVE DEL. 5.3: 'REPORT DISCUSSING THE EMERGENT TOPICS IN IDENTITY RELEVANT DISCOURSE AT DIFFERENT LEVELS'



Topics that characterize discourses where they are used, are topic 0, 1, 2, 3, 4, 5, 6, and 10. These topics are about press announcements, social relationships and settings at work, congratulations and ludic events, especially a summer festival, and Communicating Europe.



4.4.3 Poland

In reference to the Polish case, we downloaded posts and comments from two sources, which are the Facebook pages of the LMAs in our two regions:

- Official Facebook channel for Warmińsko-Mazurskie ROP 2014-2020 and 2007-2013:
- Official Facebook channel for Dolnośląskie ROP 2014-2020 and 2007-2013

After removing words contained in the same stopword list that we used for newspapers, we analyzed both posts and comments. Overall, our corpus consists of 109.168 words, and the longest source is composed by 807 words. The following table presents a list of the 20 most important words for each topic, which we used, together with the colleague from IAFE-NRI, in order to make sense of each topic. Indeed, in this inductive phase of the analysis, we relied on the list of words per topic, and on the three most representative comments/posts for each topic. The interpretation of topics follows the table. Please note two things regarding the following table. First, most of the words on this table do not have a clear connection with EU funds. We highlighted in yellow words with a specific connection to EU and its funds. This fact is not a pitfall of the method, as it just reflects words used in the actual public discourse on LMAs' Facebook profiles. So only few topic are especially connected to EU funds. Second, because of the specific feature of Polish language, it is possible to find the same word under different declination. In example, we find, in the same column, europejskie and europejska, Olsztyn and Olsztynie, Dolny Śląsk and Dolnego Śląska, and Giżycko and Giżycku. This issue just reinforces the interpretation of a specific topic⁹.

topic	0	1	2	3	4	5	6	7	8	9
20 most important words	warto	zapraszamy	miejsce	dziękujemy	piękna	polsce	giżycko	miasto	lipka	mamy
	raz	czerwca	parku	gratulujemy	jesień	lipca	byłam	ełk	święta	nadzieję
	miejsce	udział	zamek	prosimy	najbardziej	fundusze	jezioro	mieszkam	jeziora	miejsca
	rok	rpo.warmia.mazury.pl/artikul	park	wiadomość	pięknie	godz	oczywiście	okolice	lidzbark	ludzi
	dalej	kliknij	miasta	wysyłki	prawda	zmiany	miejsce	tez	warmiński	razie
	zobaczysz	maja	możemy	anna	lubię	polski	polecam	super	święt	chyba
	odwiedziś	atrakcji	centrum	nagrody	mazurach	europa	iława	giżycko	szaniec	czasu
	jesteśmy	olsztynie	hotel	prywatną	zima	tvp	giżycku	ostróda	wilczy	miejsce
	most	dzieci	olsztyn	masz	drzewa	latach	olsztyn	ryn	dobrego	takim
	końca	dni	pewno	wyniki	lesie	europejskiej	super	szczytno	życzymy	niestety
	koniecznie	otwarte	olsztynie	katarzyna	chyba	olsztyn	iławie	rodzinne	mogę	unijne
	jakieś	www.facebook.com/events	jeziorem	konkurs@netcentersolution.pl	zimą	olsztynie	amfiteatr	piekne	trochę	podoba
	pierwszy	warsztaty	widać	czekamy	lato	obejrzenia	mikołajki	strony	raczej	dotacje
	góry	dowiedz	zamku	oczywiście	pewnie	www.youtube.com/watch?v	frombork	mrągowo	szlak	takich
	dzieci	dofe	klasztor	dane	wiosna	podróż	niegocin	kętrzyn	rzeka	szkoda
	ciekawe	wzmę	fot	mamy	wiem	zdjęć	naprawdę	węgorzewo	mikołajki	naszym

⁹ There are several geograophical names in the table with the most important words per topic. We list them here as a aid for the reader: Olsztyn, Święta Lipka, Braniewo, Niegocin, Kętrzyn, Mrągowo, Węgorzewo, Mikołajki, Wigry, Iława, Giżycko, Lidzbark Warmiński, Szczytno, Ryn, Ostróda.

PERCEIVE DEL. 5.3: 'REPORT DISCUSSING THE EMERGENT TOPICS IN IDENTITY RELEVANT DISCOURSE AT DIFFERENT LEVELS'

	która	zaprasza	zdjęciu	danymi	spacer	jednym	temu	prawda	nidzica	cieszymy
	końcu	serdecznie	znajduje	dokładnie	pora	czasie	wieża	braniewo	ludzi	pięknych
	miał	jutro	wigry	ewa	słońce	europejskie	byłem	bym	nowym	pewno
	kolejny	na-warmii-i-mazurach	robi	rację	las	europejska	chyba	piękne	wesołych	coraz

topic	10	11	12	13	14	15	16	17	18	19
20 most important words	ramach	województwa	funduszy	mazury	konkursie	środków	warmii	dzięki	droga	piękne
	dofinansowanie	regionalnego	europejskich	warmia	konkursu	drogi	mazurach	rpo	zapraszam	dziękujemy
	działania	programu	zapraszamy	miejsce	konkurs	rpo	mazur	centrum	życia	pozdrawiam
	pracy	dolnośląskiego	godz	kocham	zapraszamy	została	wakacje	unijnym	dobry	zdjęcia
	rpo.warmia.mazury.pl/artikul	mln	stronie	piękne	czekamy	nowe	macie	dolnym	siebie	zdjęcie
	rozwój	rpo	spotkania	natury	udział	unijnych	oczywiście	śląsku	czym	dziękuję
	osób	operacyjnego	informacji	jeziora	udziału	dzięki	zapraszamy	mln	domu	pięknie
	spotkanie	projektu	rpo	warmię	zdjęcie	wie	najlepiej	funduszom	naszą	jezioro
	wniosków	lata	informacje	jezior	naszym	inwestycja	weekend	wrocławiu	kolory	słońca
	projektów	ramach	spotkanie	lasy	zachęcamy	fot	polski	dotacji	czas	piękny
	projekty	rozwoju	listopada	kraina	fundusze	budowa	czas	unii	ludzie	widok
	informacyjne	środków	projektu	cud	szczegóły	wraz	polecamy	muzeum	miejscu	jeziorem
	nowych	śląska	rozwoju	piękno	nagrody	ulicy	regionu	otwarcie	razu	wim@netcenter.solutions.pl
	rpo	dolnego	temat	ziemi	możecie	nowych	najpiękniejsze	nowy	dzień	wygląda
	stronie	euro	konsultacje	uwielbiam	informacji	wim	polsce	ramach	świata	widoki
	szczegóły	m.in	odbędzie	spokój	wystarczy	zostało	wakacji	budynku	stronę	pozdrawiamy
	szkolenia	złoty	olsztynie	cisza	zdjęcia	miasta	wiecie	projekt	swoich	koło
	miejs	inwestycji	marca	cudne	stronie	mieście	pewnością	złoty	dni	wzajemnie
	zapraszamy	marszałek	informacyjne	nigdzie	znajdziecie	dofinansowana	miłośników	środkom	lepiej	wspomnienia
	środowiska	unijnych	nowego	przyrody	typ	zdrój	Warmii	europejskiej	mówi	zdzęć

Topic 0 – BRIDGE: Texts mostly coded at this topic show 3 different stories with no links to Cohesion Policies. Only the one with a bridge could be guessed as a story linked to EU funds

Topic 1 – OPEN DAYS OF EU FUNDS: Invitation for a number of events organised as part of open days of EU funds

Topic 2 – HOTEL: A commercial of "Zajazd Eljan" (hotel and conference centre)

Topic 3 – CONGRATULATIONS: List of people who won in a competition. No info what kind of competition it was.

Topic 4 – MAZURY FOR ALL SEASONS: A praise of the beauty of Mazury. A region worth seeing in any season of the year.

Topic 5 – EU FUNDS: This topic relates to EU co-financed projects, as the first two texts mostly coded at this topic deal with a EU co-financed project on the digitalization of a photo agency's archives. Agency was working in conspiracy in 1980s.

Topic 6 – AMPHITHEATER: EU co-financed construction of amphitheater

Topic 7 - REGIONAL AMENITIES: The text mainly coded at this topic is a recipe of a regional dish, while the second and the third are info about bird species

Topic 8 - REGION'S TOURIST ATTRACTION: The texts mostly coded at this topic are texts in German concerning one of the region's tourist attractions

Topic 9 - ELBLĄG CHANNEL: The three texts mostly coded at this topic are commercials for Elbląg Channel - no mention of the EU funds

Topic 10 - EU GRANTS: This topic deal with EU grants: the first text is about grants for renewable sources of energy, which are grants for local authorities. The second text is about grants for high-quality pre-school education. The third text is the results of a call for grant applications

Topic 11 - PRORAMMES: Here the texts are names of programmes and funds

Topic 12 - JOB AND EU: This topic is about EU funds' info point and job offers

Topic 13 - LOVE WAMIA & MAZURY: Info on how wonderful it is to live in Warmia & Mazury

Topic 14 - FUNDS IN A LENS: Info about a competition for the best photo subject: EU funds in a camera lens

Topic 15 - FUNDS FOR INVESTMENT: This topic is about EU funded investments. The first and second most important texts are about EU funds for road extension, while the third text regards the renovation of a church with the EU funds

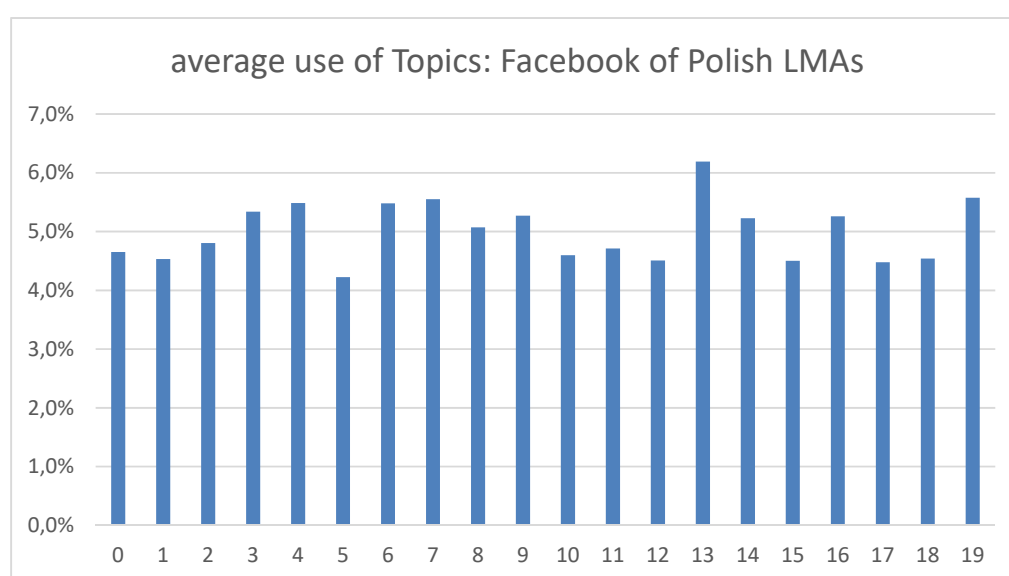
Topic 16 - HOTEL: All the texts mostly coded at this topic are about hotel commercials.

Topic 17 - EU FUNDED RESCUE SERVICES: The most important text is about a Mountain Volunteer Rescue Service supported from the EU funds, while the second and third ones are about a warning and crisis management system co-financed from the EU funds.

Topic 18 - DIVERSE EVENTS: No mention of EU funds

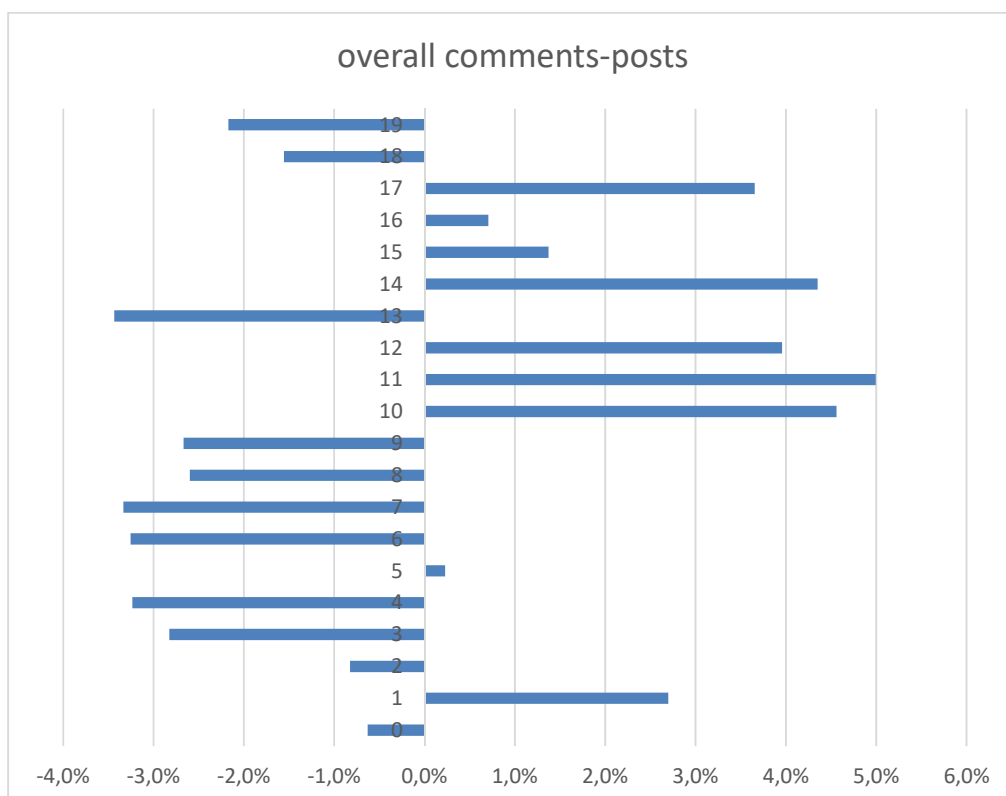
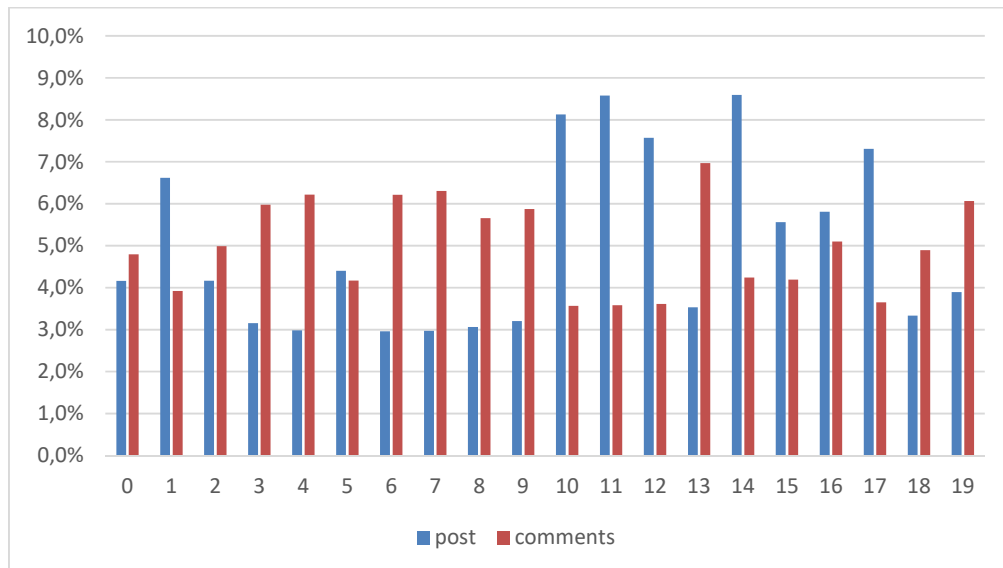
Topic 19 - PHOTOS: Mentioned some photos, probably sent to a competition; no mention of the EU funds.

While from the following figure we can say that the usage of the 20 topics elicited is balanced, with no one clearly most used than the other, from the description just provided we can draw two insights. First, there are several topics that have no connection with Structural Funds and Cohesion Policies. Second, when these funds are mentioned – and it happens in topics 1, 5, 6, 10, 11, 12, 14, 15, and 17 - topics very pragmatically deals with funding possibilities or with description of successfully



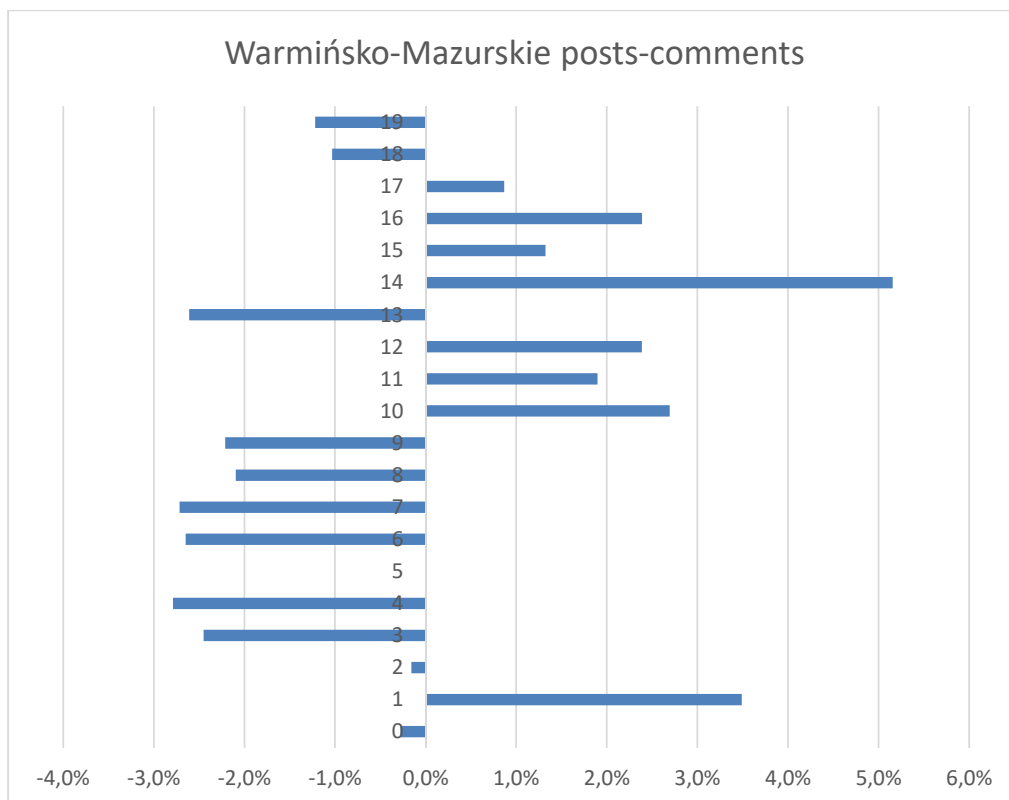
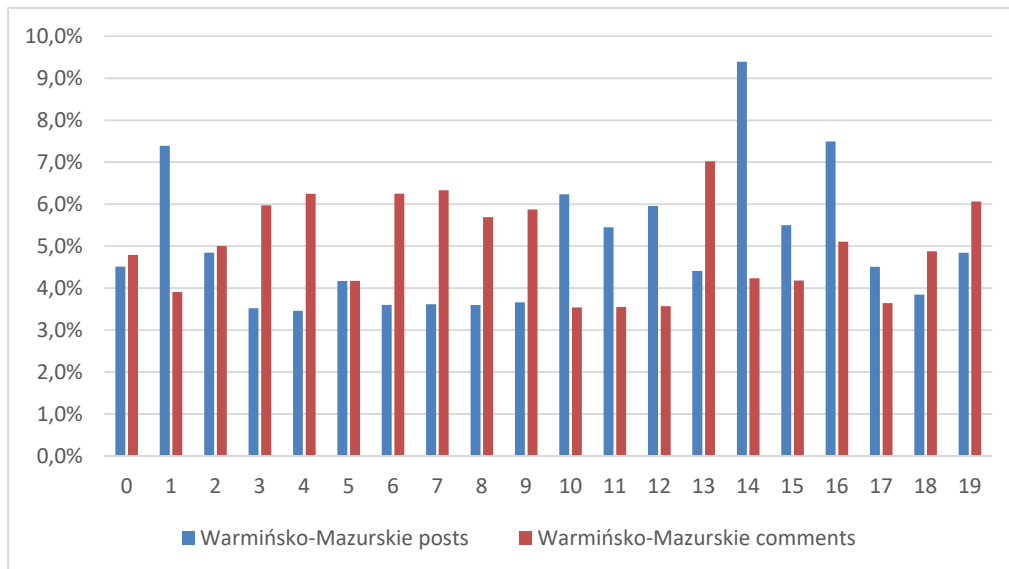
PERCEIVE DEL. 5.3: 'REPORT DISCUSSING THE EMERGENT TOPICS IN IDENTITY RELEVANT DISCOURSE AT DIFFERENT LEVELS'

If we analyze more in detail topics related to EU funds, we see from the next table and figure that they all are more used in posts, than in comments, with the only exception of topics 6, that refers to the EU co-financed construction of an amphitheatre.



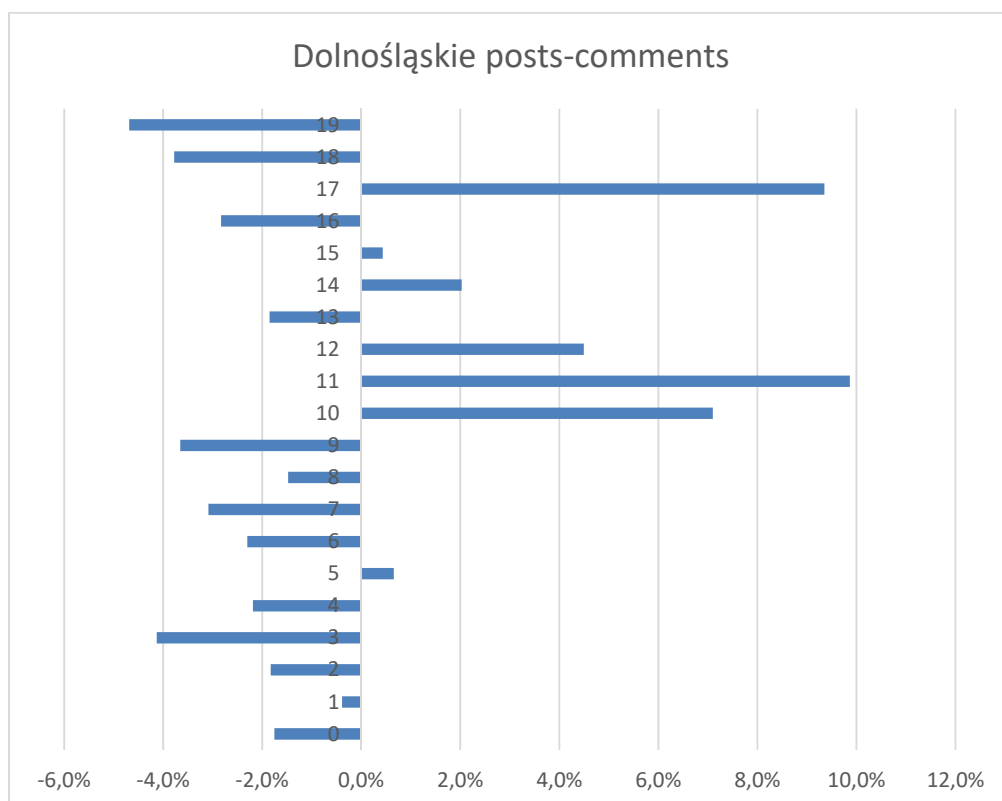
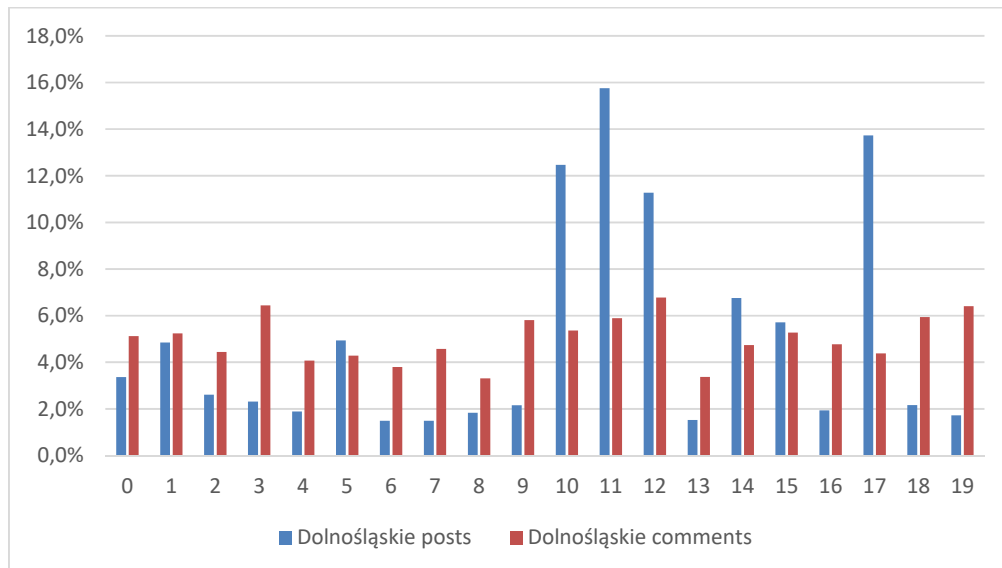
PERCEIVE DEL. 5.3: 'REPORT DISCUSSING THE EMERGENT TOPICS IN IDENTITY RELEVANT DISCOURSE AT DIFFERENT LEVELS'

A similar pattern can be found in the case of Warmińsko-Mazurskie.



PERCEIVE DEL. 5.3: 'REPORT DISCUSSING THE EMERGENT TOPICS IN IDENTITY RELEVANT DISCOURSE AT DIFFERENT LEVELS'

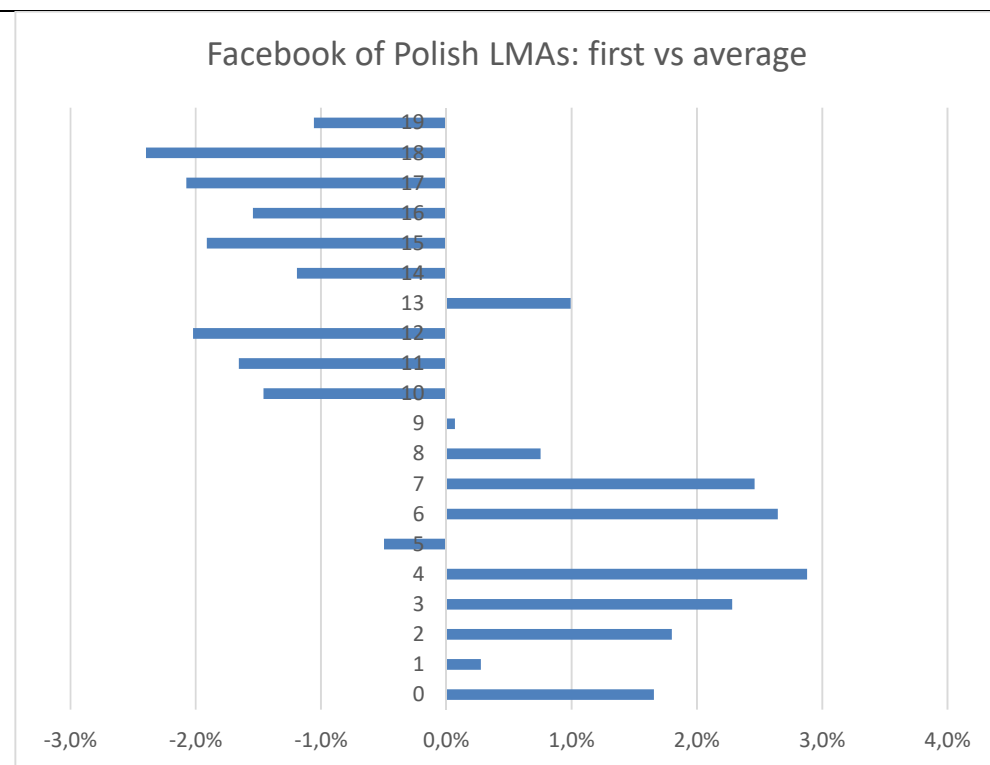
On the contrary, in Dolnośląskie most used topics are only 10, about EU grants, 11, about programmes, 11, about jobs and the EU, and 17, about EU funded rescue services. Even in this case, though, these topics are mostly used by posts.



PERCEIVE DEL. 5.3: 'REPORT DISCUSSING THE EMERGENT TOPICS IN IDENTITY RELEVANT DISCOURSE AT DIFFERENT LEVELS'

Finally, by analyzing the following table and figure, we see that all the EU related topics, with the small exception of topic 1, tend to be topics whose averages use exceeds the number of times where they are the most important topics. This means that all these EU related topics tend to not characterize texts where they are used, but are generally used together with other topics.

topic	times first	average use
0	6,3%	4,7%
1	4,8%	4,5%
2	6,6%	4,8%
3	7,6%	5,3%
4	8,4%	5,5%
5	3,7%	4,2%
6	8,1%	5,5%
7	8,0%	5,6%
8	5,8%	5,1%
9	5,3%	5,3%
10	3,1%	4,6%
11	3,1%	4,7%
12	2,5%	4,5%
13	7,2%	6,2%
14	4,0%	5,2%
15	2,6%	4,5%
16	3,7%	5,3%
17	2,4%	4,5%
18	2,1%	4,5%
19	4,5%	5,6%



On the axis we see the difference between "times first" and "average use"

4.4.4 Romania

In reference to the Romanian case, we downloaded posts and comments from three sources, which are involved in the managing of EU funds:

- Agentia pentru Dezvoltare Regionala Sud-Est (Sud Est Regional Development Agency)
- Ministerul Dezvoltarii Regionale, Administratiei Publice si Fondurilor Europene (Ministry of Regional Development, Public Administration and European Funds)
- Ministerul Fondurilor Europene (Ministry of European Funds)

After removing words contained in the same stopwords list that we used for newspapers, we analyzed both posts and comments. Overall, our corpus consists of 337.307 words, and the longest source is composed by 673 words. The following table presents a list of the 20 most important words for each topic, that we used, together with the colleague from IEA, in order to make sense of each topic. Indeed, in this inductive phase of the analysis, we relied on the list of words per topic, and on the three most representative comments/posts for each topic. The interpretation of topics follows the table.

topic	0	1	2	3	4	5	6	7	8	9
20 most important words	http://bit.ly	pana	ani	trebuie	euro	publice	publice	cooperare	locuințe	http://www.fonduri-ue.ro/comunicare/stiri-am-oi
	jud	proiecte	ziua	s-a	milioane	regionale	fonduri	programul	anl	operațional
	tulcea	finantare	bucurești	declarat	programul	dezvoltării	ordonanta	romania	tinere	proiecte
	consiliul	multumim	http://bit.ly	românia	fonduri	ministrul	cadru	programului	locuințe	pocu
	judetul	buna	decembrie	ani	proiecte	dragnea	nivelul	interreg	http://bit.ly	cadru
	apă	romania	româniei	putem	finanțare	ora	maxim	moldova	mdrap	mfe
	teleorman	trebuie	românești	important	europene	viceprim-ministrul	încadrare	http://bit.ly	microbuze	posdru
	judetul	putea	mulți	putea	valoare	liviu	guvern	transfrontalieră	apartamente	programul
	giurgiu	exista	piața	parte	lei	administratiei	funcție	proiecte	locuri	proiectelor
	dolj	dvs	ora	s-au	românia	dîncu	dezvoltare	bulgaria	locuinte	fondurilor
	judetele	national	parcul	exemplu	dezvoltare	vasile	salarizarea	românia	camere	management
	olt	doua	italia	cred	http://bit.ly	româniei	actul	comun	destinate	europene
	zona	proiectele	români	există	bugetul	administratiei	ani	apel	construite	detalii
	ilfov	publica	zilei	trebui	miliarde	shhaideh	autorității	cadru	programul	fonduri europene
	judetean	putin	românia	decât	româniei	participă	normativ	republica	str	http://www.fonduri-ue.ro/comunicare/stiri
	drumuri	zile	român	proiect	fondul	http://bit.ly	regionala	serbia	prezent	autoritatea
	judetul	puteti	foto	făcut	investiții	guvernul	tara	mdrap	municipiul	data
	craiova	europena	romania	într-o	guvernul	mdrap	salarilor	management	finalizate	găsiți
	comuna	locala	anul	câteva	operațional	sevil	instituției	v-a	cadru	informații
	sibiu	cate	duminică	atât	fondurile	ministerul	plătit	ungaria	strada	sectorial

PERCEIVE DEL. 5.3: 'REPORT DISCUSSING THE EMERGENT TOPICS IN IDENTITY RELEVANT DISCOURSE AT DIFFERENT LEVELS'

topic	10	11	12	13	14	15	16	17	18	19
20 most important words	regio	bani	primaria	publice	dezvoltare	proiecte	dezvoltare	europene	cultural	europene
	lei	s-a	locală	publică	http://bit.ly	ghidul	regio	fondurilor	regio	european
	regional	fac	cadastru	privind	dezvoltarea	por	adr	ministrul	http://bit.ly	puteți
	milioane	romania	municipiului	ministerul	urbană	solicitantului	regiunea	european	patrimoniu	http://bit.ly
	proiect	vrea	http://bit.ly	locale	românia	data	regional	românia	patrimoniului	europeană
	reabilitarea	țara	dezvoltare	mdrap	mediului	cadru	centru	comisiei	muzeul	online
	proiectul	banii	risc	proiectul	urbact	publice	por	fonduri	conservarea	româniei
	http://bit.ly	ponta	socială	domeniul	cercetare	prioritatea	regională	teodorovici	românia	ani
	fonduri	oameni	persoane	publici	afaceri	consultare	http://bit.ly	eugen	cetatea	europa
	proiectului	munca	sociale	public	cadru	sprijinirea	sud	corina	istoric	proiect
	reabilitare	spune	ministerul	româniei	strategia	investiții	muntenia	coeziune	europa	românia
	modernizarea	ani	general	http://bit.ly	mediul	axa	sud-est	politica	turistic	bucurești
	programul	pare	marginalizate	administrația	durabilă	specifice	operațional	perioada	turism	europeni
	finanțare	facut	reducerea	administratie	inovare	specific	regionala	cadru	culturale	concurs
	infrastructurii	romaniei	primăria	poca	urbane	adresa	nord-vest	comisia	suceava	europa
	valoarea	venit	persoanelor	cadru	mdrap	ghidului	nord-est	regională	proiect	deschise
	valoare	oare	sector	consultare	domeniul	fondurilor	vest	comisarul	restaurarea	uniunea
	operațional	psd	sectorului	administrative	urban	dezvoltarea	informare	doamna	turistice	concursul
	totală	ministru	urgentă	precum	european	inclusiv	programului	europeană	biserica	ziua
	semnat	primarul	carte	nivelul	strategiei	publică	regiunii	cretu	patrimoniul	pagina

Topic 0 - EMERGENCY WARNINGS: This topic refers to hydrological warnings for some bodies of water from Romania

Topic 1 - EU FUNDING: This topic refers to the need of accelerating the infrastructure works in order to obtain the approval for European funding for public projects

Topic 2 - NOISE: This topic could be connected to the celebration of Romania's National Day on December the 1st

Topic 3 - EU FUNDING: The topic follows two aspects, not connected, referring to problems encountered in the process of European funding (complicated procedures, bureaucracy) and problems related to the free movement of persons in Romania

Topic 4 - EU FUNDING: The topic relates to EU funding - instructions regarding the financing of SME's projects from EU funds and procedures regarding the co-financing of European projects for mayoralties and companies.

Topic 5 - POLITICS: This topic refers to a 2014 meeting at the Ministry of Regional Development and Public Administration between Romanian and Chinese officials (Livu Dragnea - the vice prime minister of Romania and Huiman Yi - president of Industrial and Commercial Bank of China) and also of the vice prime minister Liviu Dragnea with Romanian ministers.

Topic 6 - LEGISLATION: The topic refers to the legislation of personnel's remuneration paid from public funds (E.O no 20/2016) and the dispute about the fact that Regional Development Agencies do not benefit from this ordinance.

Topic 7 - INSTRUCTING CAMPAIGN: The topic refers to an instructing campaign for strategic projects (Operational Program - Common Basin of Black Sea 2014-2020, Interreg Cooperation Program V-A Romania-Hungary, Interreg IPA Cross border Cooperation Romania- Serbia 2014-2020).

Topic 8 - LOCAL PUBLIC INVESTMENTS: The topic refers to the completion of dwellings construction and renting to youngsters by the National Agency for Dwellings - The program for constructing dwellings for youngsters.

Topic 9 - EU FUNDS: The topic follows some instructions regarding clarifications for the technical and financial applications of funding through the Operational Program Human Capital.

Topic 10 - EU FUNDING: The topic relates to some examples of EU funded projects (REGIO 2007-20013 / 2014-2020) for education, culture and leisure.

Topic 11 - POLITICS: The topic refers to a political scandal involving the former Prime Minister of Romania, Victor Ponta, facing various accusations of lying and deceiving.

Topic 12 - EU FUNDS: The topic refers to a series of problems related to accessing European funds (list of Operational Program Human Capital rejected projects in Bucuresti-Ilfov region - for reducing poverty and social exclusion); public consultation regarding the Financing Manual for "Precedential support for the elaboration of Local Development Strategies"; publication of statistics by the Agency for Cadastre and Real-estate Publicity regarding real estate transactions.

Topic 13 - LEGISLATIVE PROCESS: The topic refers to the legislative process in relation to public advice activity: a Governmental Decision regarding the free access to public interest information; the Law no 52/2003 regarding decisional transparency and public debate in administration; a Law projects for establishing the decentralization measures.

Topic 14 - INTEGRATED DEVELOPMENTS: The topic approaches the integrated development of the Danube's Delta regions (a 2013-2015 project managed by Ministry for Regional Development and Public Administration), but also about urban development (event in Riga for professionals involved in research and members of civil society organisations involved in urban development).

Topic 15 - EU FUNDING PROCEDURES: This topic relates to some EU funding procedures: Specific conditions for accessing funds through Priority Axis no 3 - "Transition towards a low carbon emissions economy" and the final version of the Applicant's Guide for projects launched in Priority Axis no 4 "Support for durable urban development".

Topic 16 - EU FUNDED PROJECT DISSEMINATION: This topic refers to a dissemination session (December 2015) regarding the implementation stage and the results of projects funded from European funds through the Regional Operational Program 2007-2013 at the level of the Sud-Est development region.

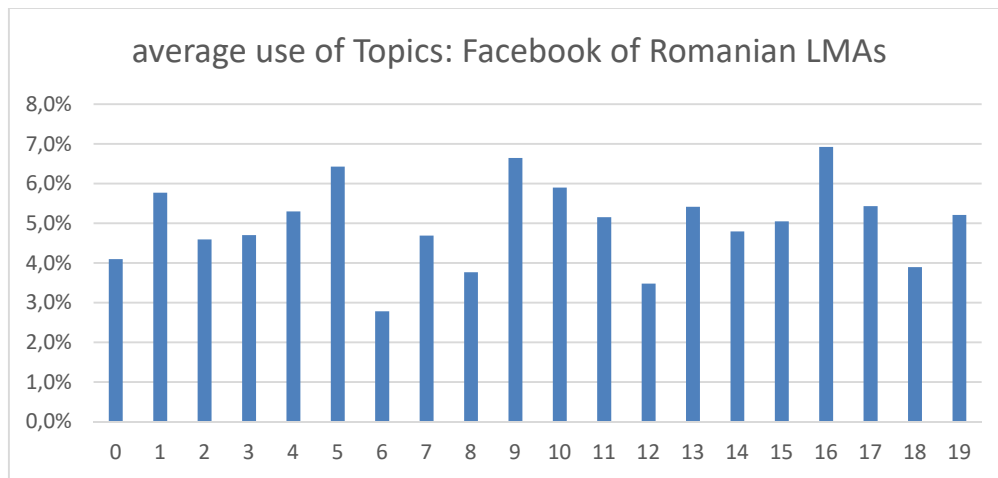
Topic 17 - NOISE: The topic relates to a complaint regarding a negative answer of the Ministry for Regional Development, Public Administration and European Funds for a compensation following a natural calamity.

Topic 18 - CULTURAL HERITAGE: The topic follows the announcement regarding the participation at the EU Awards Competition of a cultural patrimony objective that was restored through the Regional Operational Program 2007-2013 - the Dragomirna Monastery.

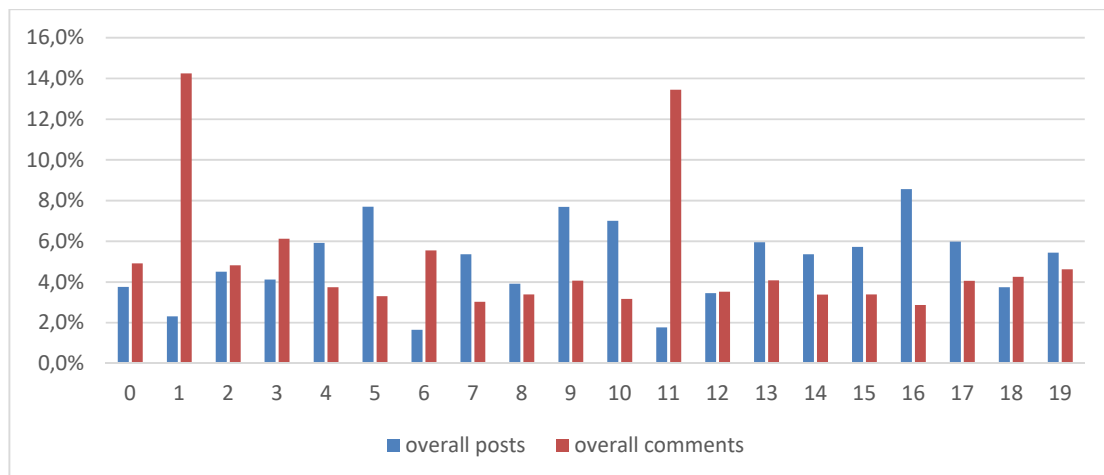
Topic 19 - NOISE: The sample of messages refers to an European blogging competition but also to a project called "Evolution" that present a short experimental animation based on drawings and video footage.

Overall, we see that there are at least 8 topics that specifically refer to EU funds and funding procedures, mixed with topics that refer to specific issues. Topics' usage in our sample is balanced.

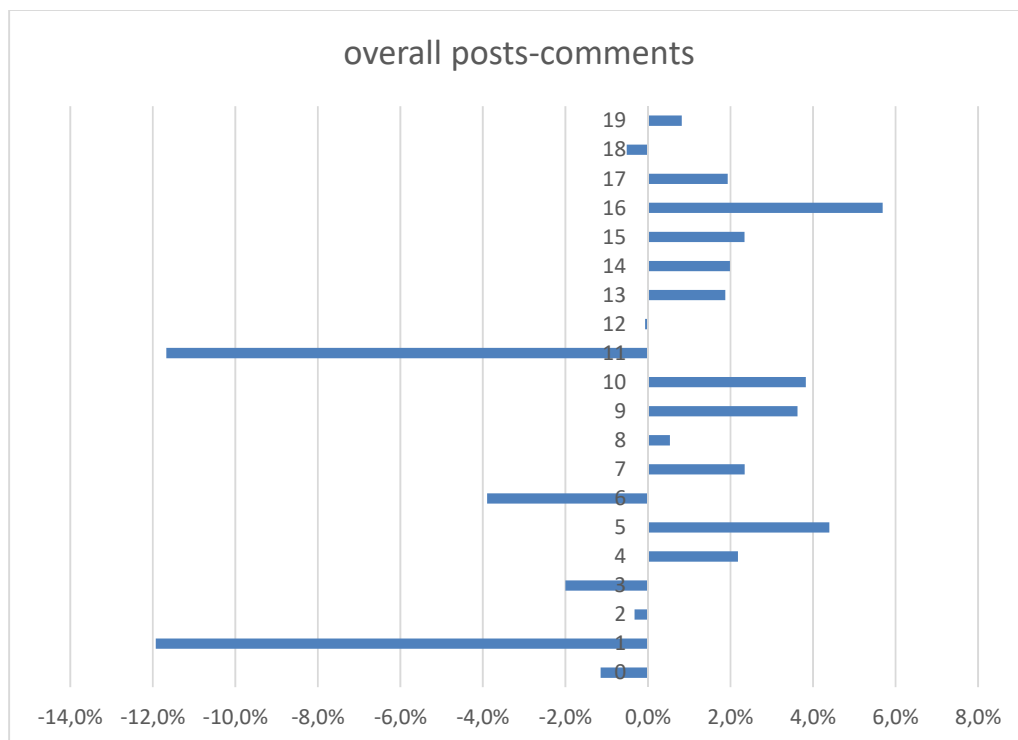
PERCEIVE DEL. 5.3: 'REPORT DISCUSSING THE EMERGENT TOPICS IN IDENTITY RELEVANT DISCOURSE AT DIFFERENT LEVELS'



Based on the following table and figure, we can figure out whether each topic is more used in posts by LMAs, or in comments by citizens and users. Topics more presents in posts are 5, that deal with a specific political meeting, 9, that provides clarifications for applications through the Operational Program Human Capital, 10, that entails some examples of funded projects, and 16, that relates about a dissemination session in the Sud Est Development region. On the contrary, posts focus more on topic 1, that wants to accelerate the approval for funding projects, 3, that focus on two problems related to complicated procedures and bureaucracy, 6, which relates to disputes on how to pay personnel's remuneration, and 11, that refer to a political scandal. So where institutions mostly refer to instructions, examples, and dissemination, comments focus mostly on what's wrong.

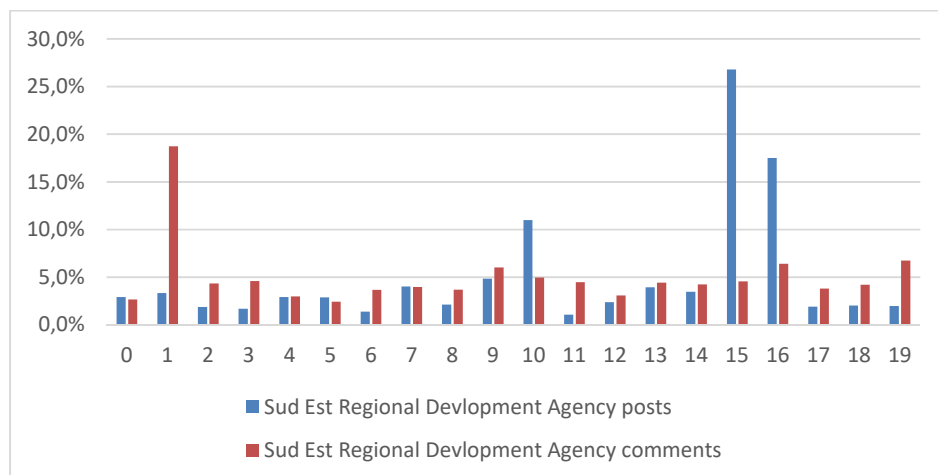


PERCEIVE DEL. 5.3: 'REPORT DISCUSSING THE EMERGENT TOPICS IN IDENTITY RELEVANT DISCOURSE AT DIFFERENT LEVELS'

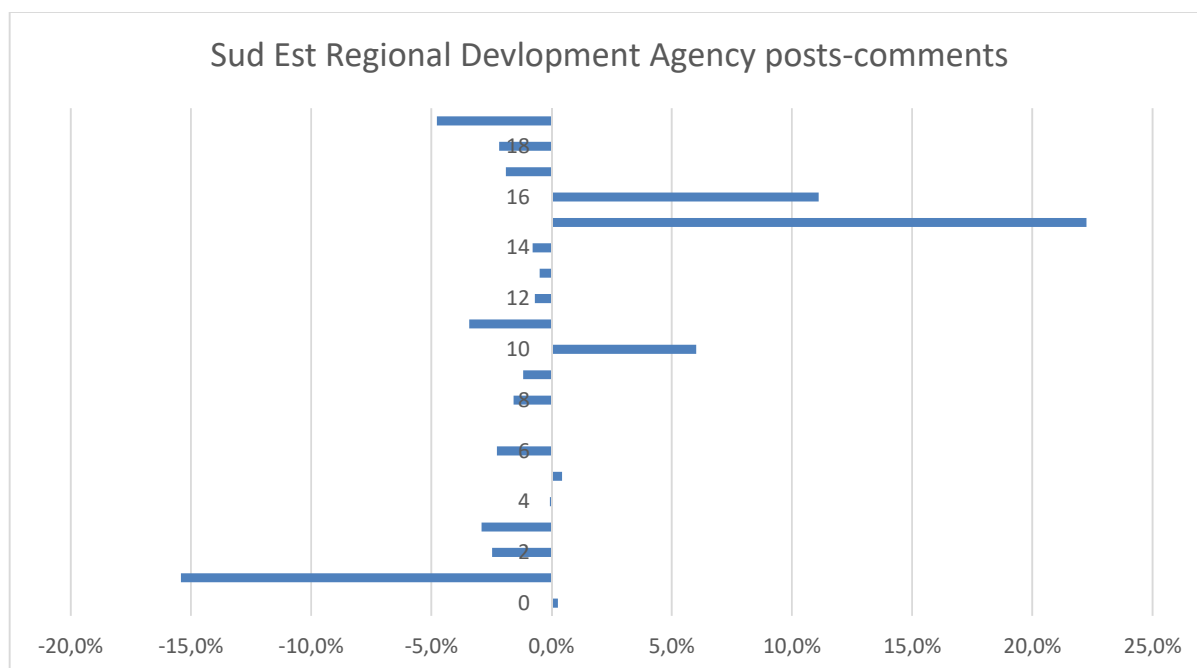


We can now focus on three couple of figures and tables, which are similar to the ones just analyzed, but focus especially on each one of the Facebook profiles that we analyzed.

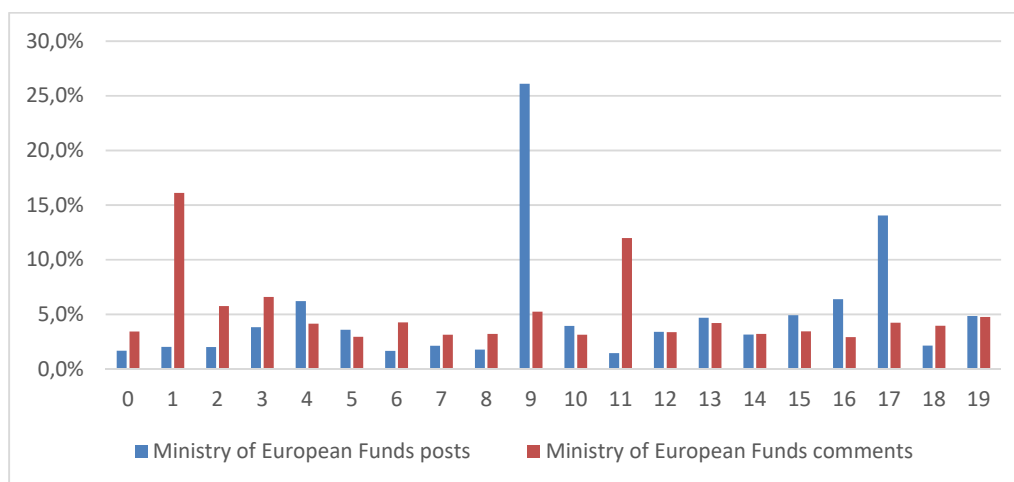
Regarding Sud Est Regional Development Agency, we see that posts mostly refer to topic 16, about a dissemination event held in the region, and on topic 15, that refers to specific conditions for accessing funds. Comments emphasize the need to speed up the process to fund projects.



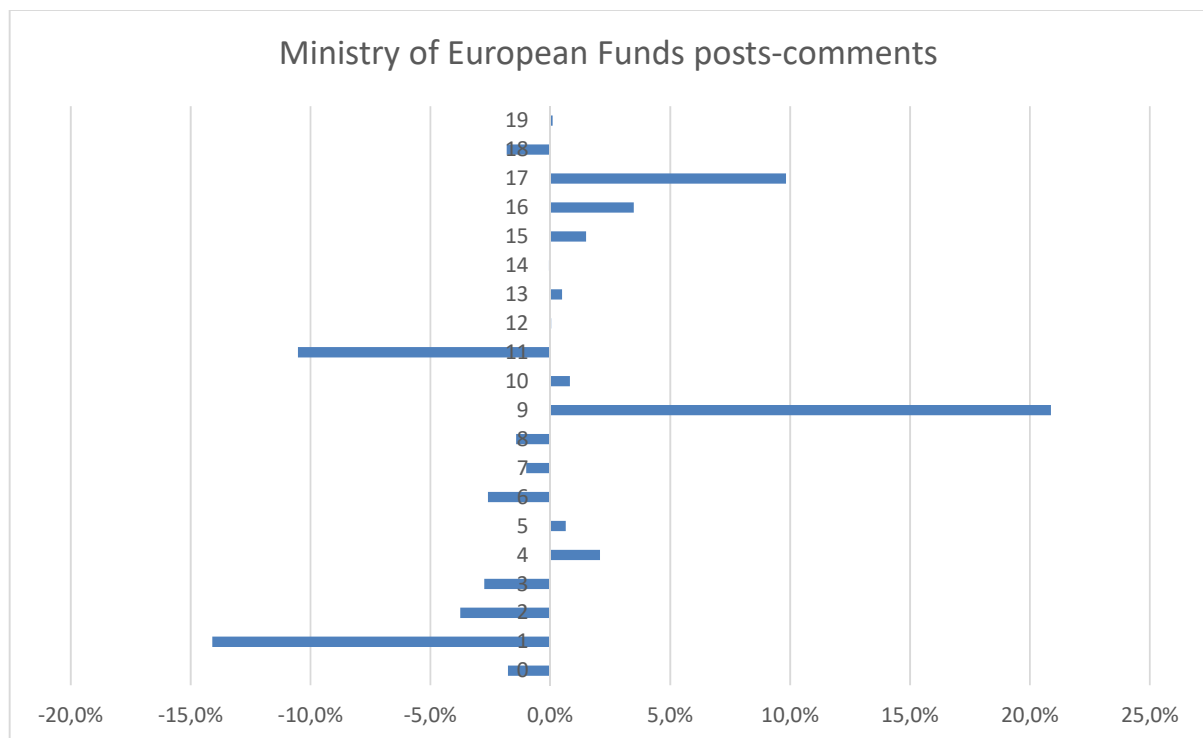
PERCEIVE DEL. 5.3: 'REPORT DISCUSSING THE EMERGENT TOPICS IN IDENTITY RELEVANT DISCOURSE AT DIFFERENT LEVELS'



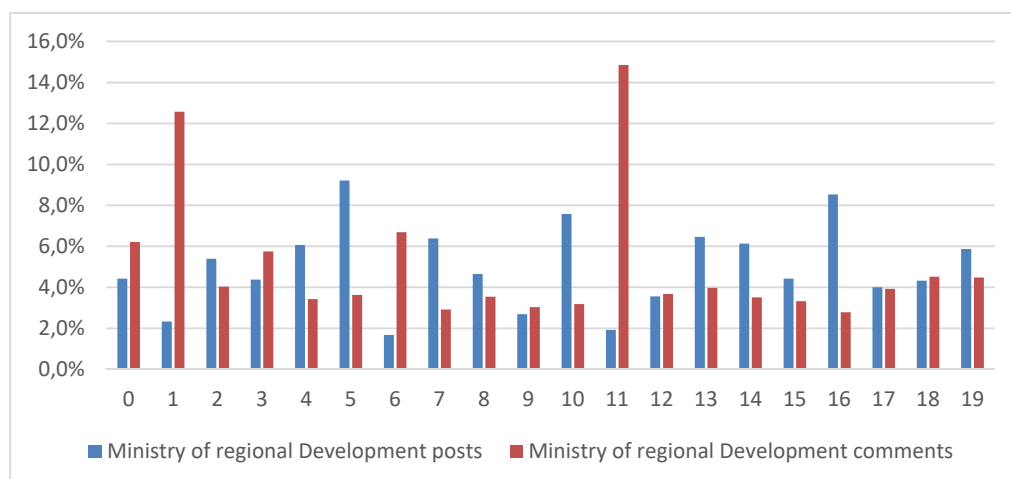
In the case of the Ministry of European Funds, posts are mainly based on topic 9, that provides procedural clarifications, and on topic 17, that deals with an issue regarding compensation after a natural calamity. Comments focus again on topic 1, referring to the need to speed up the process, and on topic 1, that refers to a political scandal regarding the former prime Minister.

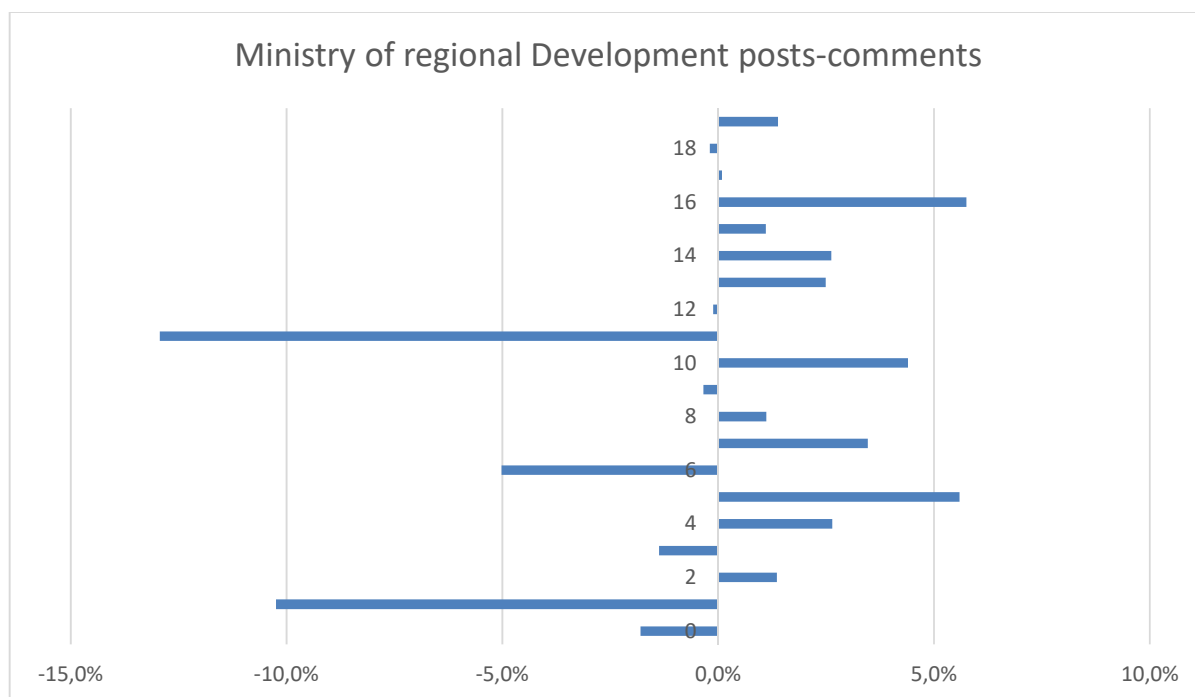


PERCEIVE DEL. 5.3: 'REPORT DISCUSSING THE EMERGENT TOPICS IN IDENTITY RELEVANT DISCOURSE AT DIFFERENT LEVELS'



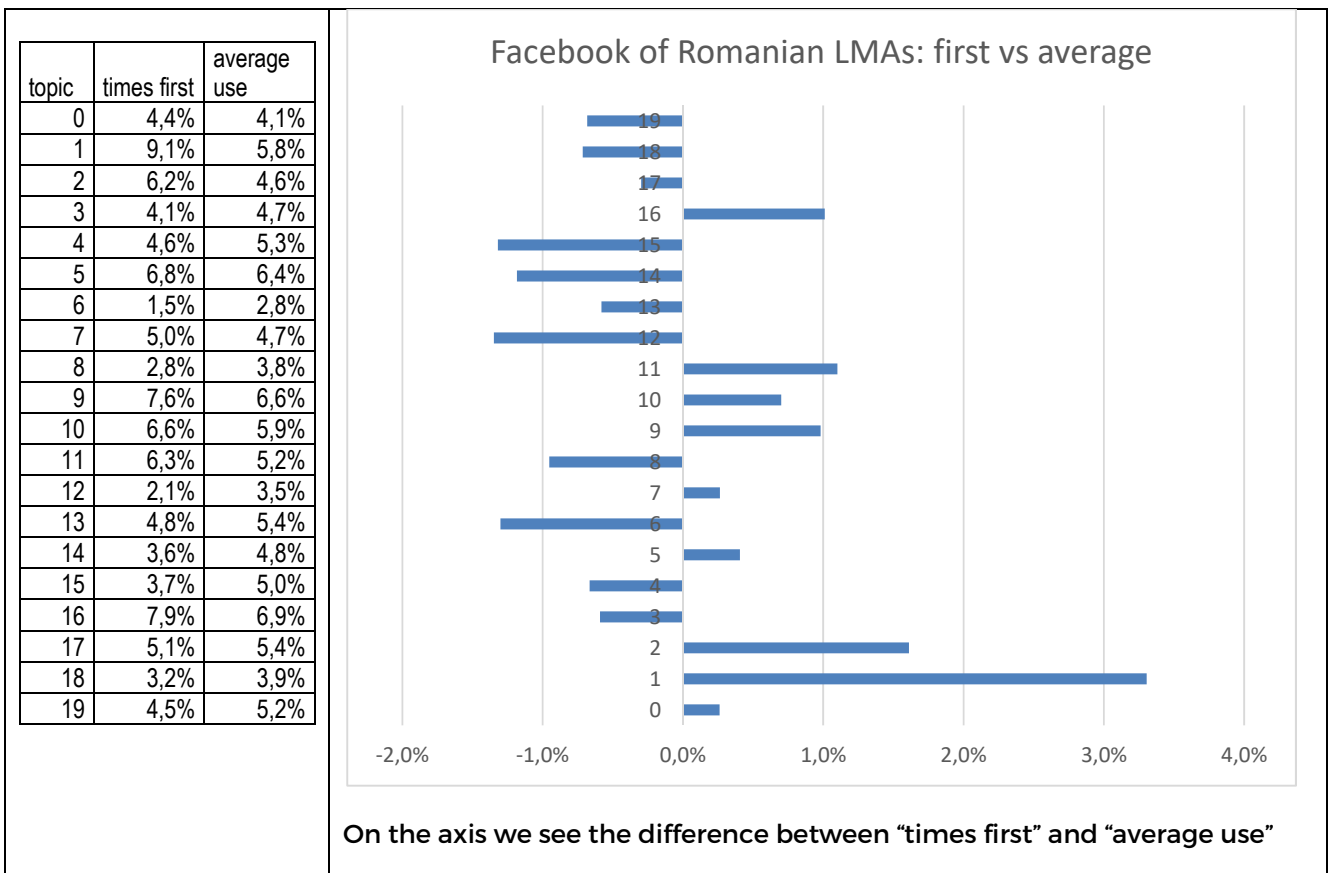
The case of the Ministry of Regional Development posts mirrors more closely the general analysis, with topic 11, 6, 1, and 3 most used in the comments, while topics 5, 10, and 16 are more used in the posts.





Finally, based on the following figure and table, we can see that the topics that more often characterize a post or a comment are Topic 1, that keeps emphasizing the need to accelerate the infrastructure works in order to obtain the approval for European funding for public projects, and topic 2, that is connected to the celebration of Romania's National day. Then we have topics 9, 10, 11, and 16, that provides technical guidance and examples for applying to funds.

PERCEIVE DEL. 5.3: 'REPORT DISCUSSING THE EMERGENT TOPICS IN IDENTITY RELEVANT DISCOURSE AT DIFFERENT LEVELS'



4.4.5 Sweden

In reference to the Swedish case, we downloaded posts and comments from the Facebook official profile of Tillväxtverket, the Local Managing Authority. After removing words contained in the same stopword list that we used for newspapers, we analyzed both posts and comments. Overall, our corpus consists of 12.884 words, and the longest source is composed by 79 words. The following table presents a list of the 20 most important words for each topic, which we used, together with the colleague from UGOT, in order to make sense of each topic. Indeed, in this inductive phase of the analysis, we relied on the list of words per topic, and on the three most representative comments/posts for each topic. The interpretation of topics precedes the table.

Topic 0 – MISUSE OF TAX MONEY: about the dismissal of Christina Lugnet

Topic 1 – SUSTAINABLE URBAN DEVELOPMENT: about urban innovation and development

Topic 2 – SOCIAL ENTERPRISES: to prevent unemployment and employ immigrants

Topic 3 – INNOVATION AND ENTREPRENEURSHIP: a fair in New York hosted by the Swedish agency of regional and economic growth.

Topic 4 – MINING PROJECTS: project in Östra mellansverige supporting mining.

Topic 5 – INVESTMENT IN GLASSWORKS: Kingdom of Galsworks is an area in Sweden with a long tradition of glassworks.

Topic 6 – TOURISM AND GROWTH: the Swedish venture initiative.

Topic 7 – STARTUPS: gaming and digital startups in particular.

Topic 8 – ENTREPRENEURSHIP AND TEACHERS: initiative to promote networks for entrepreneurship.

Topic 9 – STARTUPS: fair for sharing information about entrepreneurship.

Topic 10 – INTERNATIONALIZATION AND GROWTH: information on growth during a fair.

Topic 11 – STUDENT ENTREPRENEURS: competition for entrepreneurship for students.

Topic 12 – CULTURAL AND CREATIVE COMPANIES AND EXPORTS

Topic 13 – JOB ADS FOR STRUCTURAL FUNDS RELATED EMPLOYMENT: various locations.

Topic 14 – ENVIRONMENT AND POVERTY REDUCTION PROGRAMS: Demo Miljö and the Swedish council for regional and economic growth.

Topic 15 – CONFERENCE ON THE BALTIC SEA REGION: about the future of the Baltic Sea region.

Topic 16 – QUESTION FROM THE PUBLIC ON INFRASTRUCTURE AND SAFETY: the person answering asks for clarification because question was not understood.

Topic 17 – EU FUNDED PROGRAMMES: to share information about the benefits of EU programs.

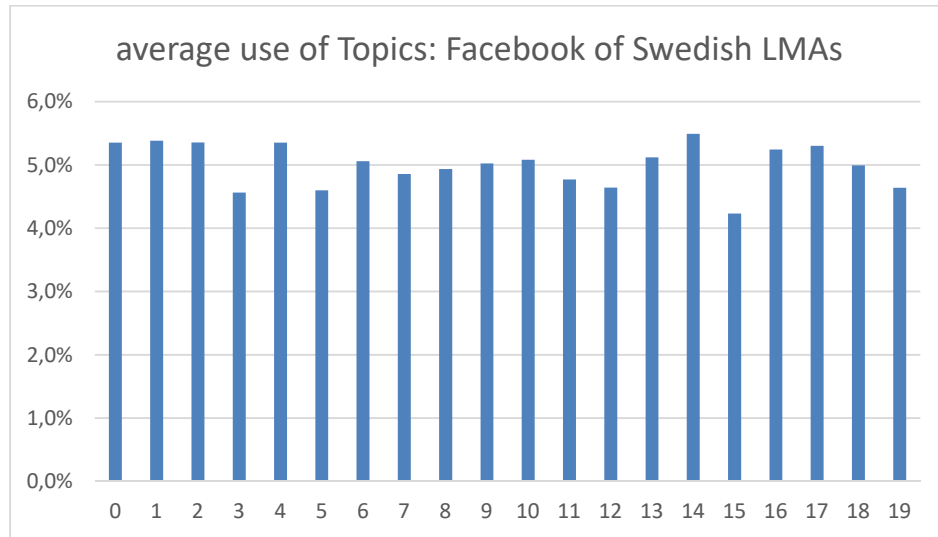
Topic 18 – CONDITIONS FOR COMPANIES for companies: regional differences in growth and internationalization.

Topic 19 – GROWTH AND SOCIETY: seminars in Almedalen on entrepreneurship, digitalization and growth.

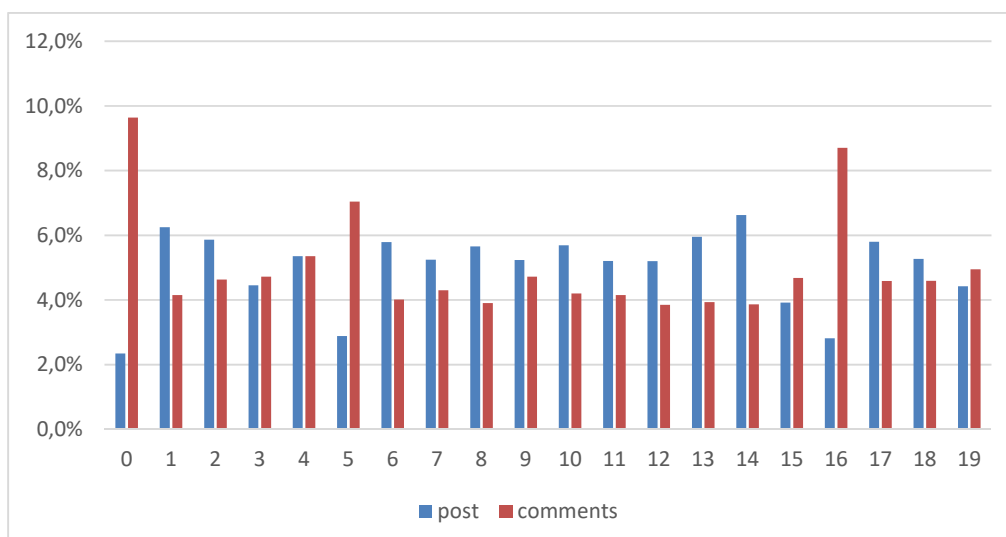
topic	0	1	2	3	4	5	6	7	8	9
20 most important words	christina	tillväxtverket	företag	tillväxtverket	http://bit.ly	tillväxtverket	sverige	http://bit.ly	företagande	företag
	lugnet	tillväxt	tillväxtverket	bit.ly	regionala	pengar	tillväxtverkets	april	företagare	starta
	avgå	hållbar	insatser	nytt	projekt	län	kronor	söka	entreprenörskap	verksamt.se
	kanske	konferensen	jobb	samarbete	exempel	blekinge	rapport	startup-sweden	tillväxtverkets	frågor
	sätt	utveckling	aktörer	dags	projektet	ansöka	svenska	digitala	kvinnors	eget
	hela	utveckla	sociala	samt	europiska	veta	gunilla	satsning	arbetar	hjälp
	företagare	regioner	nya	york	arbete	verkar	miljoner	camp	juni	oktober
	tycker	regional	uppdrag	new	europa	vet	hela	boot	berättar	träffa
	intressant	skapa	företagande	antal	filmen	almi	nordlöv	bolag	landet	information
	lön	bidrar	syftet	visa	eu:s	glasriket	generaldirektör	årets	http://bit.ly	hittar
	väl	nationella	vägar	lära	hjälp	anställda	besökare	sveriges	främja	mässan
	skattepengar	bit.ly	enklare	skatteverket	landet	sen	utländska	spännande	boka	myndigheter
	borde	kring	öka	temat	tillgång	läsa	ökar	kontakter	driva	ställa
	tag	bidra	finansiering	finansieringspodden	hör	glasrikesmiljonen	miljarder	startups	möt	funderar
	riktigt	följ	personer	bolagsverket	berättar	gilla	besöksnäringen	lokal	ambassadörer	älvsjö
	granskning	mars	offentliga	innovate	regioner	verk	veckan	februari	film	direkt
	representation	framtidens	regeringen	turismpriset	initiativ	själva	turismen	lovande	filmen	tips
	koll	http://bit.ly	medel	avsnitt	html	länsstyrelsen	turismens	investerare	hela	igång
	egna	konferens	filmer	anställa	medarbetare	enda	jobb	deltog	företagaren	lqvez
	tog	nivå	nyanlända	lyssna	ger	hemsida	skapa	höst	kostnadsfritt	http://goo.gl

topic	10	11	12	13	14	15	16	17	18	19
20 most important words	välkommen	bit.ly	företag	söker	företag	the	hej	maj	läs	seminarium
	möjligheter	tävlingen	medelstora	läs	nya	for	via	läs	företagens	idé
	stärka	tillväxtverket	kreativa	just	stöd	delta	hoppas	stockholm	villkor	anna
	sverige	årets	bit.ly	jobba	söka	sweden	svar	anmäl	tillväxtverkets	ungas
	utmaningar	internationella	kulturella	ansökan	tillväxt	augusti	tar	service	rapporten	juli
	kunskap	november	ser	hos	miljöteknik	östersjöregionen	fråga	ansök	visar	seminariet
	näringsliv	studentföretagare	internationalisering	http://bit.ly	utveckla	framtid	gång	malmö	verklighet	tillväxtdagen
	arbetar	hos	innovativa	skicka	möjlighet	konferens	följer	mars	företagen	besök
	digitalisering	läs	arbetet	stockholm	finansiering	umeå	ping	kommun	resultaten	seminarier
	konkurrenskraft	finalen	senaste	bit.ly	hitta	hack	ansökningar	region	branscher	oktober
	tillväxtdagen	entreprenörer	företagen	ifa	programmet	day	kontakta	samverkan	växa	almedalen
	behövs	sverige	företags	tjänsten	information	science	delar	landsbygden	regler	unga
	svensk	plats	infrastruktur	regionala	http://bit.ly	strategiforum	tid	handlar	undersökningen	mötesplatser
	skapar	bästa	export	ingår	tjänster	länder	emot	ansökningsdag	ökad	program
	tema	arrangeras	samtliga	arbete	marknader	gemensam	önskar	göteborg	statistik	står
	attraktiva	universitet	nästan	enheten	cleantech	internationell	mail	förslag	tillväxtvilja	morgon
	innebär	creative	blogginlägg	östersund	swedish	september	myndighet	nära	hinder	finansierar
	miljöer	innovation	frukostseminarium	handläggare	miljödriven	tyvärr	förtroende	utvecklar	resultat	plats
	runt	jobbar	deltar	utveckla	affärsutvecklingscheckar	life	uppdraget	januari	samtidigt	pitcha
	konkurrenskraften	svenska	lösningar	strukturfondsprogrammet	affärer	vann	kort	karlstad	upplever	idétag

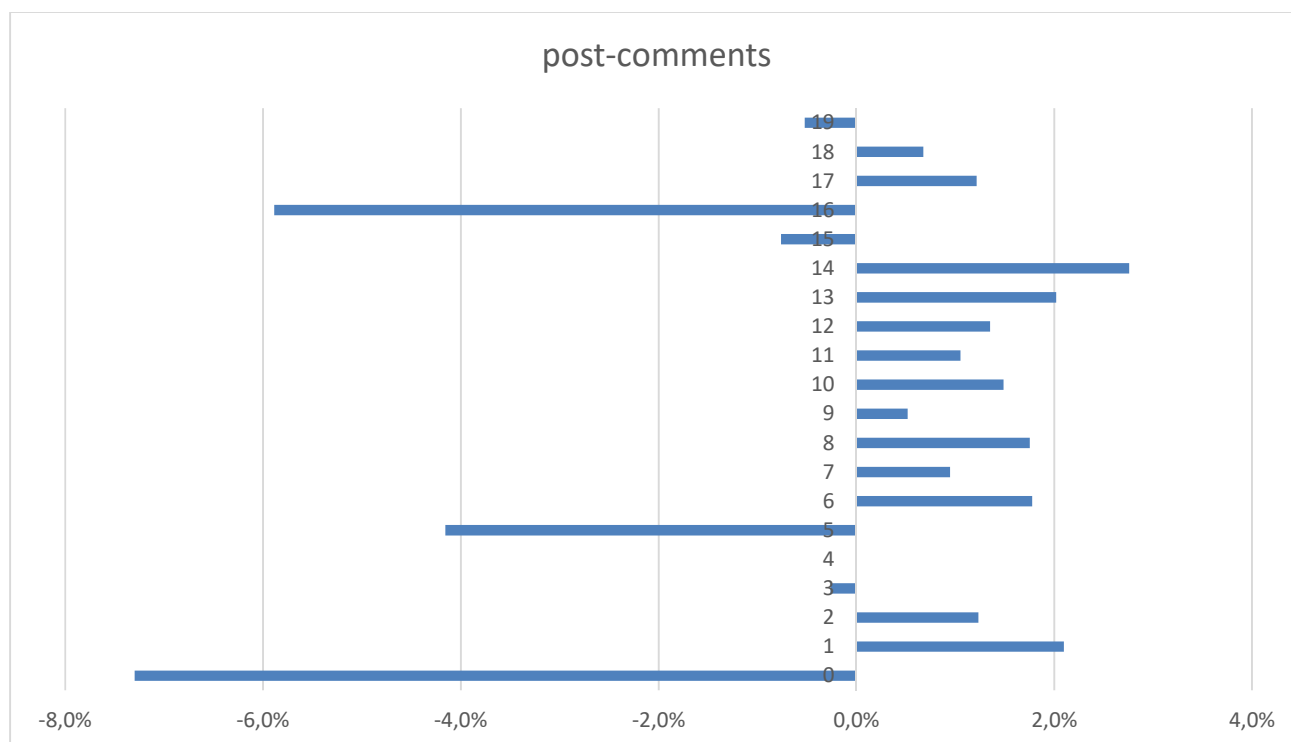
If we analyze the average use of topics, we see that their usage is balanced, with no topic that are preeminent, if compared to others.



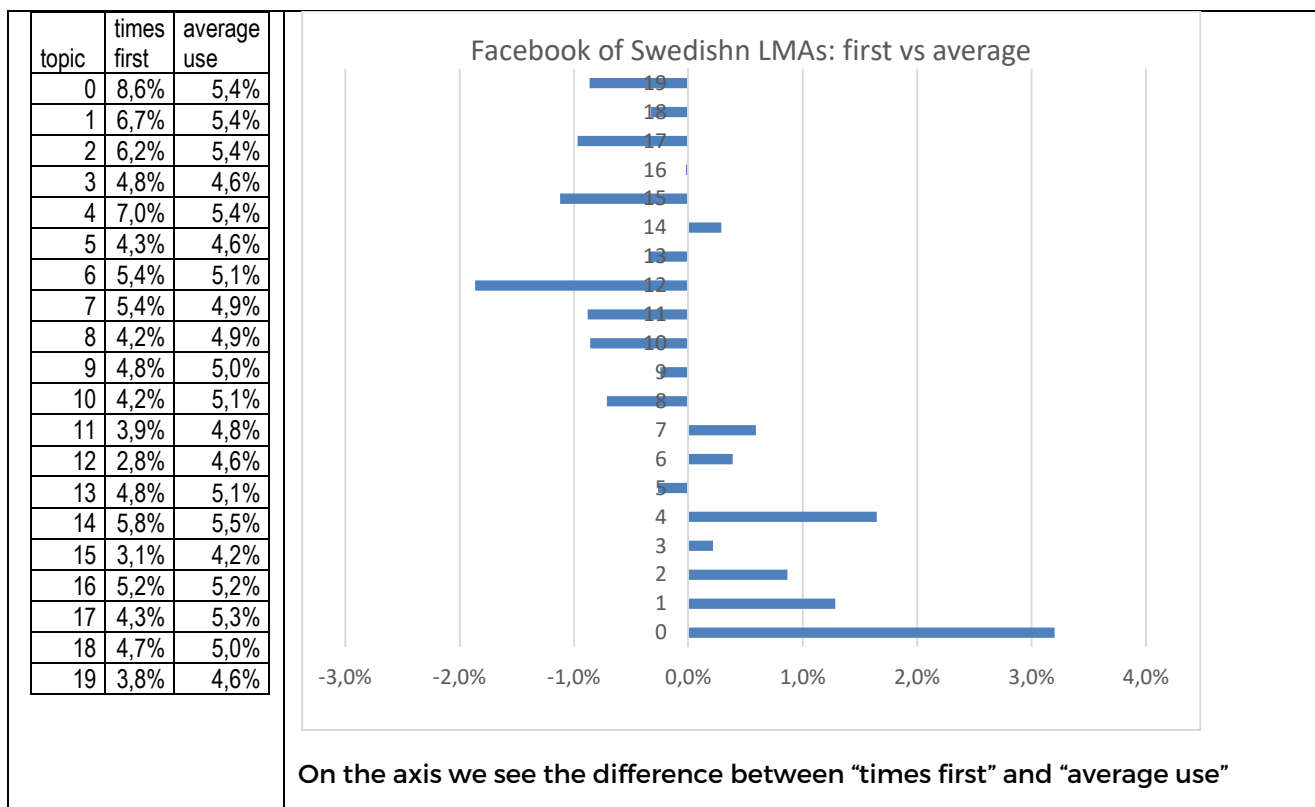
Topics that are more uses in posts are characterized by the fact that they inform or promote regarding positive aspects of the Region and of the EU funds. In example topic 14 focuses on environment and poverty reduction programmes, topic 13 is about jobs and created through structural funds, and topic 1 is about sustainable urban development. Topic 6 deals with tourism and growth, while topic 8 advertises on initiatives to promote networks for entrepreneurship. On the contrary, in a trend that we analyzed in other national cases as well, topics mostly used for comments highlights what is not properly working. So topic 0 focuses on misuse of tax money, and topic 16 is about questions from citizens regarding infrastructures and safety. Finally, topics 5 inquiries about investments in glassworks.



PERCEIVE DEL. 5.3: 'REPORT DISCUSSING THE EMERGENT TOPICS IN IDENTITY RELEVANT DISCOURSE AT DIFFERENT LEVELS'



Topics that more often characterize texts are topic 0, on the misuse of tax money, topic 4, dealing with a Mining project in Östra mellansverige, and 1, which is about sustainable urban development.



4.4.6 Spain

In reference to the Spanish case, we downloaded posts and comments from the Facebook official profile of Junta de Extremadura, the Local Managing Authority. After removing words contained in the same stopword list that we used for newspapers, we analyzed both posts and comments. Overall, our corpus consists of 278.101 words, and the longest source is composed by 395 words. The following table presents a list of the 20 most important words for each topic, which we used, together with the colleague from UB, in order to make sense of each topic. Indeed, in this inductive phase of the analysis, we relied on the list of words per topic, and on the three most representative comments/posts for each topic. The interpretation of topics precedes the table.

Topic 0 - EUROPEAN YOUTH POLICY IN EXTREMADURA: News related to programs, activities, projects, ..., with respect to youth in Extremadura. Several institutions and foundations collaborate in such initiatives and the activities are also diverse (sports, cultural activities, ...).

Topic 1 - OPINION ON THE REPERCUSSION OF CULTURAL ACTIVITIES IN EXTREMADURA: Information related to cultural activities in the region of Extremadura (festivals, sport activities, tourism, traditions...). General information on the opinion expressed by different politicians with special emphasis in its international projection.

Topic 2 - NOISE

Topic 3 - CONSTRUCTION SECTOR: News related to the sector of construction (works, housing, investments, ...) in the two provinces in Extremadura (Cáceres and Badajoz). Different political chiefs are visiting some municipalities in relation to such activities.

Topic 4 - EDUCATION: News on the education system in Extremadura. Information on courses and programmes offered by the Junta de Extremadura and information on the agents (teachers, students, schools, ...) participating in such activities.

Topic 5 - CULTURAL ACTIVITIES: Information on different cultural activities (theater, exhibitions, festivals,...) in different cities in Extremadura. The information provided is related to the dates and places of such activities taking place.

Topic 6 - CULTURAL ACTIVITIES: Information on different cultural activities (theater, exhibitions, festivals,...) in different cities in Extremadura. The information provided is related to the people participating in such activities (authors, actors, ...).

Topic 7 - TOURISM AND EMERGENCY ALERTS: Information on tourism promotion in Extremadura. News related to different emergency alerts because of high temperatures during the summer in Extremadura.

Topic 8 - GOVERNMENT AGREEMENTS: Announcement of the agreements achieved in the Government Board of the regional government of Extremadura through the Media Room

Topic 9 - BUSINESS SECTOR AND ENTREPRENEURSHIP: News related to different programs, projects, conferences or forums with respect to the business sector and entrepreneurship in Extremadura. Some news is more specific on the presentation of innovation strategies to face new challenges

Topic 10 - DEVELOPMENT PROGRAMMES: Information on different grants, subsidies, programs and projects in relation to cooperation, development and public works provided by the regional government of Extremadura. Specific emphasis is put on cooperation programs for development.

PERCEIVE DEL. 5.3: 'REPORT DISCUSSING THE EMERGENT TOPICS IN IDENTITY RELEVANT DISCOURSE AT DIFFERENT LEVELS'

topic	0	1	2	3	4	5	6	7	8	9
20 most important words	Jóvenes	general	gracias	fomento	educación	día	badajoz	extremadura	extremadura	empresas
	extremadura	director	más	obras	centros	mérida	premios	turismo	gobierno	sector
	instituto	cultural	mejor	euros	consejería	extremadura	cáceres	centro	consejo	empresarial
	fundación	cultura	buena	viviendas	formación	próximo	premio	cáceres	agenda	innovación
	juventud	destaca	tierra	don	cultura	teatro	exposición	feria	http://www.gobex.es/salaprensa/view/press/press/detalle.php?id	extremeñas
	programa	patrimonio	vida	consejería	curso	festival	entrega	internacional	acuerdos	jornada
	proyecto	extremeños	enhorabuena	benito	alumnos	plazo	museo	bla	vicepresidenta	proyectos
	europaea	deportes	está	inversión	escolar	edición	presenta	alerta	directo	extremadura
	actividades	región	están	serena	educativos	cáceres	nogales	provincia	noviembre	gobex
	joven	importancia	españa	consejero	profesional	semana	extremeño	badajoz	septiembre	empresarios
	cooperación	garcía	todas	cáceres	programa	será	trinidad	nacional	octubre	programa
	deporte	directora	buen	visita	educativo	horas	muestra	mañana	regional	investigación
	concurso	extremadura	pueblo	millones	docentes	días	mérida	horas	diciembre	foro
	extremeña	dirección	mundo	mejora	transporte	presentación	acto	guadiana	enero	proyecto
	europeo	deporte	muchas	badajoz	alumnado	badajoz	pública	promoción	teniente	emprendedores
	creación	destacado	tan	nuevo	escolares	celebrará	regional	norte	http://www.gobex.es/salaprensa/view/press/agenda/agenda.php	comercio
	participa	interés	toda	moral	plazas	internacional	josé	día	abril	nuevos
	asociación	españa	siempre	construcción	cursos	sala	libro	región	extremeño	región
	edición	calidad	parte	plasencia	consejera	mañana	centro	emergencias	aprueba	extremeños
	internacional	apuesta	felicidades	barros	educativa	red	recibe	turístico	mayo	través

PERCEIVE DEL. 5.3: 'REPORT DISCUSSING THE EMERGENT TOPICS IN IDENTITY RELEVANT DISCOURSE AT DIFFERENT LEVELS'

topic	10	11	12	13	14	15	16	17	18	19
20 most important words	euros	salud	medio	junta	más	presidente	años	social	más	plan
	ayudas	ses	rural	vara	extremadura	monago	nada	sociales	también	marcha
	millones	carrón	agricultura	fernández	año	extremadura	mas	personas	forma	junta
	convocatoria	hospital	ambiente	extremadura	años	josé	qué	pública	comunidades	extremadura
	doe	atención	sector	presidente	región	gobex	pues	política	parte	convenio
	plan	mayores	incendio	guillermo	mes	gobierno	ahora	administración	comunidad	objetivo
	publica	hernández	desarrollo	indicado	espera	destaca	está	políticas	manera	información
	destina	servicio	echávarri	economía	número	inaugura	más	sanidad	vez	colaboración
	más	mujeres	plan	destacado	ciento	http://www.gobex.es/salaprensa/view/press/press/detalle.php?id	menos	servicios	primera	consumo
	proyectos	pacientes	campo	región	primer	antonio	gente	ley	junta	gobex
	contratación	género	consejero	igualdad	menos	parejo	señor	consejero	posible	ley
	subvenciones	más	territorio	gil	pasado	recibe	ver	renta	público	acuerdo
	decreto	sistema	agrarias	portavoz	extremeños	españa	dinero	laboral	extremeña	protección
	desarrollo	violencia	consejería	sociedad	datos	anuncia	vara	familias	españa	puesta
	gobex	personas	incendios	futuro	personas	reúne	cosas	salud	caza	extremeño
	programa	sanitario	zonas	rosiña	días	nuevo	mucho	básica	debe	proyecto
	destinadas	sepad	agricultores	más	respecto	asegura	mal	discapacidad	año	materia
	fomento	profesionales	pac	señalado	extremeñas	visita	creo	personal	está	civil
	mejora	día	nivel	isabel	comunidad	nueva	muchos	gestión	sólo	seguridad
	municipios	badajoz	begoña	vida	últimos	presenta	usted	oferta	sistema	pone

Topic 11 – HEALTH SYSTEM AND SOCIAL SERVICES: News related to the health system and social services in Extremadura. Special emphasis is placed on hospital, elderly care, women services and violence against women.

Topic 12 – AGRICULTURE AND ENVIRONMENTAL ISSUES: News related to the agriculture and environmental sectors with the announcements of policies and plans from the corresponding department in Extremadura. Specific emphasis is placed on the alert and extinction of fires in the forests.

Topic 13 – ECONOMICS AND SOCIETY: News related to the economic situation and social matters (equality) in Extremadura. Activity related to such topics from the Government of Extremadura (Junta de Extremadura).

Topic 14 – DATA IN THE REGION OF EXTREMADURA: Information provided by the regional government in Extremadura with respect to statistics from different areas (as an example, the flu incidence in the region, the payment delay in the payments made by the Junta de Extremadura).

Topic 15 – AGENDA OF THE PRESIDENT OF THE GOVERNMENT OF EXTREMADURA: Announcements related to different public activities presided by the president of the Government of Extremadura (Junta de Extremadura). In such cases, the president opens the activity, presents a project, announces or presents a program, or visits some facilities.

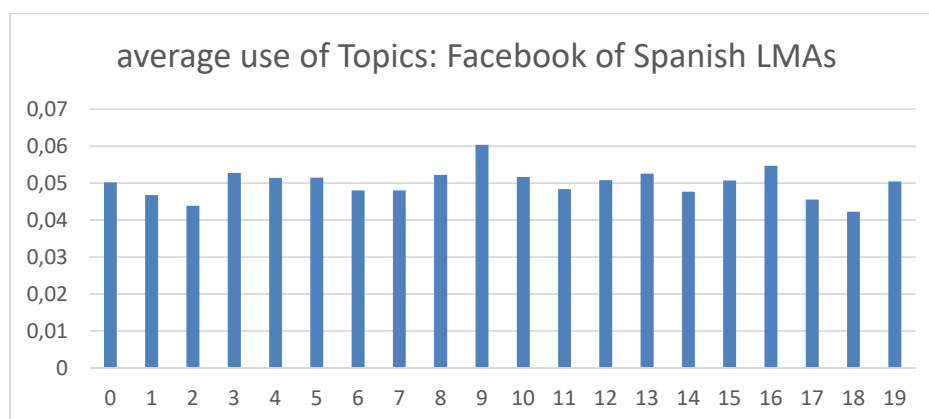
Topic 16 – GENERAL COMPLAINTS: This topics uses words used by people on Facebook to complain about politics and politicians in very vague and indefinite ways. In example, a quote from one of the most important comments says: "The rightwing parties did the same for people in Extremadura (los Extremeños). They don't care about us, but we keep voting for them. And now Vara (former President of the Junta de Extremadura, PSOE) will be considered guilty".

Topic 17 – SOCIAL SERVICES: News related to different policies related to social services (health, labour opportunities, families, disabilities, ...) by the regional government in Extremadura. In some cases, there are announces of new policies and their coverage, in some others they are the opinion expressed by specific people.

Topic 18 – LETTERS TO THE JUNTA: This topic collects words that are used in letters addressed to the Junta de Extremadura – and published as Facebook comments on their profile. Letters are very different from each other, but they tend to be more complains, than congratulations.

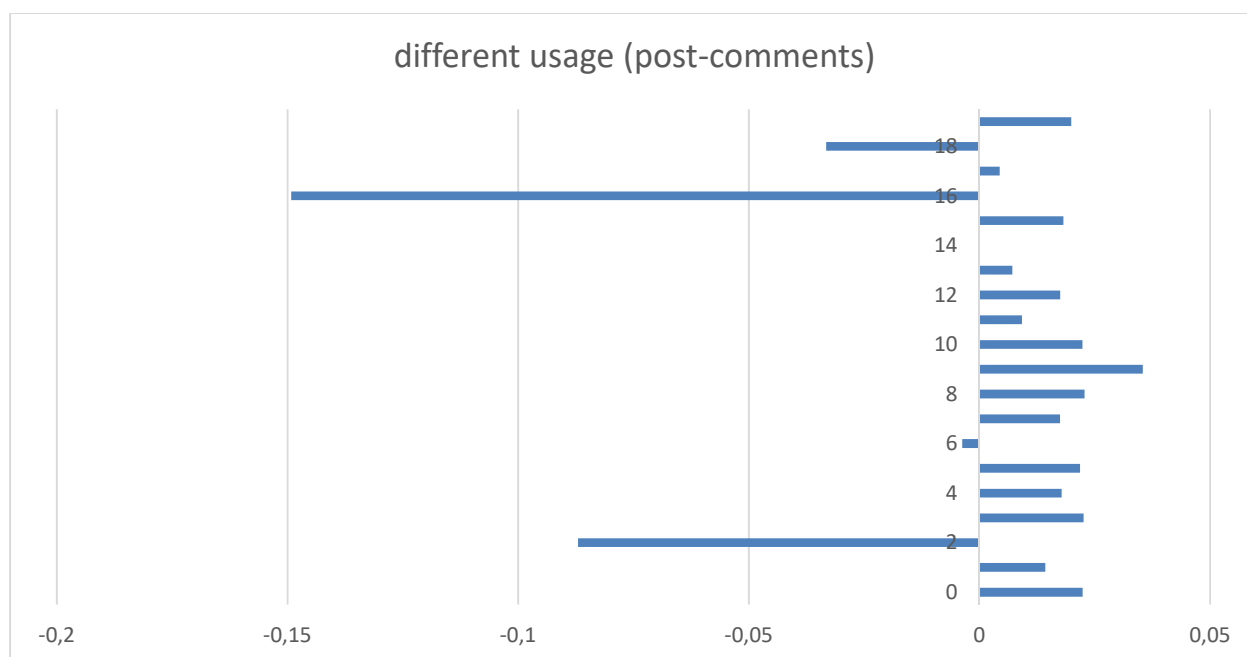
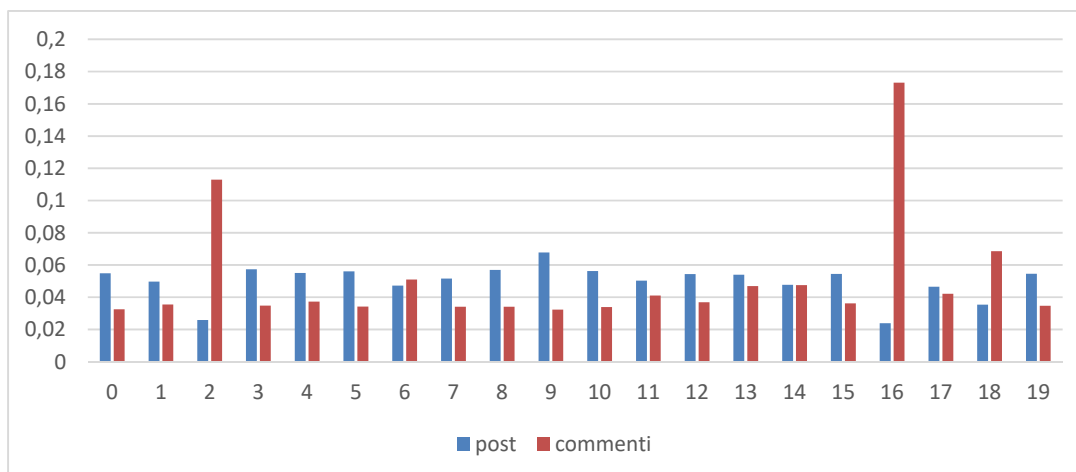
Topic 19 – SECURITY AND CIVIL PROTECTION: News related to different plans, agreements, projects and laws related to issues of security and civil protection by the regional government in Extremadura (Junta de Extremadura).

Overall, topics are used in balanced way.



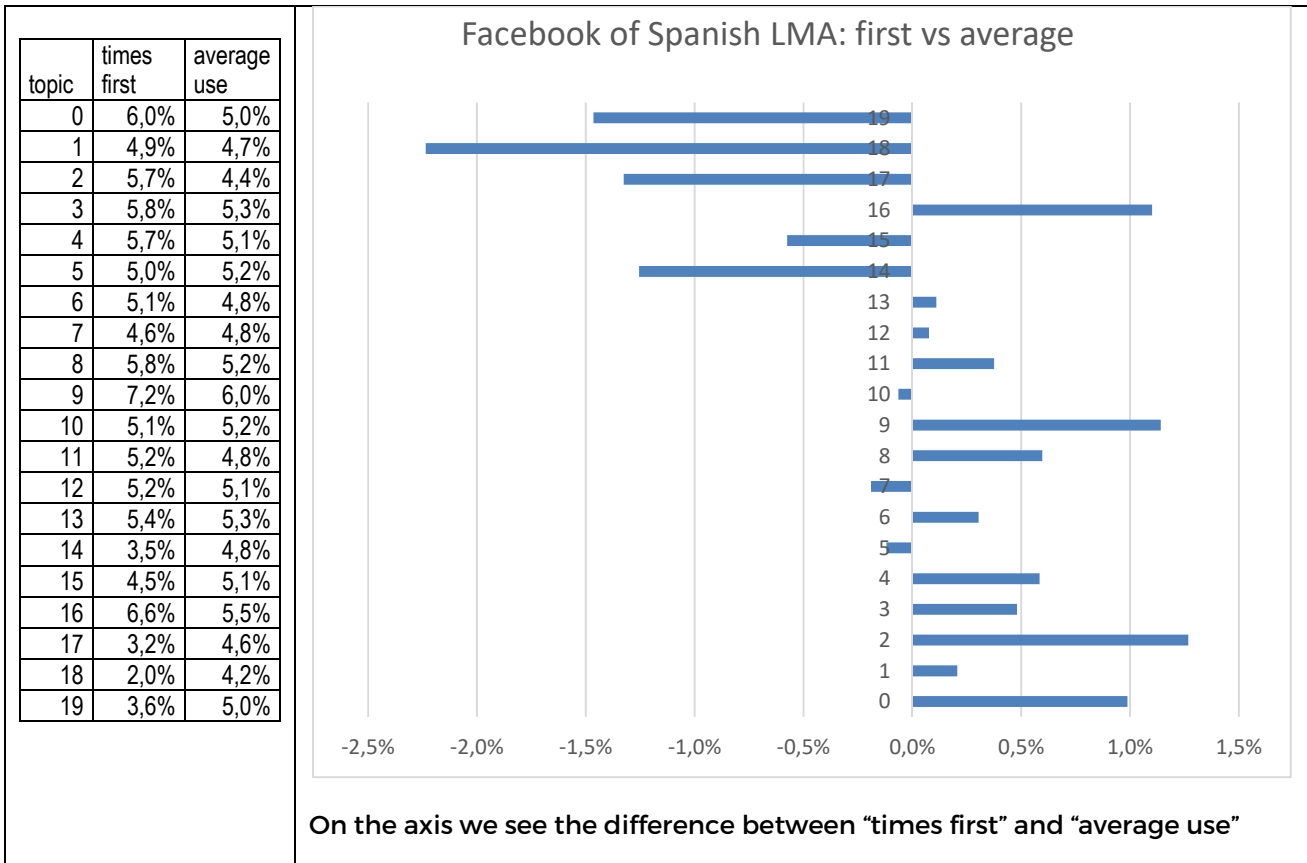
PERCEIVE DEL. 5.3: 'REPORT DISCUSSING THE EMERGENT TOPICS IN IDENTITY RELEVANT DISCOURSE AT DIFFERENT LEVELS'

It is more interesting to note that all the topics are more used in posts, than in comments, with three relevant exceptions. The first exception is topic 2, which is composed by noise. More interestingly, comments widely use topic 18, that constitutes letters (mostly complaints) to the Junta, and topic 16, that collects general complaints. So basically citizens write on the Junta de Extremadura Facebook page in order to lament something.



Among the topics that most often characterize texts where they are used, we can find topic 0, regarding political bodies, topic 9, about Spanish Economy, and topic 16, the one mostly used by comments to complain regarding something.

PERCEIVE DEL. 5.3: 'REPORT DISCUSSING THE EMERGENT TOPICS IN IDENTITY RELEVANT DISCOURSE AT DIFFERENT LEVELS'



4.4.7 EU profiles

Finally, we downloaded posts and comments from six institutional sources linked to the EU:

- EU Regional and Urban Policy (www.facebook.com/EUinmyregion)
- Interreg Europe (www.facebook.com/interregeurope)
- Assembly of European Regions – AER (www.facebook.com/EuropeanRegions)
- European Committee of Regions (www.facebook.com/European.Committee.of.the.Regions)
- Interreg Central Europe (www.facebook.com/InterregCE)
- Perceive Project (www.facebook.com/perceiveproject)

After removing words contained in the English stopwordlist, which we used for newspapers, we analyzed both posts and comments. Overall, our corpus consists of 116.872 words, and the longest source is composed by 621 words. The following table presents a list of the 20 most important words for each topic, which we used, together with the colleague from PBS, in order to make sense of each topic. Indeed, in this inductive phase of the analysis, we relied on the list of words per topic, and on the three most representative comments/posts for each topic. The interpretation of topics follows the table. Please note two things regarding the following table.

topic	0	1	2	3	4	5	6	7	8	9
20 most important words	project	world	sea	europe	aer	que	aer	energy	regional	europe
	region	government	black	project	youth	las	president	sustainable	policy	die
	projects	life	summit	will	committee	services	regions	climate	local	direct
	award	years	abruzzo	central	meeting	para	hande	urban	projects	und
	congratulations	croatia	della	photos	regions	mobile	general	transport	development	der
	innovation	because	regione	photo	summer	los	new	cities	will	www.youtube.com/watch?v
	regiostars	public	del	projects	regional	por	region	change	regions	super
	poland	human	che	competition	school	municipality	european	project	public	europa
	awards	rights	italian	must	plenary	information	bozatli	waste	platform	das
	women	united	community	look	culture	rome	council	green	authorities	für
	public	minister	delle	picture	will	bike	özsan	environment	research	ist
	baltic	heart	business	facebook	working	este	assembly	new	innovation	euregions
	innovative	politicians	italy	entries	academy	del	member	food	good	luxembourg
	spain	state	webpage	april	group	europa	members	improve	national	van
	winner	hope	regioni	least	conference	november	secretary	smart	european	mit
	apply	used	umbria	website	assembly	españa	meeting	water	experts	jag
	portugal	states	non	voting	network	enterprise	cooperation	city	practices	dossier
	germany	will	dei	page	session	responsible	met	cop	support	monti
	countries	case	progetto	may	happening	invites	county	life	economy	cross_border
	ireland	peace	puglia	e-mail	study	portugal	delegation	global	exchange	europedirect

PERCEIVE DEL. 5.3: 'REPORT DISCUSSING THE EMERGENT TOPICS IN IDENTITY RELEVANT DISCOURSE AT DIFFERENT LEVELS'

topic	10	11	12	13	14	15	16	17	18	19
20 most important words	european	people	europe	european	regions	euinmyregion	les	project	social	cor
	regions	countries	will	funds	happy	share	des	interreg	project	live
	regional	money	interreg	investment	good	contest	pour	programme	development	today
	policy	country	central	member	day	blogging	dans	will	innovation	cities
	europe	feel	open	states	visit	read	régions	looking	growth	follow
	commission	free	conference	programmes	great	ec.europa.eu/regional_policy/blog/detail.cfm?id	sur	proposals	new	will
	cohesion	citizens	cooperation	commission	work	post	par	europe	economy	regions
	citizens	rich	event	cooperation	european	europe	vous	application	people	week
	future	lot	week	million	news	region	que	available	health	agenda
	will	right	brussels	fund	europe	competition	une	website	research	watch
	commissioner	fair	programme	cohesion	today	rate	france	deadline	market	members
	cohesionpolicy	interesting	register	support	brussels	great	région	join	cultural	debate
	union	course	place	border	cor	blog	est	partners	economic	http://bit.ly
	corina	time	regions	interreg	better	people	nous	partner	business	local
	committee	year	days	will	luck	photo	l'europe	lead	rural	check
	cretu	need	join	years	best	city	plus	online	services	day
	crisis	work	cities	period	coming	win	qui	apply	jobs	starting
	parliament	will	new	today	time	discover	européenne	questions	sector	corplenary
	smart	point	september	structural	forward	experience	avec	contact	digital	european
	economic	big	registration	eu's	book	erasmus	projets	work	order	online

Topic 0 - REGIONAL PUBLIC FUNDING: The topic reports winning and awarding of public funding for regional projects

Topic 1 - NEWS AND EVENTS: The topic incorporates news and events surrounding European funded research projects.

Topic 2 - EU POLITICS: The topic reports news and events surrounding European funded research projects. :

Topic 3 - PHOTOGRAPHIC COMPETITION: The topic reports on 'Taking a closer look at Central Europe' photographs competition.

Topic 4 - AER EVENTS: The topic reports on the Assembly of European Regions workshops, academy, and dissemination.

Topic 5 - REGIONAL POLICY: The topic collects News and events surrounding regional policy activities in Brussels.

Topic 6 - AER STAFF MEETINGS: The topic collects information concerning the meetings of Assembly of European Regions president and other staff.

Topic 7 - ENERGY AND ENVIRONMENTAL PROJECTS: The topic describes the discourse on the dissemination results of energy or environmental research projects. In the texts is often explicitly mentioned EU funding.

Topic 8 - REGIONAL POLICY RESEARCH: The collected texts reports discourse on the research and innovation on regional policy from Interreg Europe. The collected texts highlight how two themes - resource efficiency and circular economy - are increasingly relevant topics on the regional policy agenda.

Topic 9 - EU POLICY ISSUES: The collected texts report a discourse on problems within EU policy making and EU-funded projects in the region.

Topic 10 - COHESION AND REGIONAL POLICY: The topic emerging from the collected texts revolves around the concepts of European democracy and policy.

Topic 11 - EU POLITICS: The topic concerns EU political governance under a variety of point of view. As examples, the discourse in the collected texts spans from the loss of sovereignty of countries, which abide to the undemocratic EU council which is courted by lobbyists, to the analysis of Greek crisis. The texts include comments such as the following: "Greece had a tiny problem with early retirement to start with; promising everyone retirement at 50-55 was a bit optimistic wasn't it? ".

Topic 12 - NEWS AND EVENTS: The topic regards the news and events from Interreg Europe.

Topic 13 - REFLECTIONS ABOUT EU FUNDED PROJECTS: The topic reflects on the projects funded by EU. For example, a text reports complaints about a program supported by the European Union that teaches Brazilians Portuguese. The text suggests that EU should teach European Portuguese.

Topic 14 - EVENTS ADVERTISEMENTS: The topic concerns leisure time to be spent in European regions. It advertises events in regions of Europe. For example, collected texts advertise Madrid's Three Kings' parade and Committee of the Regions visit.

Topic 15 - EUROPE IN MY REGION PHOTO COMPETITION: The topic here is a photographic competition entry reminder.

Topic 16 - NEWS AND EVENTS: The topic in the texts regards news announcements concerning a variety of European regional bodies, including AER, European Regional Development Fund, and the Pyrenees-Mediterranean Euroregion.

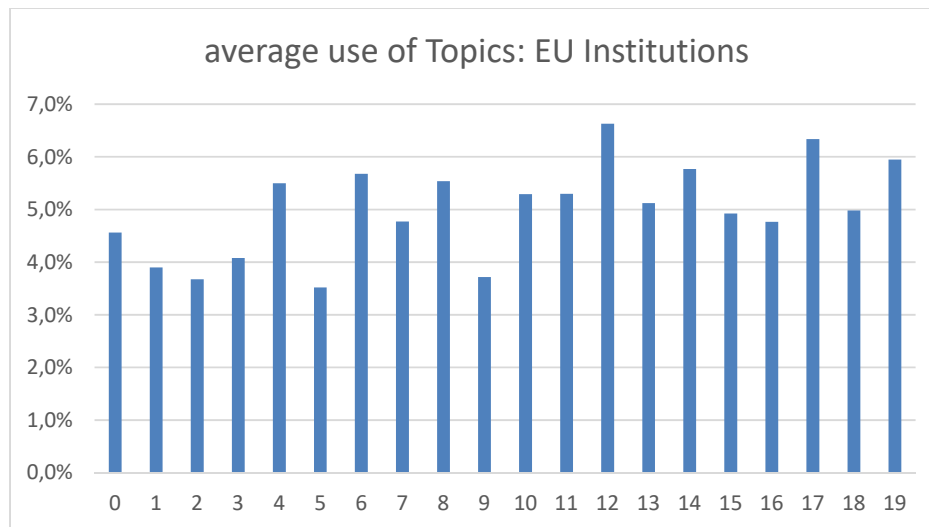
Topic 17 - INTERREG EUROPE: The topic pulls together issues surrounding the administration of project applications to Interreg.

Topic 18 - EU IN MY REGION : The topic is the description of social and development projects in European regions. For example, the CROSSROAD project is mentioned. This cross-border project between Belgium and the Netherlands stimulated technological innovation by promoting sustainable cooperation between companies and research and education institutes. This cooperation resulted in numerous new products and processes that could directly be introduced into the market. The focus of the project was to exchange know-how and cooperate to further develop five so-called emerging 'crossroad technologies' which can be used across different sectors. The CrossRoads project involved 150 companies, and organised 25 cross-border innovation projects, 13 feasibility studies and 40 experiments. Another text points at the work of scientists who study how robots can create jobs - instead of destroying them. Overall, the topic has an optimistic flavour and presents the opportunities stemming from cooperative research in EU. :

Topic 19 - COMMITTEE OF THE REGIONS: The topic regards the activity of the Committee of the Regions. For example, texts refer to the Committee of the Regions plenary live stream from European Week of Regions and cities and events on their MOOC site.

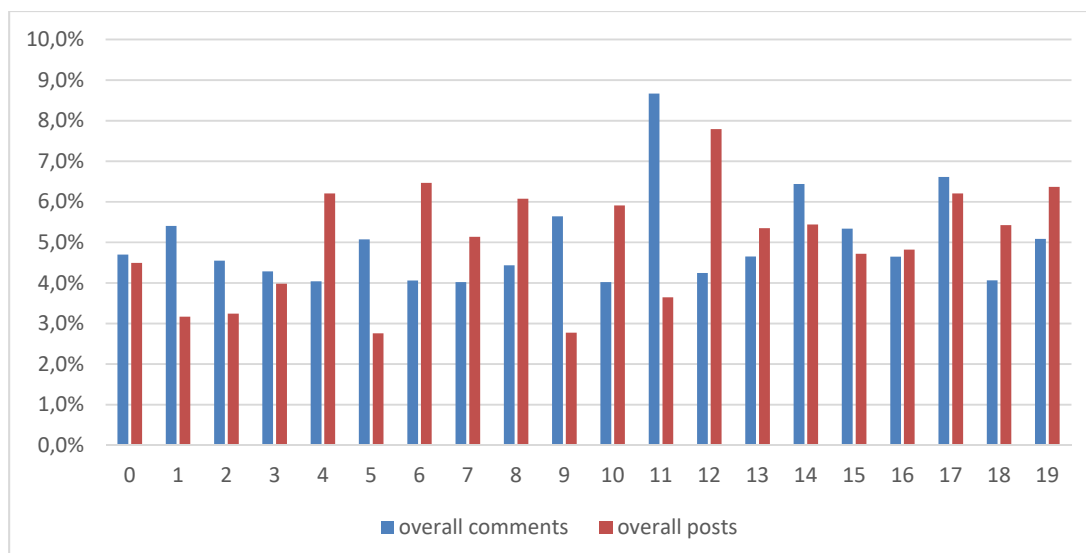
Overall, topics that are used most are topics 12, 17, and 19. The former two deal with Interreg. Topic 12 is about news and events from Interreg Europe, Topic 17 is about its administration. Topic 19 deals with the Committee of Regions.

PERCEIVE DEL. 5.3: 'REPORT DISCUSSING THE EMERGENT TOPICS IN IDENTITY RELEVANT DISCOURSE AT DIFFERENT LEVELS'

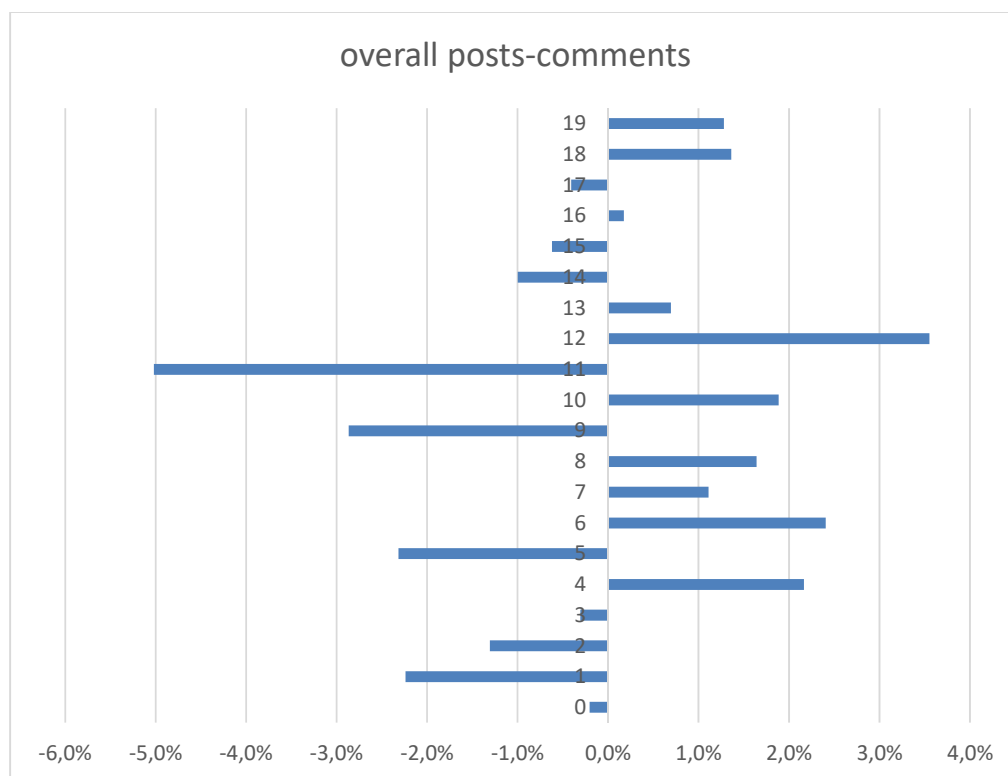


Posts and comments are constituted by different topics: we now focus on the overall description and, then, will describe each source. Overall, posts are composed mainly by topic 12, which is about news and events from Interreg Europe, and by topics 4 and 6, that are about the Assembly of European Regions: the former is about events, the latter deals with staff meetings. Then, among the topics mainly used by posts, we have number 10 and number 8. Both topics deals explicitly with Cohesion and regional policy: topic 10 focuses on the concepts of European democracy and policy, while topic 8 focuses on research and innovation on Regional Policy.

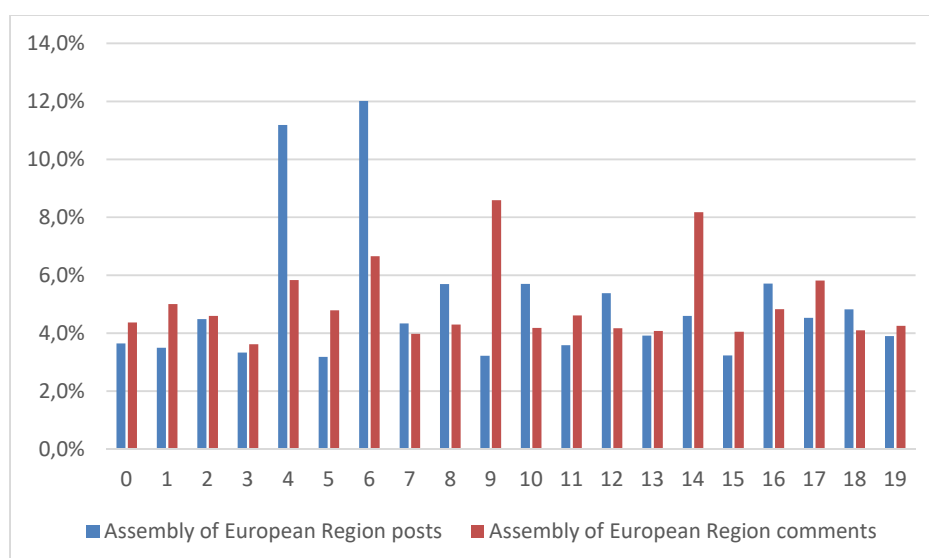
The topic that is most used in the comments is number 11, that deals with EU politics, and with issues such as the Greek crisis, that are likely to produce a vast debate. The second most important topic, for comments, is number 9, that is about policy issues and problems. Third and fourth most important topics for comments are number 5 and 1, that deals with news and events regarding Regional Policy and European Funds.



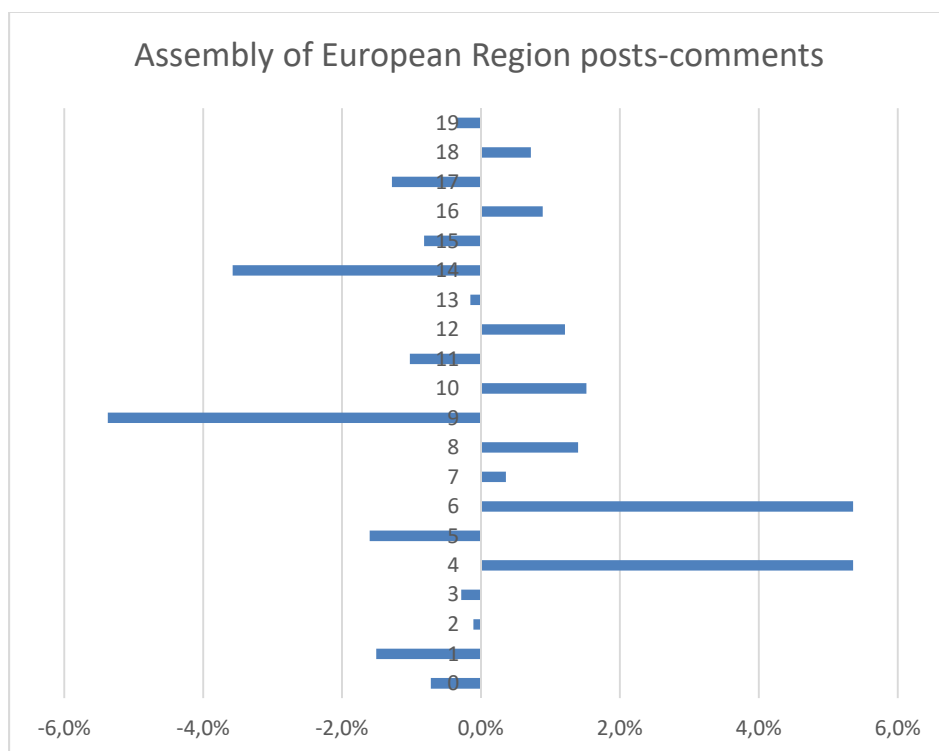
PERCEIVE DEL. 5.3: 'REPORT DISCUSSING THE EMERGENT TOPICS IN IDENTITY RELEVANT DISCOURSE AT DIFFERENT LEVELS'



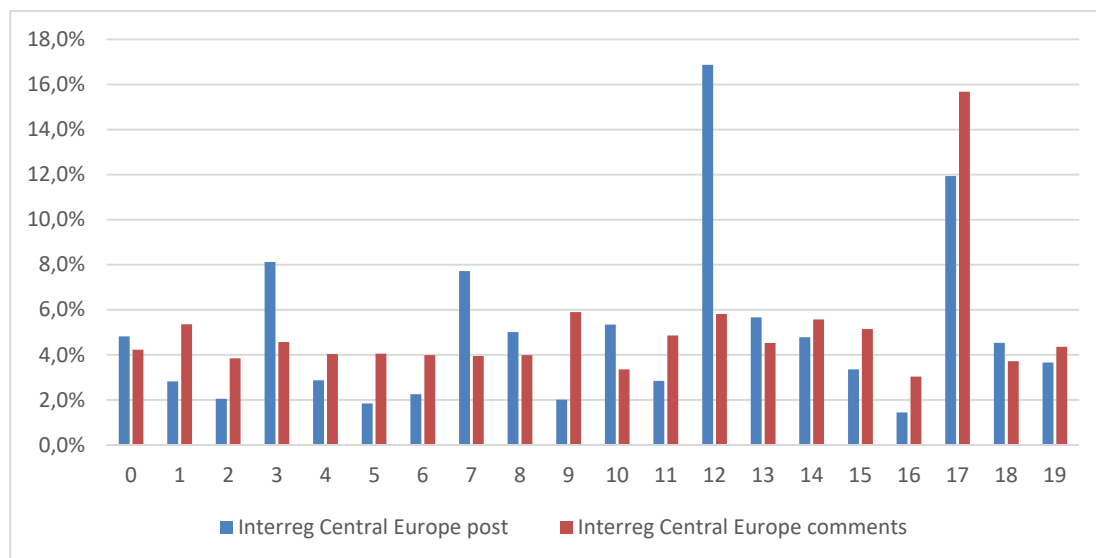
We can now focus on each specific Facebook profile. In the page by the Assembly of European Region, posts are mostly composed by topic 4, which is about AER events, and by topic 6, that are about AER staff meetings. AER tends to communicate basically itself. On the contrary, comments are more based on topic 9 and on topic 14. The former deals with problems and issues regarding EU funded projects. The latter is related to advertisement



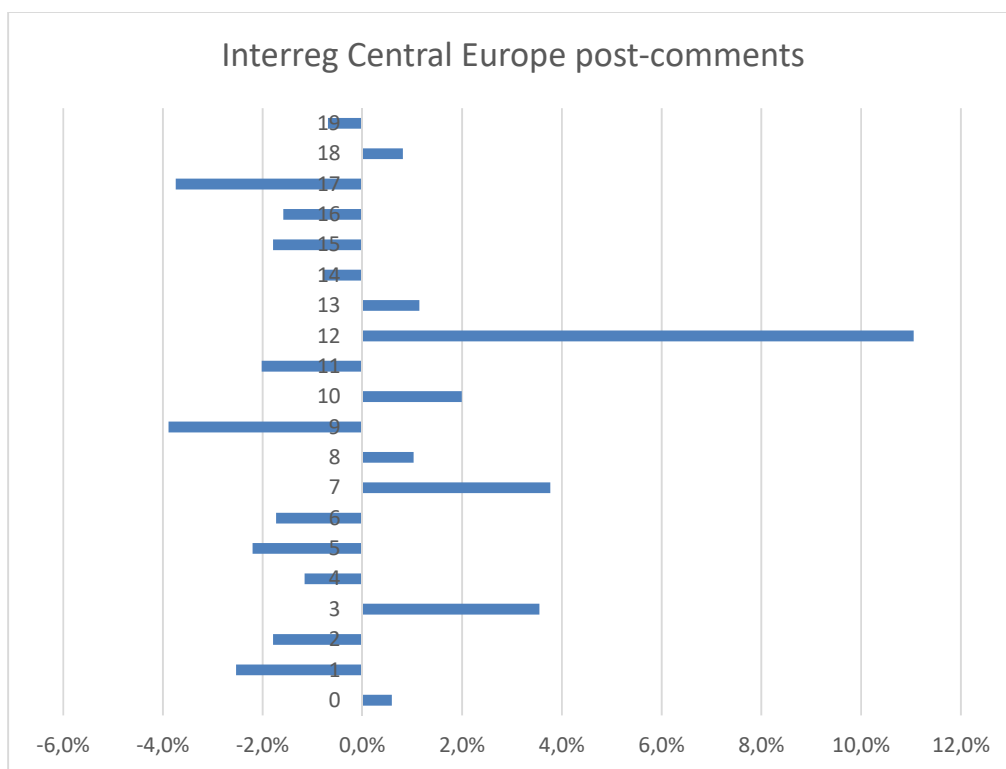
PERCEIVE DEL. 5.3: 'REPORT DISCUSSING THE EMERGENT TOPICS IN IDENTITY RELEVANT DISCOURSE AT DIFFERENT LEVELS'



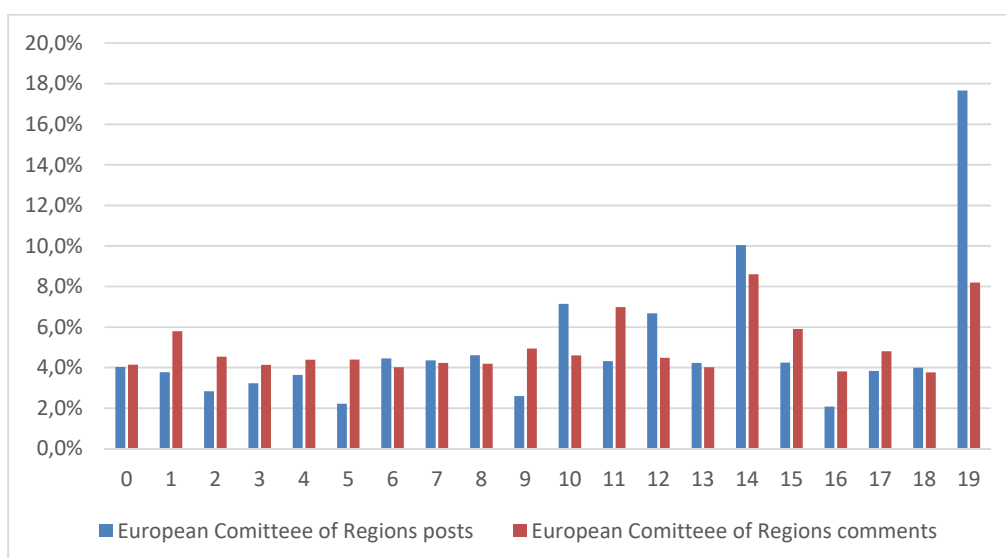
Regarding the profile of Interreg Central Europe, the first topic by far, as used by post, is number 12, which regards exactly news and events from Interreg. Then, posts, as opposed to comments, rely on topic 3, that regards a photographic competition, and topic 7, that is about energy and environmental projects. Topic 17 is widely used in posts, but is more used in comments, and it pulls together issues regarding the administration of project applications to Interreg. In the comments to this profile we can then note the difference in the usage of topic 9, that deals with EU policy issues, and is mostly used by comments.



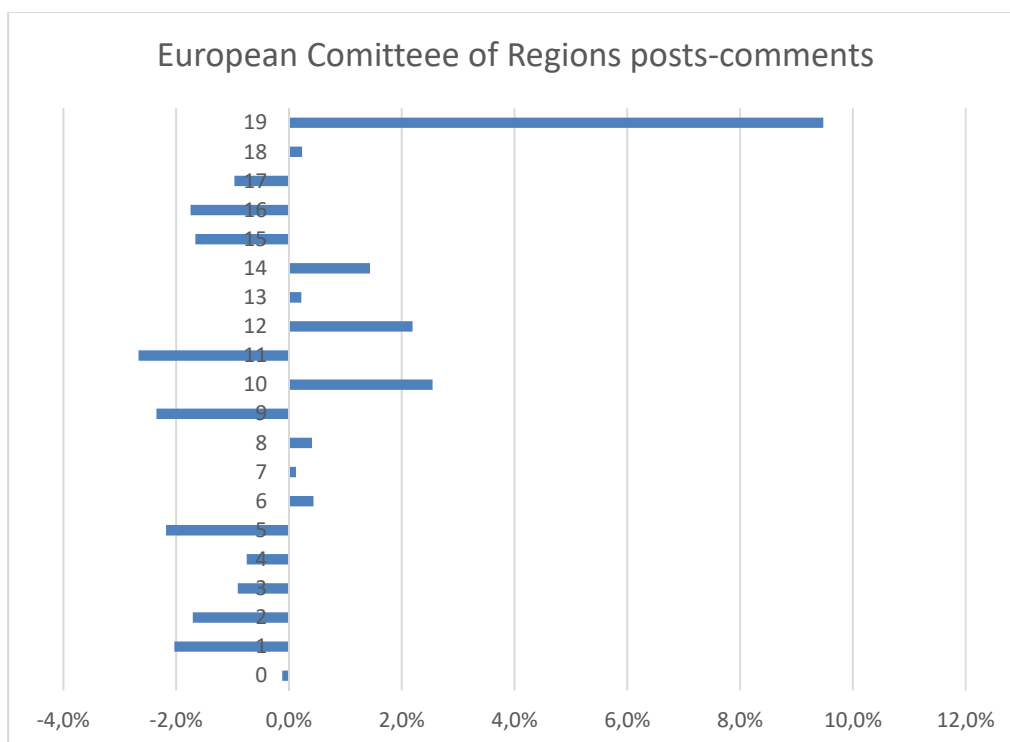
PERCEIVE DEL. 5.3: 'REPORT DISCUSSING THE EMERGENT TOPICS IN IDENTITY RELEVANT DISCOURSE AT DIFFERENT LEVELS'



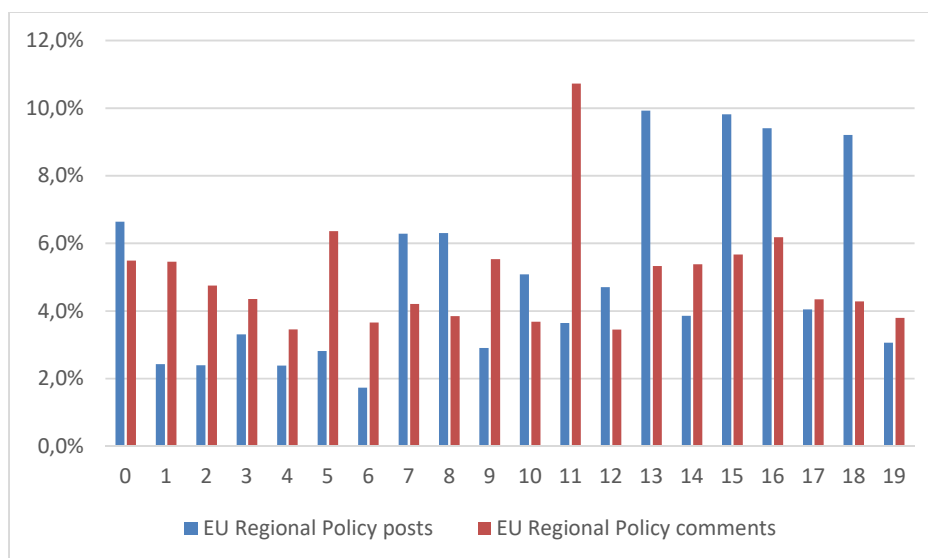
The European Committee of Regions mostly relies for its posts on topic19, that is indeed about the activity of the Committee of the Regions. This topic is quite used by comments as well. Topic 14, which is about news and events, is used both by posts and comments. The important topics for posts are topics 10 and 12, which deal with the concept of European democracy and policy, and with news and events. Instead, topic 11, which is about politics, is important for comments.



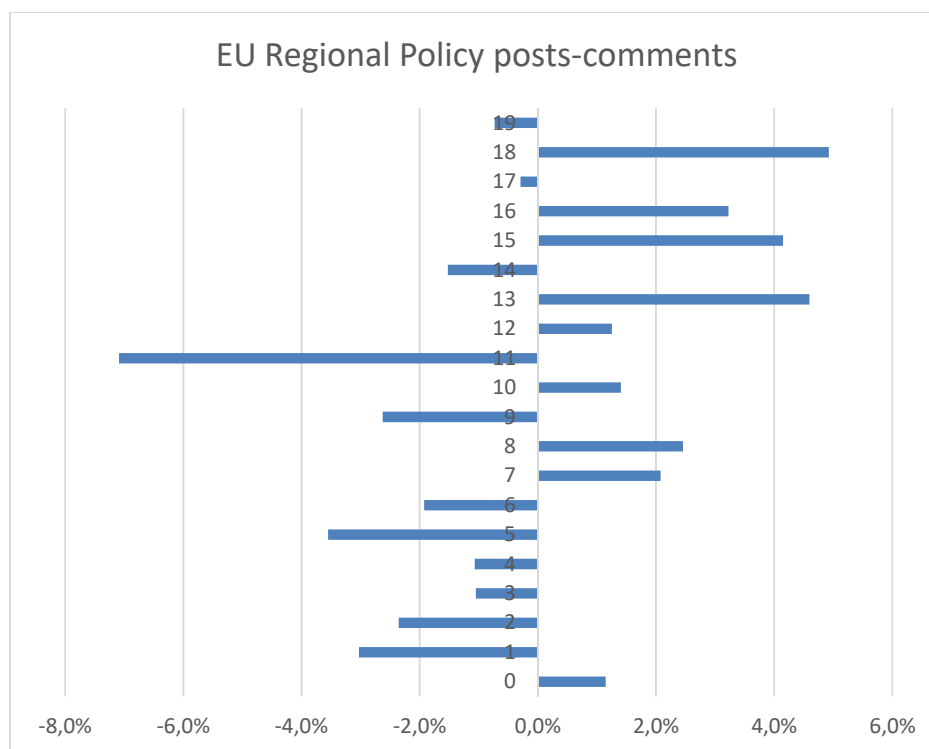
PERCEIVE DEL. 5.3: 'REPORT DISCUSSING THE EMERGENT TOPICS IN IDENTITY RELEVANT DISCOURSE AT DIFFERENT LEVELS'



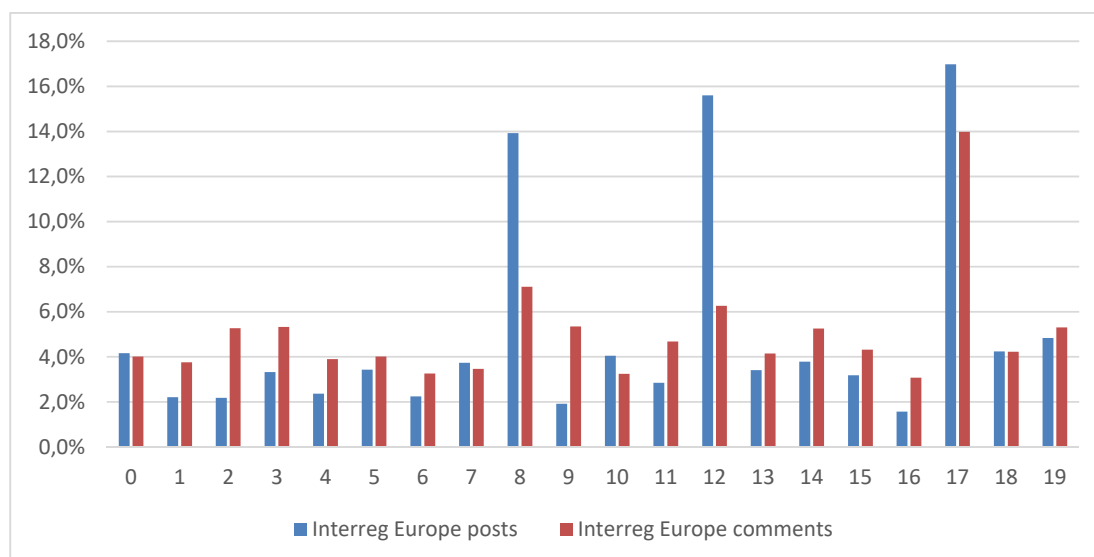
The profile of EU Regional Policy is more polarized, in the different use of topics made by posts and comments. Most important topics for posts only are the topic 13, which is about reflections on project funded by the EU, 15, which is about a photographic competition linked to “Europe in my Region”, 16, which deals with news and events, and 18, which conveys a description of social and development projects in European Regions. Comments focus again on topic 11, that we see keeps being the most important topic for comments by citizens. Then comments relies on topic 1 and 5, both connected to news and events, and to topic 9, that again is about issues with EU funds.



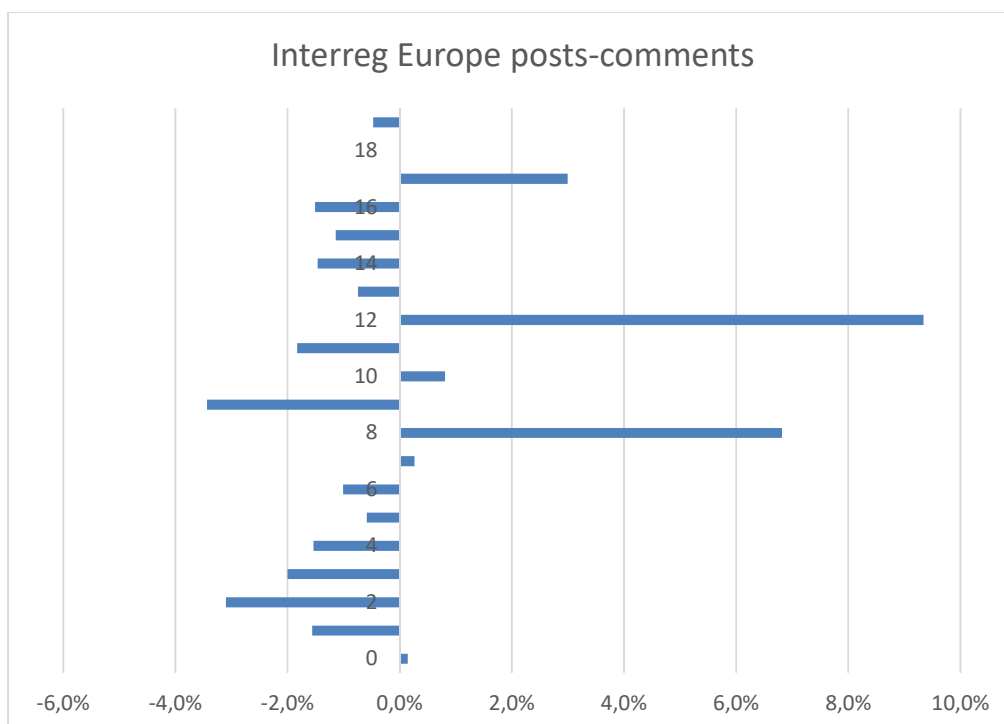
PERCEIVE DEL. 5.3: 'REPORT DISCUSSING THE EMERGENT TOPICS IN IDENTITY RELEVANT DISCOURSE AT DIFFERENT LEVELS'



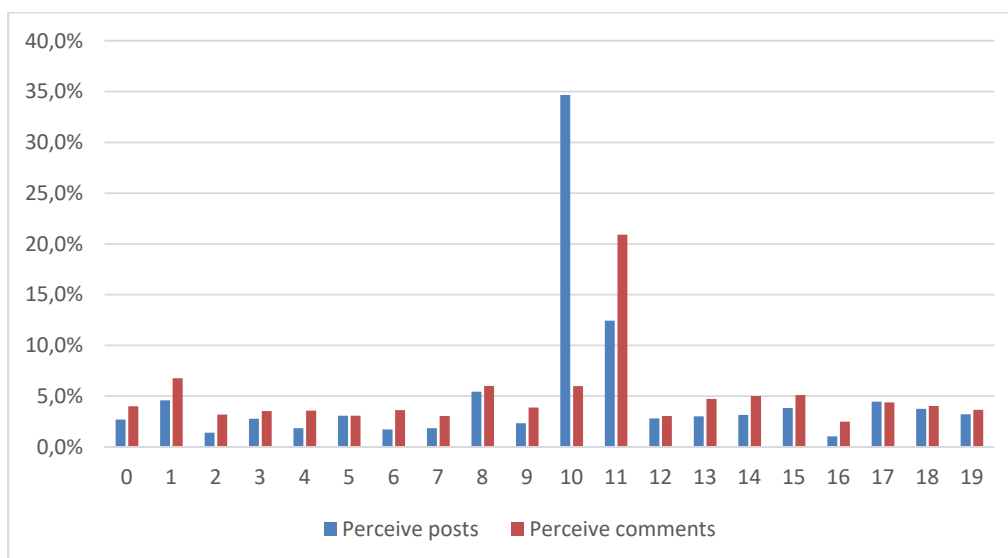
The profile of Interreg Europe hosts posts mostly based on topic 8, about regional policy research, and 12, about news and events. Topic 17 is widely used by both posts and comments, and pulls together issues surrounding the administration of projects applications to Interreg. The topic that is mostly used by comments, and not by posts, is number 9, regarding policy issues.



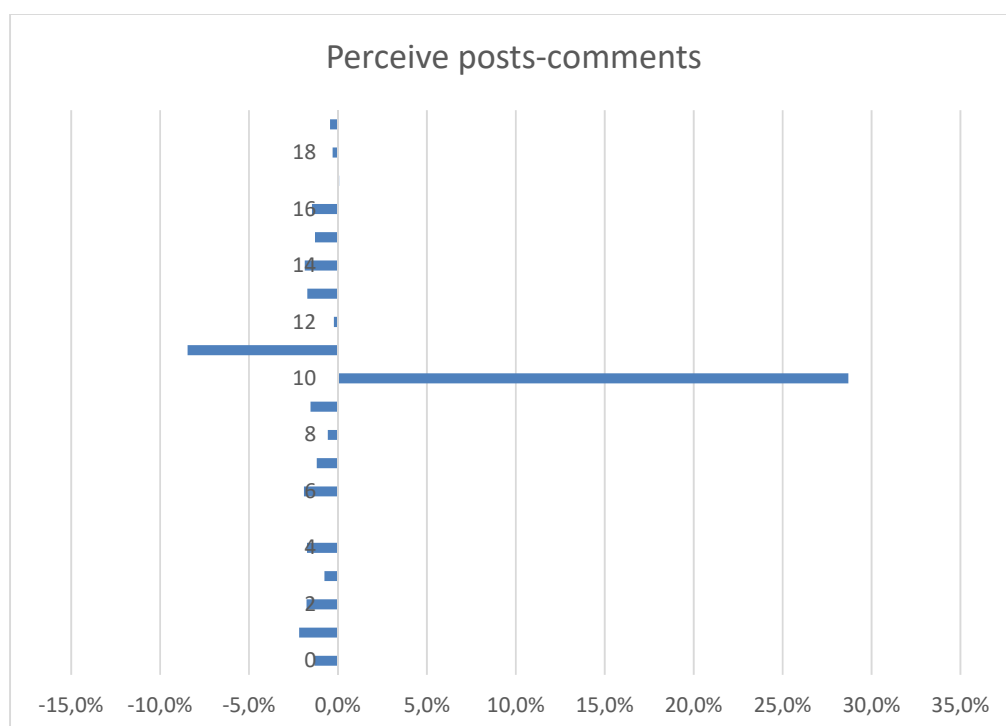
PERCEIVE DEL. 5.3: 'REPORT DISCUSSING THE EMERGENT TOPICS IN IDENTITY RELEVANT DISCOURSE AT DIFFERENT LEVELS'



We collected also posts and comments from the Facebook profile of own projects. Posts, which are our communication, are clearly based on topic 10, which revolves around Regional and Cohesion Policy., and around the concepts of democracy and policy. Similarly to other sources, comments are mostly based on topic 11, which is used to discuss political issues within the EU.

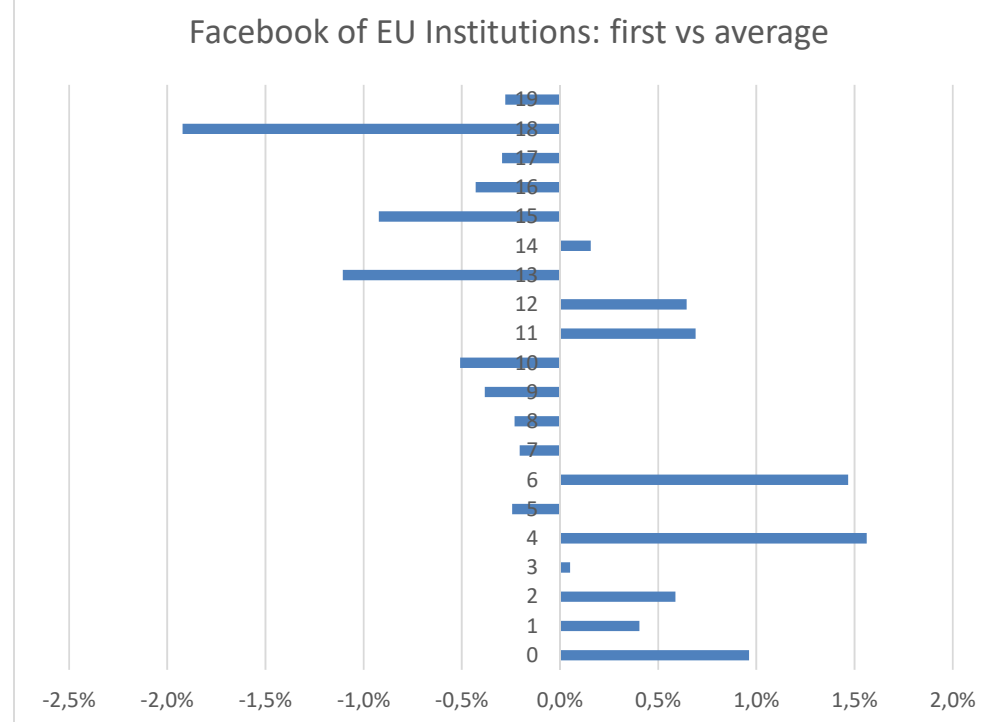


PERCEIVE DEL. 5.3: 'REPORT DISCUSSING THE EMERGENT TOPICS IN IDENTITY RELEVANT DISCOURSE AT DIFFERENT LEVELS'



Topics that are mostly characterizing the texts where they are used are number 4 and 6, about AER. Then we have topic 0, on Regional public funding, and topic 11, mostly used in comments to highlight political issues.

topic	times first	average use
0	5,5%	4,6%
1	4,3%	3,9%
2	4,3%	3,7%
3	4,1%	4,1%
4	7,1%	5,5%
5	3,3%	3,5%
6	7,1%	5,7%
7	4,6%	4,8%
8	5,3%	5,5%
9	3,3%	3,7%
10	4,8%	5,3%
11	6,0%	5,3%
12	7,3%	6,6%
13	4,0%	5,1%
14	5,9%	5,8%
15	4,0%	4,9%
16	4,3%	4,8%
17	6,0%	6,3%
18	3,1%	5,0%
19	5,7%	5,9%



On the axis we see the difference between "times first" and "average use"

of topics 13 and 5 ("Brief news from stock market and enterprises") indicates the sharing of economic-based words, while "Structural funds and the development of Mezzogiorno" (18) is linked to discourse on the "Political mismanaging of EU funds" (19). In a somewhat different vein, "Divisive themes in the European political debate" (1) and "European constraints for national economic policy" (12) both denote more sceptical outlooks on the European Union and regulative constraints it brings about.

Group 2 (red) clusters topics on the investment fields of Cohesion Policy as evident from "Europe in the regional discourse on fishing and agriculture" (2), "Structural funds and the development of domestic productive systems", "Structural funds and sustainability" (14), and "Structural funds for creative entrepreneurship" (17). Additionally, the emphasis on Calabria and southern regions of Italy become apparent (stemming from the use of regional newspapers in the sample) through topics on "Structural funds in the political debate of southern regions" (4) or "Europe in the political debate of Calabria" (15).

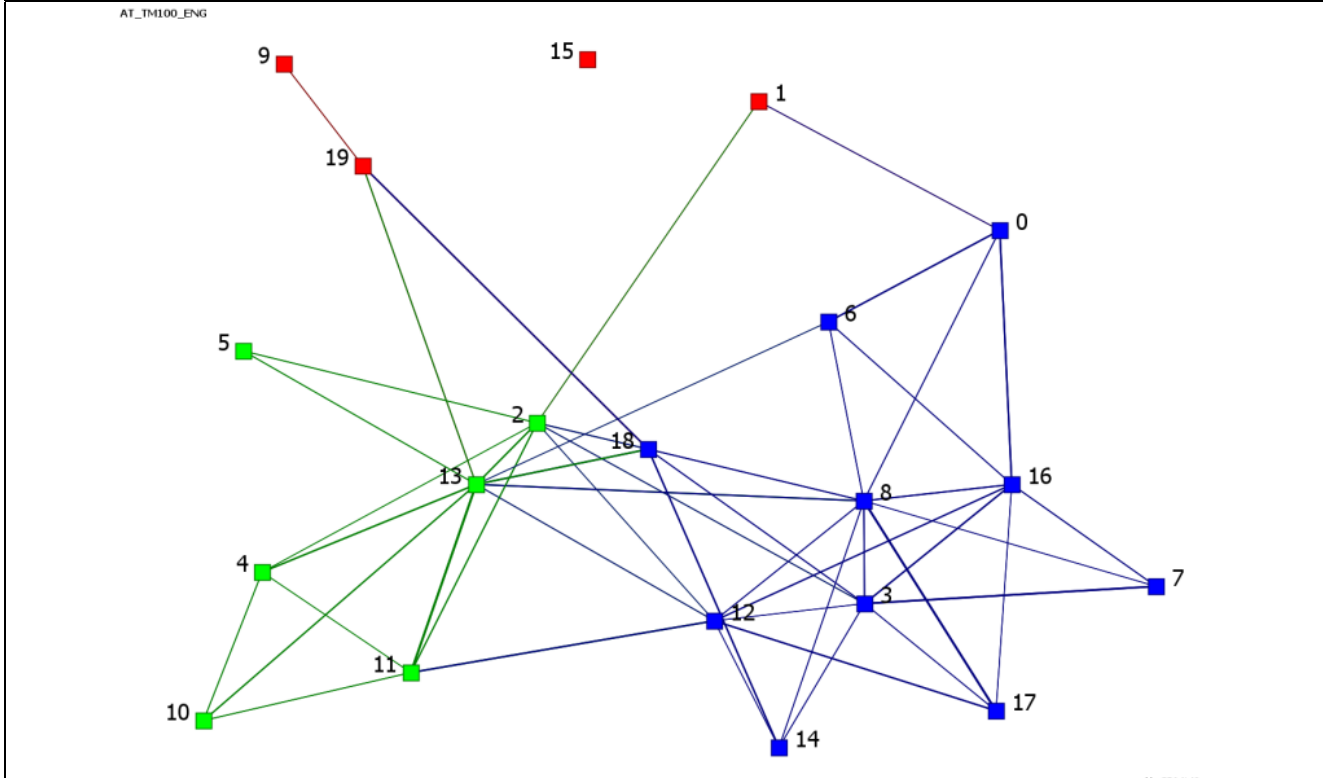
Group 3 (blue) shares less words with the two other sub-groups, and additionally suggests a heterogeneous range within the topics of the sub-group. In this sense, "Structural funds, training and employment" (0), "Structural funds and crime" (9), and "Europe in the national political debate" (3) do not share a large amount of vocabulary with Groups 1 and 2, but also do not share a significant amount of common words with each other.

In terms of centrality, topic 16 on "Management of structural funds" showed the highest values by means of total-degree-, closeness-, and betweenness centrality – hence accounting for the best connected node within the model.

Rank	Total-degree centrality			Closeness centrality			Betweenness centrality		
	Topic	Value	Unscaled	Topic	Value	Unscaled	Topic	Value	Unscaled
1	16	0.138	341	16	0.498	0.001	16	0.211	36
2	13	0.137	339	7	0.461	0.001	7	0.196	33.500
3	7	0.125	309	2	0.452	0.001	18	0.184	31.500
4	6	0.124	307	18	0.451	0.001	13	0.152	26
5	2	0.108	267	13	0.434	0.001	8	0.149	25.500

5.2 Austria

Austria network of topics (press) - Dense sub-graphs



Groups of topics (press) - Dense sub-graphs

Group 1: [10]

- 0 Cohesion Policy beneficiaries or EU-sceptic countries
- 3 EU negotiations
- 6 **Noise**
- 7 EU politicians
- 8 Cooperation
- 12 Stock market/fund management
- 14 Money/payments
- 16 (Economic) crisis and notions of hardship
- 17 International relations
- 18 Operational Programmes, Cohesion Policy in Austria

Group 2: [6]

- 2 CEE economy
- 4 Infrastructure connecting Eastern neighbours
- 5 Internal politics
- 10 Renewable Energies
- 11 Austrian industrial sectors
- 13 The benefits of R&D

Group 3: [4]

- 1 EU membership/borders
- 9 Events in Austria
- 15 **Health insurance restructuring in Austria**
- 19 Cohesion Policy in Burgenland

Group 1 (blue) clusters topics directed at EU and international levels as central points – evident through notions of “EU negotiations” (3), “EU politicians” (7), “(Economic) crisis and notions of hardship” (16) on a larger scale, and “International relations” (17). In a similar vein, the central node sharing the largest amount of intra-group linkages is “Cooperation” (8), setting the tone for the

words shared within. Evident, too, is not just this political dimension, but the emphasis on economic topics (e.g. "Stock market/fund management" and "Money/payments") therein.

Group 2 (green) encompasses topics on a more national, and regional level, as exemplified with topics on the "Central and Eastern European economy" (2), "Internal Politics" (5), or "Austrian industrial sectors" (11). Interestingly, the topic of "Operational Programmes, Cohesion Policy in Austria" (18) that forms part of Group 1 using Dense sub-graphs, is part of this Group 2 using Newman clustering - hence fitting the national narrative of the group. Moreover, this sub-group clusters investment fields of Cohesion Policy, such as "Infrastructure connecting Eastern neighbours" (4), "Renewable Energies" (10), or "The benefits of Research and Development" (13).

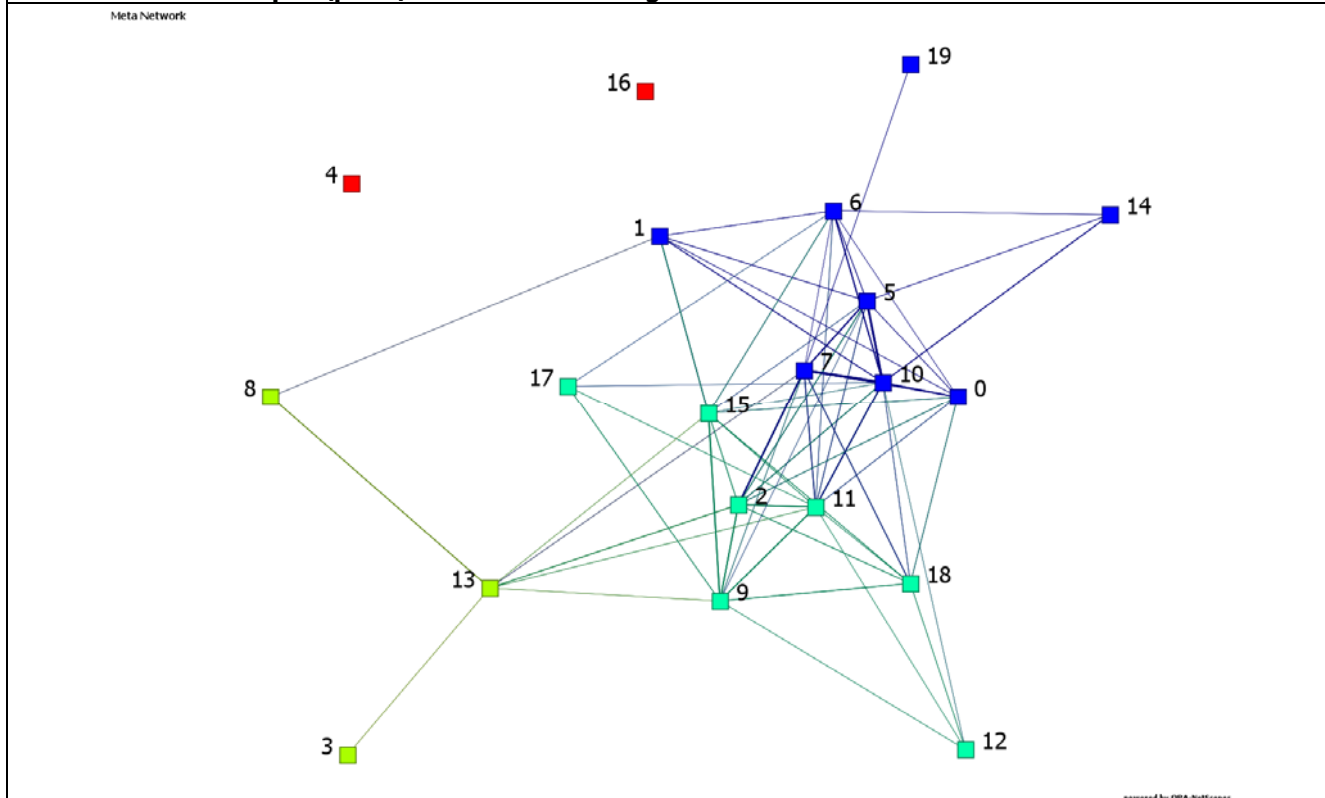
Group 3 (red) shares the least amount of linkages to the other sub-groups. As assumed, "Health insurance restructuring in Austria" (15) does not form part of Cohesion Policy discourse, but rather uses the same notions of "Strukturfonds" (structural funds) when describing national re-structuring. Hence, topic 15 is marked red as indication of noise. "Events in Austria" (9), too, are not linked to further topics apart from "Cohesion Policy in Burgenland" (19), which makes sense in view of the semantic overlap in the use of regions (e.g. "November 28th, 7pm - Event presenting project XYZ in Oberwart, Burgenland") Interestingly, discourse on "EU membership and borders" (1) does not seem to share too many words with the two other sub-groups, with the linkages only consisting of topics 0 and 2 - both of which employ vocabulary on nations.

As has been touched upon in the description of the network of topics, the most central topic (in terms of total-degree centrality) is "Cooperation" (8). Topic 12 ("Stock market/fund management") is the most central in terms of closeness, while topic 13 ("The benefits of Research and Development") is in terms of betweenness.

Rank	Total-degree centrality			Closeness centrality			Betweenness centrality		
	Topic	Value	Unscaled	Topic	Value	Unscaled	Topic	Value	Unscaled
1	8	0.119	300	12	0.083	3.380e-004	13	0.246	42
2	13	0.117	294	13	0.083	3.373e-004	2	0.193	33
3	12	0.094	237	2	0.083	3.360e-004	8	0.117	20
4	3	0.094	236	8	0.082	3.339e-004	12	0.111	19
5	16	0.092	232	3	0.082	3.332e-004	19	0.099	17

5.3 Poland

Poland network of topics (press) – Newman clustering



Groups of topics (press) – Newman clustering

Group 1: [8] 0 Increase of GDP 1 EU funds for SMEs/companies 5 CAP, RDF, EU funds for agriculture 6 Ads and contents 7 Cohesion Policy 10 Bilateral relations between Poland and its neighbours 14 Culture, entertainment, festivals 19 Election	Group 2: [7] 2 Structural funds (regions, infrastructure environment) 9 ERDF for roads 11 Strategic documents/planning 12 Journal of Laws 15 Bank's credit lines for firms 17 Unemployment and the youth 18 Taxes
Group 3: [3] 3 Prenatal health care project 8 ERDF for roads 13 Water consumption and use	Group 3: [2] 4 Polish science/National priority projects 16 Announcements and tables of contents

While group 1 (blue) does not indicate one sole theme, it seems to encompass a number of sub-themes. First, a strong connection between topics 7, 10, and 0 becomes apparent, centred on “Cohesion Policy” in economic and political terms, “Bilateral relations between Poland and its neighbours”, and the “Increase of GDP”. In this sense, a focus on cross-border cooperation becomes apparent with the objective of increasing wealth becomes apparent. In a different vein, topics 1 (“EU funds for SMEs/companies”), 5 (“CAP, RDF, EU funds for agriculture”), and 14 (“Culture, entertainment, festivals”) seemingly denote investment fields of Cohesion Policy. As a residual topic, “Ads and contents” (6) potentially describes noise.

In a similar manner, group 2 (turquoise) seems to cluster topics that are related to each other (and particularly so in a number of cases), but do not make for one all-encompassing theme. The centre of group 2 comprises "Structural funds (regions, infrastructure environment)" (2) and "Strategic documents/planning" (11) – both of which describe topics general enough to share broad amounts of vocabulary with other topics. Topics 2, 9, and 17 seemingly denote fields of investment, more generally in the form of "Structural funds", and more specifically, in terms of "ERDF for roads", and "Unemployment and the youth". In a related vein, topics 12 ("Journal of Laws") and 18 ("Taxes") account for legal texts, sharing similar vocabulary.

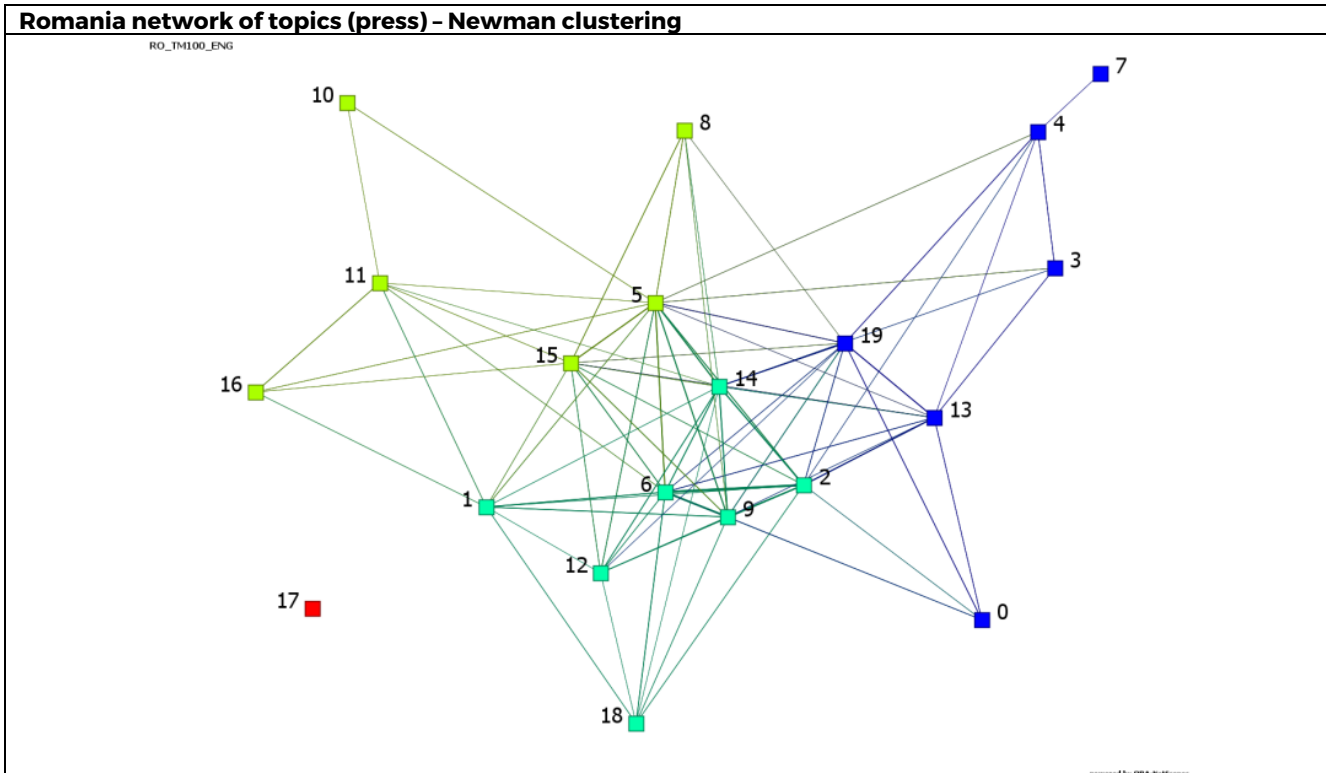
Group 3 (yellow) comprises fields of investment of Cohesion Policy with the topics "Prenatal health care project" (3), "ERDF for roads" (8), and "Water consumption and use" (13). Closely located are topics 2, 9, and 17 of group 2, which – as we have just shown – denote further areas of investment.

Group 4 (red) is disconnected from all other sub-groups and comprises topics 4 ("Polish science/National priority projects") and 16 ("Announcements and tables of contents"). Interestingly, both topics are neither linked to each other.

The most central topics within Polish media are "Bilateral relations between Poland and its neighbours" (10) by means of total degree, "Ads and contents" (6) by means of closeness, and "Water consumption and use" (13) by means of betweenness.

Rank	Total-degree centrality			Closeness centrality			Betweenness centrality		
	Topic	Value	Unscaled	Topic	Value	Unscaled	Topic	Value	Unscaled
1	10	0.152	774	6	0.032	9.313e-005	13	0.181	27.500
2	7	0.119	603	15	0.032	9.295e-005	6	0.156	23
3	5	0.109	552	13	0.032	9.281e-005	7	0.111	21
4	2	0.106	540	11	0.032	9.280e-005	9	0.105	9.500
5	11	0.102	526	0	0.032	9.269e-005	10	0.099	8.500

5.4 Romania



Groups of topics (press) - Newman clustering	
Group 1: [7] 1 Infrastructure 2 EU funding 6 EU and national budget-funded projects 9 Infrastructure 12 Education and training 14 Noise 18 Culture and heritage	Group 2: [6] 0 Romanian Politics 3 Romanian Politics 4 EU politics and enlargement 7 Noise 13 Noise 19 EU funds management capacity
Group 3: [6] 5 EU funding problems 8 Budgetary deficit 10 Business development 11 Corruption 15 Agriculture and rural development 16 Noise	Group 3: [1] 17 Noise

Group 1 (turquoise) – very clearly – shows a theme of investment areas of Cohesion Policy. These include “Infrastructure” (1), “EU funding” (2) as linked to projects in the Danube region, “EU and national budget-funded projects” (6) as general topic, again, “Infrastructure” (9), and “Education and training” as linked to the ESF as well as “culture and heritage” projects (18).

Group 2 (blue) entails more critical perspectives on politics – directed both at the EU and the national government. From this critical viewpoint, topic 4 discusses decisive EU topics directed at both Romania (such as fighting corruption) and the Union (such as discussions regarding the membership of Turkey). Similarly, topic 19 shares critical aspects of management capacities.

Interestingly, the network of topics in this case shows that both nodes depicting "Romanian Politics" (0 and 3) are – albeit coded with the same meaning – not connected to each other, but belong to the same group.

In a related vein, group 3 (yellow) takes critical discourse a step further and pins down "EU funding problems" (5). In this sense, the "Budgetary deficit" (8) is discussed in view of high budgetary deficits, or "Corruption" (11) is regarded as a matter in the implementation of Cohesion Policy in the country. "Business development" (10), too, uses keywords such as "unjust" and "false" (when translated to English). In general, Romanian media seems to indicate a more critical viewpoint on EU and Cohesion Policy matters in the sense that critical voices not just emerge, but are grouped together. Additionally, while 15 ("Agriculture and rural development") seemingly does not fit as well, the closeness to Group 1 indicates the proximity of words of investment areas of Cohesion Policy.

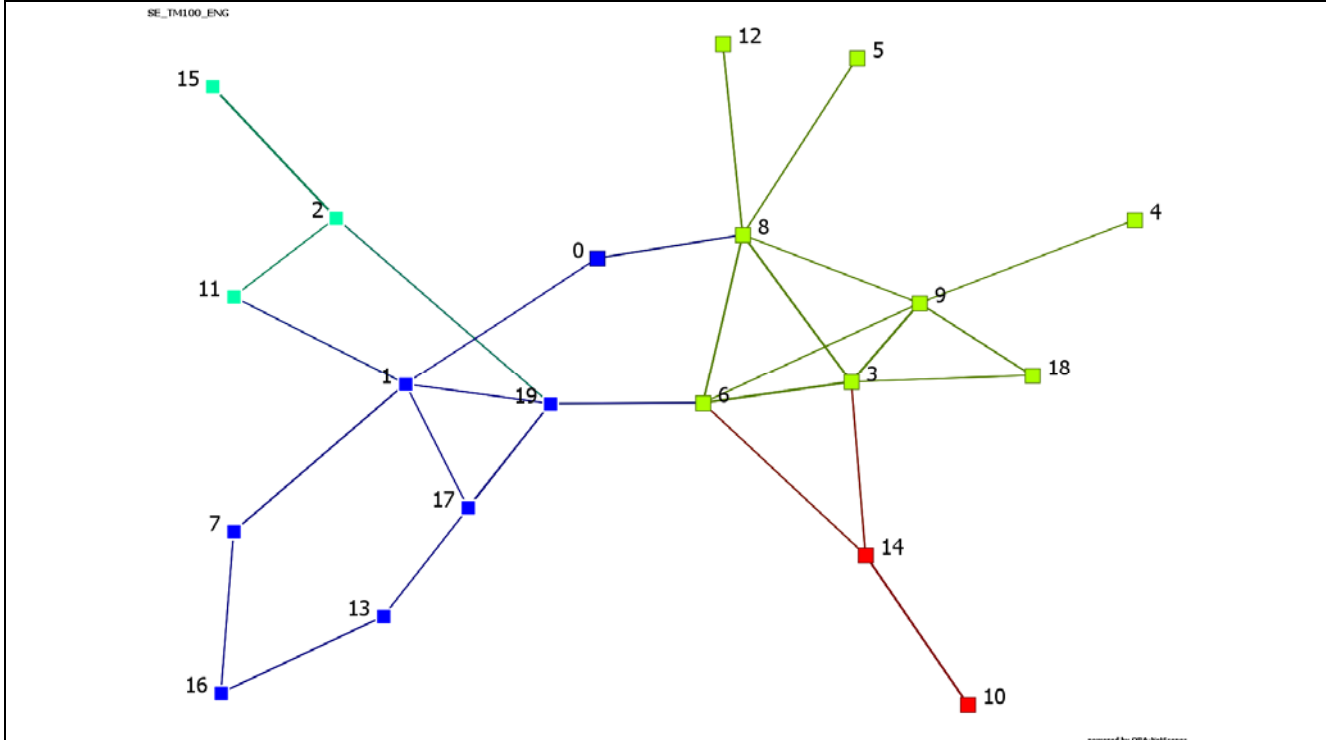
Group 4 (red) contains merely "Noise" (17) not connected to any topics of any sub-group.

The most central topic in terms of total-degree centrality is the general topics of "EU funding", while, interestingly, topic 11 ("Corruption") is the most central in terms of both closeness and betweenness.

Rank	Total-degree centrality			Closeness centrality			Betweenness centrality		
	Topic	Value	Unscaled	Topic	Value	Unscaled	Topic	Value	Unscaled
1	2	0.202	748	11	0.080	2.341e-004	11	0.149	25.500
2	6	0.194	716	2	0.079	2.306e-004	13	0.091	15.500
3	5	0.189	699	14	0.079	2.299e-004	2	0.091	15.500
4	14	0.180	665	19	0.079	2.298e-004	4	0.064	11
5	9	0.178	657	13	0.078	2.295e-004	5	0.058	10

5.5 Sweden

Sweden network of topics (press) - Newman clustering



Groups of topics (press) - Newman clustering

Group 1: [8] 3 European financial crisis 4 Russian-Western summit meeting 5 Experience 6 EU Commission 8 Swedish-EU mutual economic integration 9 Human Rights for asylum seekers 12 International currency and growth comparisons 18 Nordic culture	Group 2: [7] 0 Employment 1 International trade 7 Swedish financial investment 13 Projects for Roma inclusion 16 Social welfare and taxes 17 Energy and environment 19 Swedish regional policy investments
Group 3: [3] 2 Automobile industry investment 11 Financial investment 15 Automobile policy	Group 3: [2] 10 Swedish government parties and leaders 14 Brexit

Group 1 (yellow) clusters topics at EU and international level from a political, economic, but also a value-based perspective. In this sense, the topics centre on the “European financial crisis” (3), the “Russian-Western summit meeting” (4), the “Swedish-EU mutual economic integration” (8), “International currency and growth comparisons” (12) – but also on “Human Rights for asylum seekers” based on EU values such as democracy and human rights. Judging from the location and linkages of topic 5, “Experience” might account for noise.

Group 2 (blue) – similar to other national networks – comprises areas of investment of Cohesion Policy with topics such as “Employment” (0), “Projects for Roma inclusion” (13), “Energy and environment” (17), and “Swedish regional policy investments” (19). A bit separate from these are “International trade” (1), and “Swedish financial investment” (7), which share economic words.

Group 3 (turquoise) shares references to Automobile policies and Swedish firms, with topics such as "Automobile industry investment" (2), "Automobile policy" (15), and "Financial investment" (11) –the latter of which comprises a number of Swedish companies.

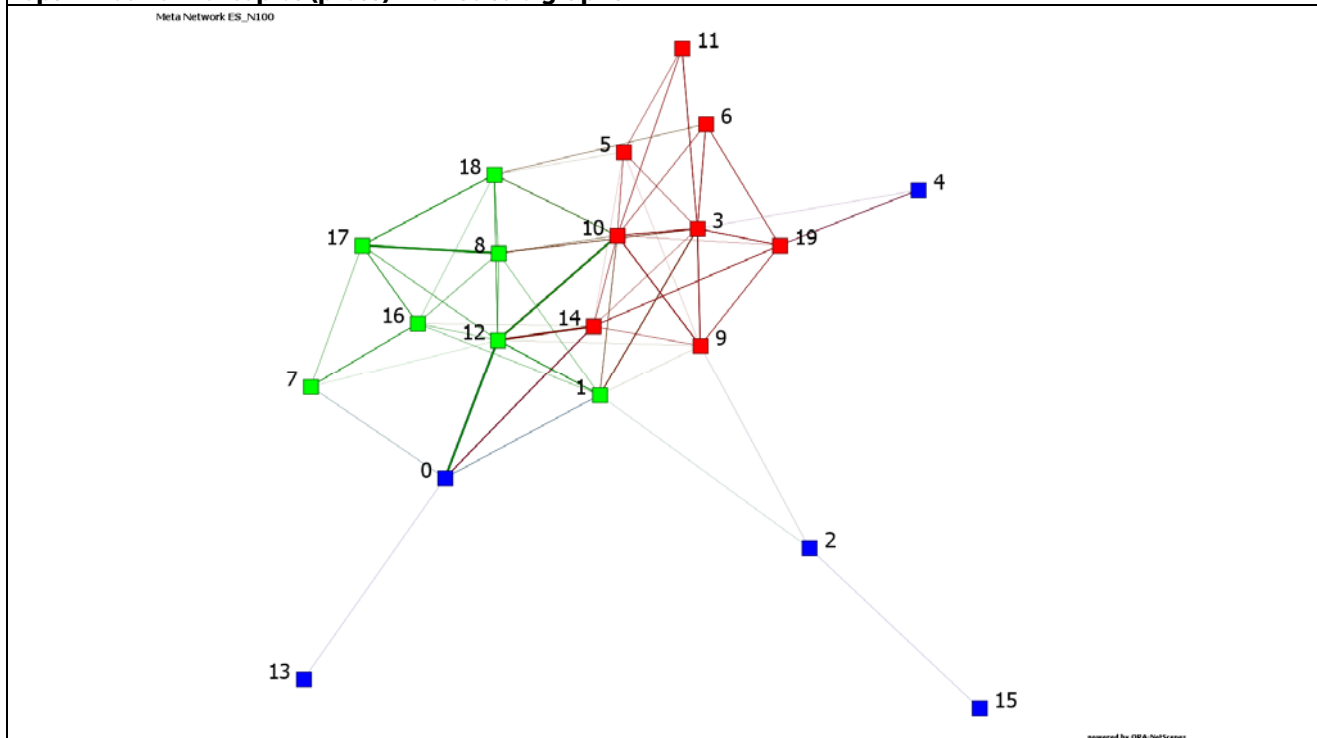
Group 4 (red) entails a political perspective, covering the two topics of "Brexit" (14) and "Swedish government parties and leaders" (10), which share common words.

Topic 3 "European financial crisis" accounts for the highest total-degree centrality, while topic 6 on the "EU Commission" has both the highest value for closeness and betweenness centrality.

Rank	Total-degree centrality			Closeness centrality			Betweenness centrality		
	Topic	Value	Unscaled	Topic	Value	Unscaled	Topic	Value	Unscaled
1	3	0.098	274	6	0.423	0.001	6	0.386	66
2	6	0.095	266	19	0.417	0.001	19	0.371	63.500
3	8	0.092	258	8	0.377	9.911e-004	8	0.316	54
4	9	0.086	240	1	0.374	9.852e-004	1	0.240	41
5	19	0.081	228	0	0.361	9.497e-004	9	0.187	32

5.6 Spain

Spain network of topics (press) - Dense sub-graphs



Groups of topics (press) - Dense sub-graphs

Group 1: [8] 3 Areas and key agents in EU framework 5 Agrarian sector 6 Misuse of EU funding 9 Spanish economy 10 Regional cohesion funds 11 Projects co-financed with funds 14 Economic crisis in the EU 19 Analysis of budget issues	Group 2: [7] 1 European policies 7 Socialist policies 8 Regional government policies in Extremadura 12 European policy related to community funds 16 Spanish politicians/prime ministers 17 Policy of Junta de Castilla-León 18 Politics of the Valencian community
Group 3: [5] 0 Political bodies 2 Noise 4 Society and services 13 International policy of the EU 15 Noise	

Using dense sup-graphs, group 1 (red) encompasses 8 different topics with noticeable economic connotations linked to notions of the “Spanish economy” (9), the “Economic crisis in the EU” (14), or the “Analysis of budget issues” (19); as well as notions of funding (e.g. 6, 10, 11). Within the group, “Areas and key agents in EU framework” (3) seemingly sets the tone for the group’s vocabulary as it shares the most linkages with 7 internal links. From this point of view, the group encompasses topics on the origin of Cohesion Policy funding (e.g. “Regional cohesion funds”) as well as its use in the sense of fields of investment (e.g. “Areas and key agents in EU framework”, “Agrarian sector”).

Interestingly, the “Agrarian sector” (5) makes for a singular topic, albeit generally forming part of “Areas and key agents in the EU framework” (3).

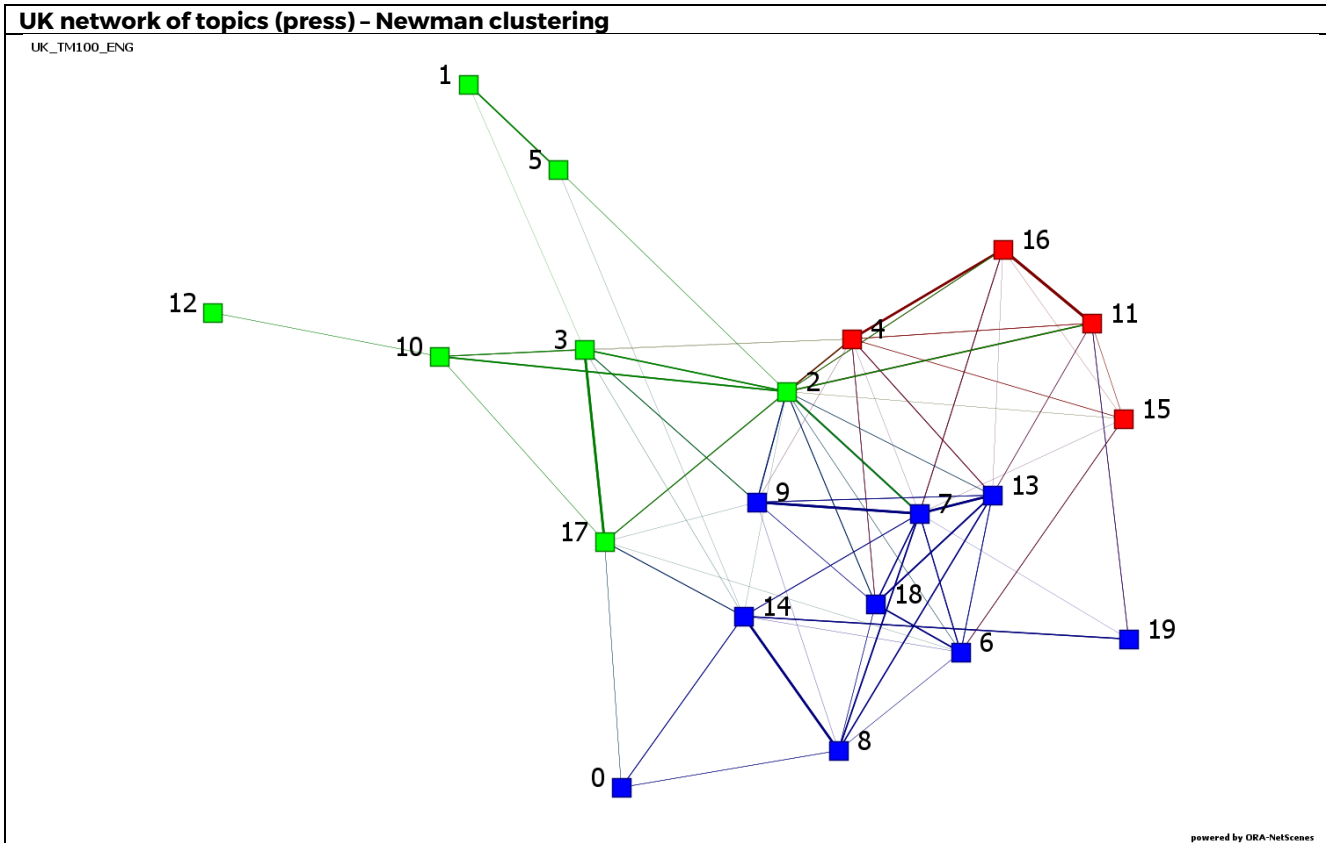
The second group (green) shares 7 topics with similarities pointing to policy-based discourse. Upon closer inspection, different levels become apparent: while “European policy related to community funds” (12) and “European policies” (1) relate to policies on the EU-level, the topic of “Spanish politicians and prime ministers” (16) creates a link to national representatives. Sub-national policies appear in the constellation of topics 8, 17, and 18 referring to Extremadura, Junta de Castilla-León, and Valencia.

Group 3 (blue) shares the least words with the three other sub-groups. Both topics described as “Noise” (2, 15) are notably disconnected from other topics. Likewise, “International policy of the EU” (13) with notions of specific countries (Iraq, Russia, USA, America) and internationally relevant issues (such as security, terrorism, or war) is rather loosely connected. Interestingly, apart from sharing similarities with a number of nodes of Group 1 (i.e. 3, 19) notions of “Society and services” (4) with connotations of key sectors such as (higher) education, or the labour market are rather disconnected, albeit accounting for investment fields of Cohesion Policy. Following the Newman model, “Society and services” however form part of Group 1, fitting the narrative on Cohesion Policy fields of investment.

Topic 10 is the most central topic in terms of total-degree centrality and denotes the very general topic of “Regional cohesion funds”. Topic 1 (“European policies”) is the most central both in terms of closeness and betweenness.

Rank	Total-degree centrality			Closeness centrality			Betweenness centrality		
	Topic	Value	Unscaled	Topic	Value	Unscaled	Topic	Value	Unscaled
1	10	0.183	461	1	0.544	0.001	1	0.181	31.000
2	12	0.179	451	9	0.542	0.001	9	0.156	26.667
3	3	0.167	421	14	0.525	0.001	0	0.111	19
4	14	0.138	349	10	0.518	0.001	2	0.105	18
5	9	0.135	340	5	0.497	0.001	12	0.099	17

5.7 UK



Groups of topics – Newman clustering	
Group 1: [9] 0 UK general election results 2005 6 World news short summaries 7 UK rebate 8 Rightwing/conservative movement 9 Auditing of EU budget 13 Eurozone bailouts 14 UK political upheaval 18 EU enlargement – CEE countries 19 Paris Climate Summit	Group 2: [7] 1 Noise 2 National economy/finance 3 Noise: Universities guide 5 Successful institutions 10 Investment in Essex region 12 Local events 17 New Year's honours
Group 3: [4] 4 Hedge funds and private banking 11 Financial news and market reports 15 Technological innovation 16 Noise: Stock market reports	

While in the case of the UK, using dense sub-graphs for the topics vocabulary structure did not indicate intelligible results, Newman clustering gave rise to a clearer picture. More specifically, three (rather than two) groups emerged, comprising the following.

Group 1 (blue) indicates discourse on critical, potentially Eurosceptic perspectives regarding the European Union. As such, it comprises nine topics based on current developments and ongoing debates, such as the “UK rebate” 7), the “Rightwing/conservative movement” in the EU (8), “Auditing

of EU budget" (9), "Eurozone bailouts" (13), as well as "EU enlargement – CEE countries" (18). The Louvian method shows a more fine-grained analysis of communities for topics 0, 14, and 19, suggesting a UK-centred discourse on the "UK general election results 2005", the "UK political upheaval", as well as the "Paris Climate Summit" (with the emphasis on present UK politicians).

Group 2 (green) clusters topics with a positive (or neutral) outlook on EU Cohesion Policy, such as "Successful institutions" (5), "Investment in Essex region" (10), or "Local events" (12). While "Successful institutions" was indicated as most prevalent topic within the sample, the topic network analysis suggests that the use of common words with other topics is rather low. In this vein, this analysis showcases the added value of generating a network of topics: while linkages to other topics are low, the clustering of Eurosceptic topics (e.g. "Eurozone bailouts", "Rightwing/conservative movement") shares numerous common features.

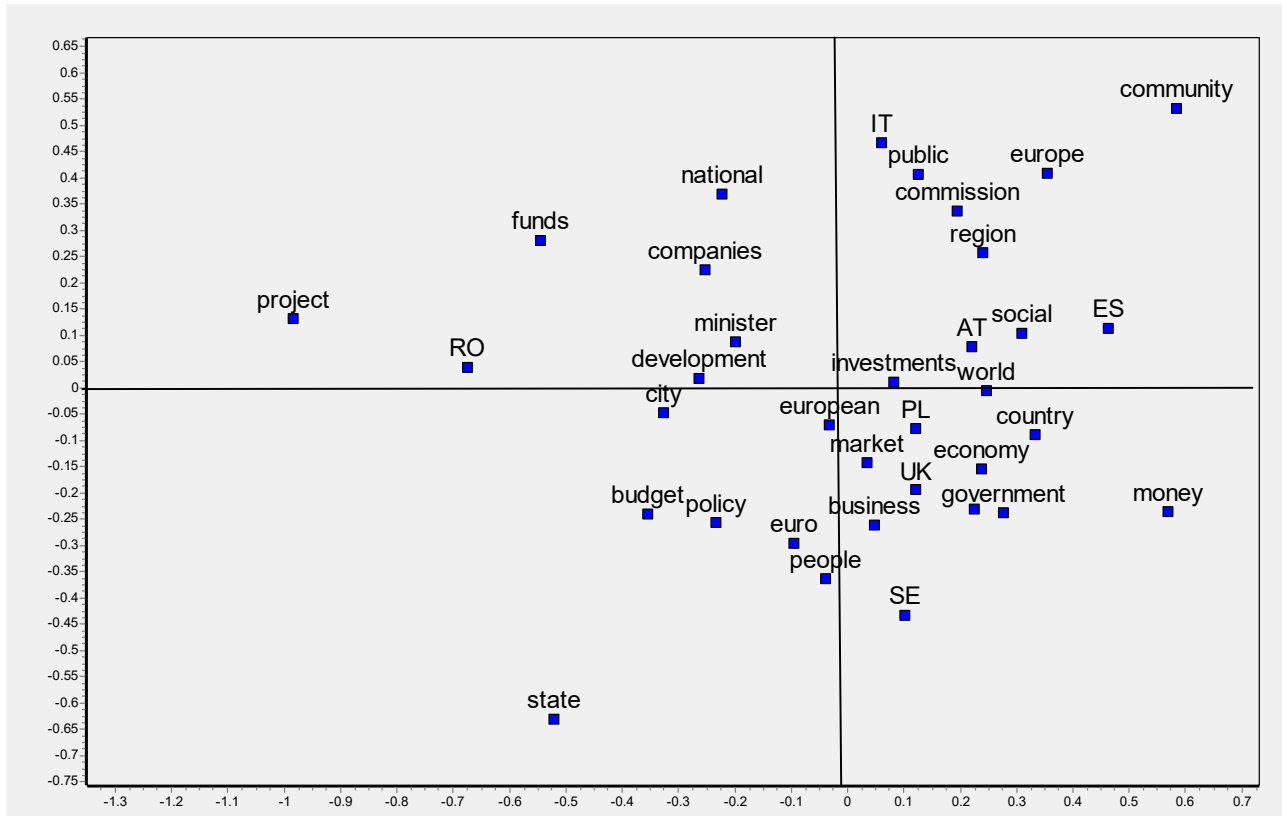
Group 3 (red) indicates notions of economic topics, including "Hedge funds and private banking" (4), "Financial news and market reports" (11), as well as "Technological innovation" (15) – which, albeit centred on innovation, uses 'economic lingo' with the 20 most important words referring to "trade", "investment", "industry", or "economic". The same group contains "Noise" (16) in the sense of stock market reports not directly related to EU Cohesion Policy.

In terms of centrality, the topic on "National economy/finance" (2) indicated the highest value in total-degree centrality. "Hedge funds and private banking" (4) showed the highest values in terms of both closeness and betweenness centrality.

Rank	Total-degree centrality			Closeness centrality			Betweenness centrality		
	Topic	Value	Unscaled	Topic	Value	Unscaled	Topic	Value	Unscaled
1	2	0.163	327	4	0.582	0.003	4	0.233	39.833
2	7	0.147	293	2	0.550	0.003	2	0.116	19.833
3	4	0.130	259	6	0.506	0.002	3	0.111	19
4	13	0.124	248	7	0.506	0.002	14	0.107	18.333
5	14	0.116	232	14	0.502	0.002	10	0.105	18

6. A Tentative International Topographic Map

The results of the multination multinational correspondence analysis introduced in the section 3 of this report are briefly illustrated and discussed below.



Even if tentative, the exercise of plotting the results of different national topic models together in a topographic space highlights some interesting results. First, Poland (PL) scores closest than any other country to the very center of the map, where talk about “European” matters is seemingly located. This can be interpreted in light of the high absorption rates that this country has achieved in the last programming periods. We could hence say that this country overlaps – more than anyone else – with all others in terms of vocabulary used when talking about regional Cohesion Policy. Second, the positioning of Romania (RO) by itself on the left side of the map seems interesting. This country that we took as not behaving particularly virtuously in terms of policy accomplishments seems to have the highest attachment to talk about “projects” and a very strong one to “funds”. Other countries such Austria (AT) and Spain (ES) get closer to alternative dimensions of policy such as the “social” one. Still, other countries such as the UK seem to employ a stronger “market” vocabulary instead.

As it will further explained in the conclusion, these results are only preliminary, still they somehow validate our intuition that Correspondence analysis can be used to summarize meaning about regional cohesion policy into “scaled” vectors. The importance of this finding resides in the fact that such vectors can be used as explanatory variables in statistical analysis assessing the relations between media representation of the policy and citizens’ awareness of the policy itself and identification with the EU.

7. Conclusion

Being originated by words in different languages, topics cannot be compared directly to each other with straightforward statistical algorithms. What can be pursued is a qualitative comparison among different inductive interpretations. Following this approach, we asked to trained academicians to analyse the elicited topics, which are constituted by words in their mother language, and provide a label in English. In this case, English language works as the *lingua franca* adopted for the comparison. We assume that if two groups of academicians when analysing topics in their mother tongue assign a similar English label to two topics, which were originally described with words in different languages, we can say that the two topics are similar or deal with the same issue. Thus, before assigning to each team of scholars, in each different analysed region, a list of topics and the connected newspapers' articles, explained to the scholars aims, criteria and procedures to assign labels to topics¹⁰.

Following this procedure, we highlighted a repertoire of common themes that recur in the discourses, in different languages, in the different selected European regions. Each of these common themes underpins topics that have been elicited from discourses in different languages.

We suggest that the emerging themes can be organised and reported in five groups:

1. National politics and the EU
2. International politics and the EU
3. The economy and the EU
4. Specific effects of cohesion and regional policies
5. Facebook

1. National politics and the EU

The first common theme refers to the **economic development** fuelled by structural funds. We found references to this theme in all the seven topic models applied to newspapers. In Italy a topic was called "structural funds and the development of domestic productive system", in Austria "Austrian industrial sector and companies"; in the polish case we have two topics pointing at the development of SMEs through European funds, a topic on the increase of GDP, and a topic on banks' credit lines for firms. In Romania we have a topic called "business development"; while in Sweden we have a topic on financial investments and one on policy investments. In Spain there are three topics related to this set: one is about Spanish economy, one regards Regional and Cohesion funds, one is about co-financed projects. Finally, in the Case of UK, we have a topic on national economy and finance.

A second common theme deals with **European institutions and politicians**: we have topics pointing at this theme in Italian, Austrian, Swedish, Spanish, and English newspapers. This set of topics deals with politicians and Institutions at the centre of European politics and decision-making.

¹⁰ This was done in Brussels, on the 14/11/2017, during the second project meeting. We presented the output and the logic of our tentative labelling exercise of the topics elicited in English language in order to present an example of labelling in a shared language.

A third common theme is the **national political debate**, which is explicitly tackled by topics in Italy, Austria, Romania, Sweden, Spain, and United Kingdom. It is worth mentioning that these topics do not deal with national politics per se, but with national politics in the realm of Europe and European funds.

2. International politics and the EU

General politics is a theme covered in many topics.

A first general political theme is **international politics**. This theme refers to international political debate, and is present in newspapers in Italy, Romania, where the enlargement of EU is explicitly cited, UK, with reference to national economic crisis, and Spain, where there are three topics dealing with international politics.

A second general political theme is the **relationships with neighbours**, and is especially used in eastern countries: Austria has three topics that deal with eastern neighbours, borders and cross-borders infrastructures. In Romania the case of Danube region is tackled, and a specific topic emerges on neighbours even in the Polish case. Swedish newspapers devote a topic to meetings with Russia.

A third general political theme deals, again, with the international politics and emphasises **divisive themes in international relations**, such as Brexit, the economic crisis of the EU, the case of asylum seekers and migrants, the case of Roma, a specific relation between the role of the UK in Europe and the possible enlargement. This set collects topics used by newspapers in Italy, Austria, Spain, Sweden, and United Kingdom.

3. The economy and the EU

Another theme is the **stock market**. It is interesting to note that the stock market is cited in articles collected because they contain words related to Europe and European identities. This set contains a topic used by newspapers in Italy, Austria, Sweden, and United Kingdom.

Connected to the stock market is the theme of **monetary issues**. The theme concerns the budget of EU funds in topics used in Romania, Spain, and UK, where it deals with the budget of the EU and the rebate of the UK. It is then used in Poland and Austria as well.

4. The specific effects of cohesion and regional policies

Another set of themes addresses how EU funded projects produce an impact on the society and the economy.

More specifically, a theme emphasises the impact of projects on **social welfare**. Specifically, it deals with education and training (in Italy and Romania), employment (in Poland and Sweden), social welfare (in Sweden), and social services (in Spain).

Another theme is the improvement of **health care**. This theme is a topic in Austria and in Poland. Likewise, in these two countries, and in United Kingdom, we find topics referring to an impact on technology and **research and development**.

In Italy, Romania, Poland and Spain, a theme is the impact of Cohesion Policy on **agriculture and fishing**.

Another theme is **creative and cultural industries**. In this respect, the positive effect of European funds in protecting the heritage and developing the sector is cited in three topics in Italy, Poland, and Romania,

Another theme that recurs in several national cases refers to **renewable energy** and environment that appears in topics in Italy, Austria, Sweden, and United Kingdom.

Finally, another theme comments on **regional specific impacts**. For example, in the Italian case, this theme emerges in a topic on the development of Regione Calabria, in one on the effect on Cohesion Policy on the southern part of Italy, and in one on the beneficial effect of European funds on the development of the Italian "Mezzogiorno". In Austria, a topic refers to Burgenland and we found similar topics in Romania, Poland, and Sweden.

There are other recurring themes, that appears in at least two topics in our sample.

It is the case of the development of **roads** (Poland and Romania), the effect of **elections** (Poland and United Kingdom), the **management** of European Funds (Italy and Romania), and specific detailed studies of the **national laws** connected to European funds (Italy and Poland).

But a very interesting theme addresses **corruption and misuse of European funds**. Topics that explicitly points at corruption and trials referred to misuse of EU funds emerged in Italy, Romania and Spain.

The following table reports a synopsis of the key themes and the countries in which they appear more frequently¹¹.

SYNOPSIS OF KEY THEMES AND GEOGRAPHICAL DENSITY

THEMES	FREQUENCY
<i>National politics and the EU</i>	
Economic development	All countries
European institutions and politicians	Austria, Italy, Spain, Sweden, and United Kingdom.
National political debate	Austria, Italy, Romania, Spain, Sweden, and United Kingdom

<i>International politics and the EU</i>	
International politics	Italy and Romania (newspapers in the two countries address the enlargement of EU), UK (national economic crisis) and Spain.
Relationships with neighbours	Austria (eastern neighbours, borders and cross-borders infrastructures), Romania (Danube region), Poland and Sweden.
Divisive themes in international relations	Austria, Italy, Spain, Sweden, and United Kingdom.

¹¹ In this table we collect and analyze themes (topics) that appears at least in two national cases. For sake of clarity, we are not citing in this table topics that appear in one Country only.

--	--

<i>The economy and the EU</i>	
Stock market	Austria, Italy, Sweden, and United Kingdom.
Monetary issues	Romania, Spain, and United Kingdom (newspapers in the three countries address the budget of the EU; UK adds the debate on the rebate), Austria, Poland.

<i>Specific effects of cohesion and regional policies</i>	
Social welfare	Italy and Romania (in both countries topics address education and training), Poland (employment), Sweden (employment and social welfare) and Spain (social services).
Health care	Austria, Poland.
Research and development	Austria, Poland and United Kingdom.
Agriculture and fishing.	Italy, Romania, Poland and Spain
Creative and cultural industries	Italy, Poland, and Romania,
Renewable energy	Italy, Austria, Sweden, and United Kingdom.
Regional specific impacts	Italy (beneficial effect of European funds on the development of the Italian "Mezzogiorno") Austria (Burgenland), Romania, Poland, and Sweden
Roads	Poland, Romania.
Elections	Poland, United Kingdom
Management of European Funds	Italy, Romania
National laws connected to European funds	Italy, Poland
Corruption and misuse of European funds.	Italy, Romania and Spain.

5. Facebook

With reference to the analysis of Facebook, the most interesting aspect is the different use of this social media that is made by Local Managing Authorities in their posts, and by citizens in their comments. Overall, if compared to the topics elicited by analysing newspapers, topics elicited from Facebook are less connected to general debates or theories, as they focus more on the daily activities. The topics that are most used by LMAs are generally connected to events, or constitute information and clarification on funding opportunities.

In Italy most important topics for comments refer to regional politics, cultural activities, and on the use of Structural funds in Calabria and in Emilia Romagna.

In Austria topics used by the LMA mostly advertise on events.

In Poland, the topics that are used most by the LMAs provide information on the funding possibilities, dealing with open days, EU funds, EU grants, and specific funding opportunities.

In Sweden the LMA uses especially topics that are aimed at informing and promoting desirable aspects of the region and of the EU funds, by citing issues such as poverty reduction programmes, and environmental protection programmes.

In Spain, the local managing authority mostly advertises on opportunities for several socio-economic sectors and promotes cultural activities funded by European funds. If posts are mostly positive and informing, comments are basically polemic complaints. With the only exception of the Austrian case, where comments use especially two topics that are related to specific events, in all the other cases comments are aimed at complaining. In Italy and in Spain, we find two topics mostly used by comments: one is on complaints that target specific actions or decision taken (or not taken) by the LMAs. The other topic collects generic complaints, which are not targeted to any specific issue, but more generally at the dishonesty/incompetence of politicians. Then, topics report controversial discussions on specific issues such as vaccines, elections and even disinfestations against mosquitoes in Italy, misuses of tax money and complaints regarding infrastructures and safety in Sweden, debates on specific issues in Poland. In Romania comments focus on a political scandal, on the excessively complicated procedures of EU funding, and on the need to accelerate the process of funding. In a nutshell, on Facebook, while LMAs inform and advertise, citizens complain.

Semantic network analysis

We have explored whether the clustering of topics based on *shared vocabulary* reveals larger areas of meaning. Our results based on the PERCEIVE newspaper dataset support the intuition that vocabulary structure – the patterning of words' co-occurrence – does reveal such macro-areas. In particular, in almost all cases the topics algorithmically clustered into same groups could be interpreted and made sense together, or in other words they seemed to form coherent pieces of same narratives concerning EU regional Cohesion Policy. We also observed that the dense sub-graphs technique and Newman clustering highlighted different structural properties of semantic networks. While this was somehow implied by the different design of the algorithms, the actual results of these techniques always depend on the actual data being analysed. We can now say that, in our case, dense sub-graphs gave a more general classification of topics – i.e. core(s) regional development topics vs peripheral and less related ones –, while Newman clustering helped us to find more fine-grained groups of clusters – i.e. on specific areas of meaning such as economy and markets, regional matters, Eurosceptic talk, etc.).

These results are quite encouraging and conceptually fuel the empirical tests entailed in the next Deliverable (5.4). In more detail, we will test the effect of public media construction of regional policy – i.e. the presence on given topics – on dependent variables such as citizens' awareness of regional policy and identification with the EU. We can now reasonably extend our initially sketched conceptual and empirical design (see Grant Agreement) to include groups of topics as well as the centrality of given topics in a national/regional setting as dependent variables.

8. References

- Altman, N., Carley, K. M., & Reminga, J. (2017). ORA User's Guide 2017. *Carnegie Mellon University, School of Computer Science, Institute for Software Research, Technical Report CMU-ISR-17-100*.
- Blei, D., Ng, A., & Jordan, M (2003). Latent dirichlet allocation. *Journal of Machine Learning Research*, 3, 993-1022.
- Carley, K. M. (1997). Network text analysis: The network position of concepts. *Text analysis for the social sciences: Methods for drawing statistical inferences from texts and transcripts*, 4, 79-100.
- Clauset, A., Newman, M. E., & Moore, C. (2004). Finding community structure in very large networks. *Physical review E*, 70(6), 066111.
- DiMaggio, P., Nag, M. & Blei, D (2013). Exploiting affinities between topic modeling and the sociological perspective on culture: Application to newspaper coverage of US government arts funding. *Poetics*, 41(6), 570-606.
- Ferri, P., Lusiani, M., & Pareschi, L. (2017). Accounting for *Accounting History*: A topic modeling approach (1996-2015). *Accounting History*, <https://doi.org/10.1177/1032373217740707>
- Freeman, L. C. (1978). Centrality in social networks conceptual clarification. *Social networks*, 1(3), 215-239.
- Greenacre, M. J. (1984). *Theory and applications of correspondence analysis*. Academic Press: London.
- Khuller, S., & Saha, B. (2009). On finding dense subgraphs. *Automata, Languages and Programming*, 597-608.
- Loewenstein, J., Ocasio, W., & Jones, C. (2012). Vocabularies and vocabulary structure: A new approach linking categories, practices, and institutions. *Academy of Management Annals*, 6(1), 41-86.
- Mohr, J. & Bogdanov, P. (2013). Introduction, topic models: What they are and why they matter. *Poetics*, 41(6), 545-569.
- Wasserman, S., & Faust, K. (1994). *Social network analysis: Methods and applications* (Vol. 8). Cambridge University Press.