

# ONLINE **DIS**INFORMATION MONITORING SYSTEM



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19

Information and disinformation production



Information and disinformation categories



Topics of disinformation



Information and disinformation on the European elections



Information and disinformation on topics of European relevance



Appendix - Salient terms in the first two months of 2019

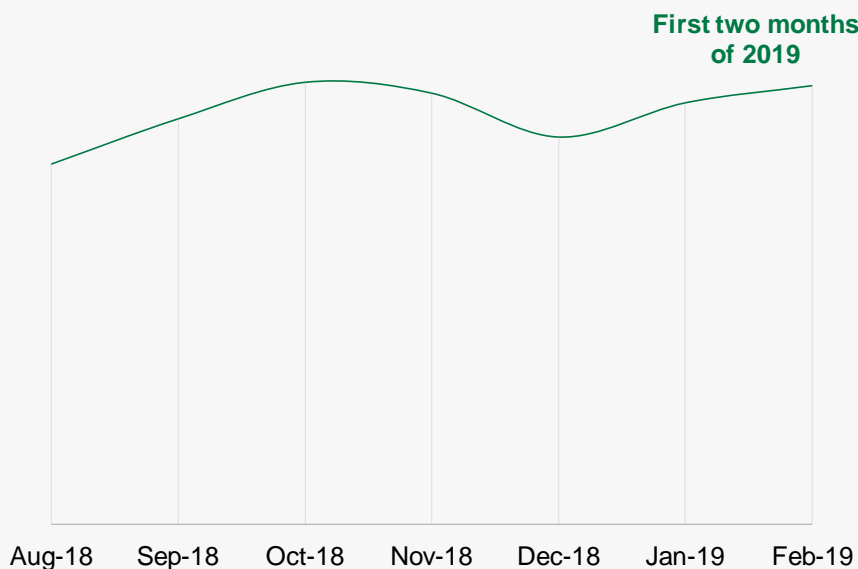


Methodological note



# Information and disinformation production

News production on an average day



## NEWS PRODUCTION IN ITALY IN THE FIRST TWO MONTHS OF 2019

From the dynamic analysis of news production (by television, radio, newspapers, news agencies, information websites, related social pages and accounts) in Italy, we note:

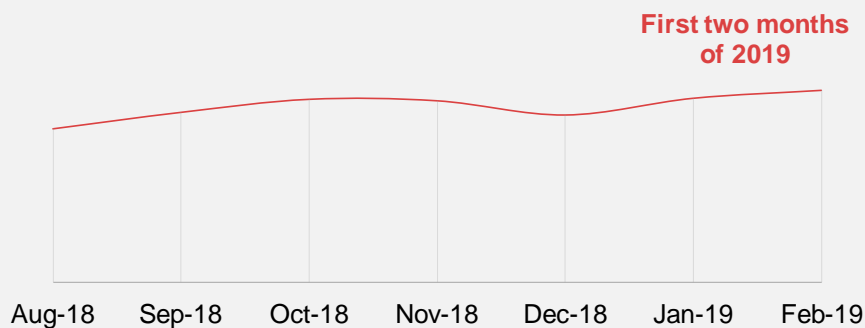
- an increase in the news produced on the average day of the first two months of 2019 (+5% on the previous two months)
- an incidence of online content on the total information equal to 66%

## ONLINE DISINFORMATION PRODUCED IN ITALY IN THE FIRST TWO MONTHS OF 2019

Online disinformation produced in Italy (by disinformation websites, social pages and accounts) in the first two months of 2019 shows a growing trend. In particular:

- in the 6 months analyzed, the amount of disinformation contents produced on an average day reaches the maximum value in February 2019
- the disinformation produced daily in the first two months of 2019 represents 7% of online content
- it is estimated that a disinformation website publishes, on average, 5 new articles in a day

Disinformation production on an average day



**+10%** on December 2018

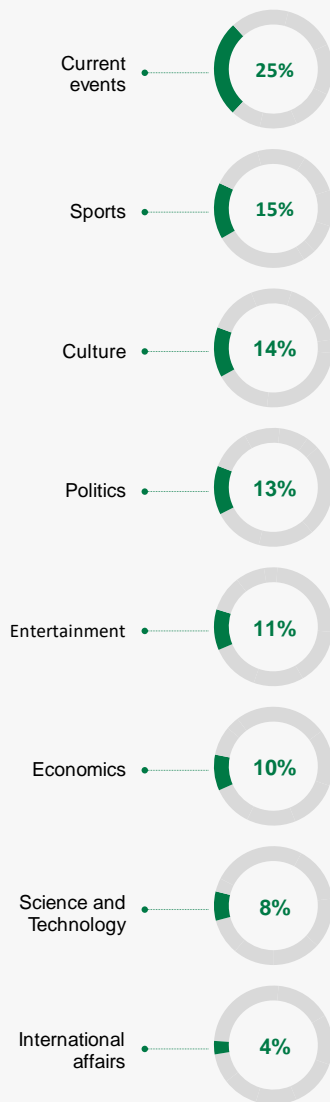
ONLINE DISINFORMATION ON AN AVERAGE DAY OF JANUARY 2019

**+4%** on January 2019

ONLINE DISINFORMATION ON AN AVERAGE DAY OF FEBRUARY 2019

# Information and disinformation categories

## Supply distribution of information, by category (first two months of 2019)



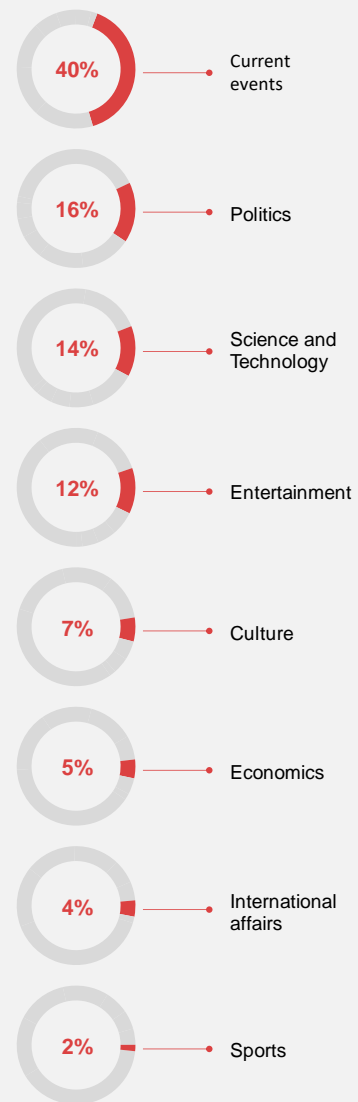
### INFORMATION CATEGORIES IN THE FIRST TWO MONTHS OF 2019

In the first two months of 2019, the supply distribution of information by category does not show significant changes compared to the 2018 average:

- “current events” remains the first category (25% of the total). The other “hard news” categories (politics and international affairs) together represent 17%
- large space is dedicated to sports news (15%), culture (14%) and entertainment (11%)

**PERSISTENT LACK OF INFORMATION ABOUT SCIENCE AND TECHNOLOGY**

## Supply distribution of online disinformation, by category (first two months of 2019)



### ONLINE DISINFORMATION CATEGORIES IN THE FIRST TWO MONTHS OF 2019

The distribution by category of online disinformation articles in the first months of 2019 shows:

- a growth compared to 2018 of the contents dedicated to current events, which rank in the first place. Follow politics, and science and technology, in slight reduction
- a marked concentration of disinformation on current events and politics (56% of the total, 3 percentage points more than the 2018 average)

**CONCENTRATION OF DISINFORMATION ON CURRENT EVENTS AND POLITICS**

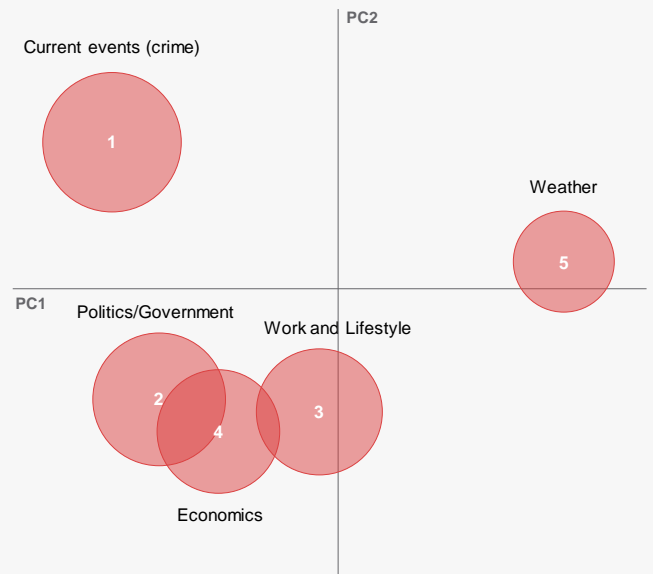
# Topics of disinformation

## MAIN TOPICS OF ONLINE DISINFORMATION IN THE FIRST TWO MONTHS OF 2019

Textual analysis (*topic modeling*) of the disinformation websites' content allows obtaining groups of frequently co-occurring terms in the analyzed documents, and identifying macro-themes. It emerges that:

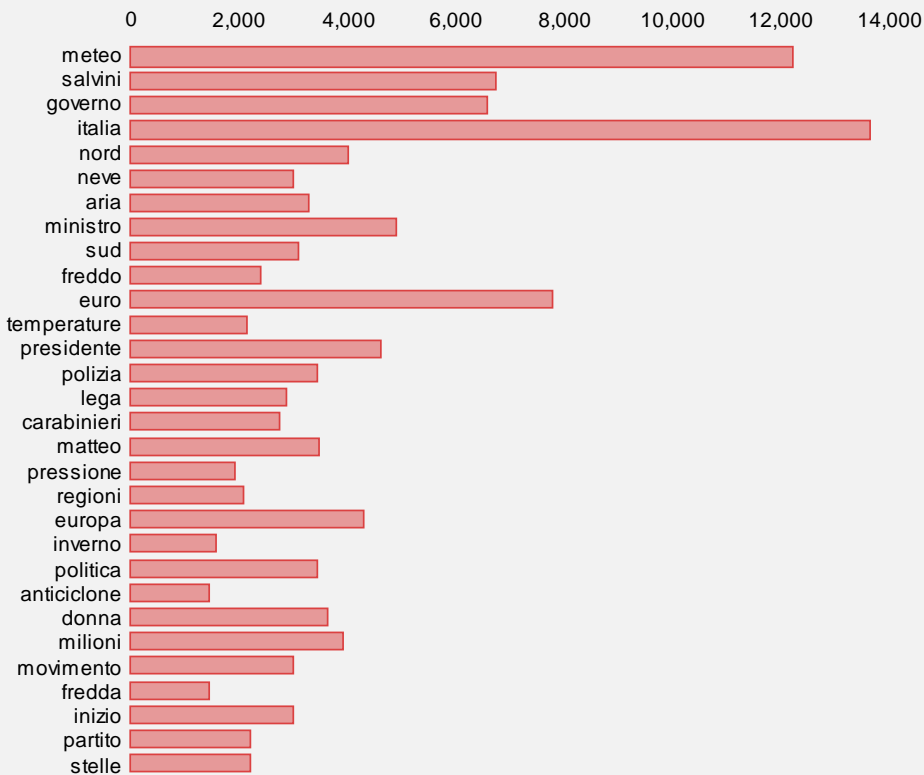
- the 5 main topics discussed in the first two months of 2019 in Italy concern crime, politics and government affairs, work and lifestyle, economic issues, and weather conditions

Main topics of online disinformation (January - February 2019)



The list of the 30 most frequent terms referable to each topic is shown in [Appendix](#)

Top-30 most salient terms in the disinformation websites (January - February 2019)



## SALIENT TERMS OF ONLINE DISINFORMATION IN THE FIRST TWO MONTHS OF 2019

The frequency distribution of the terms contained in the articles of the disinformation websites shows how:

- “Italia”, “meteo”, and “Euro” are the most recurrent words in the first two months of 2019
- many of the 30 most frequent terms are related to political parties and their exponents, and government institutions
- among other salient terms, several are related to climatic events, as well as to the police intervention

**CRIME, POLITICS/GOVERNMENT AND WORK ARE THE MAIN TOPICS OF ONLINE DISINFORMATION IN THE FIRST TWO MONTHS OF 2019**

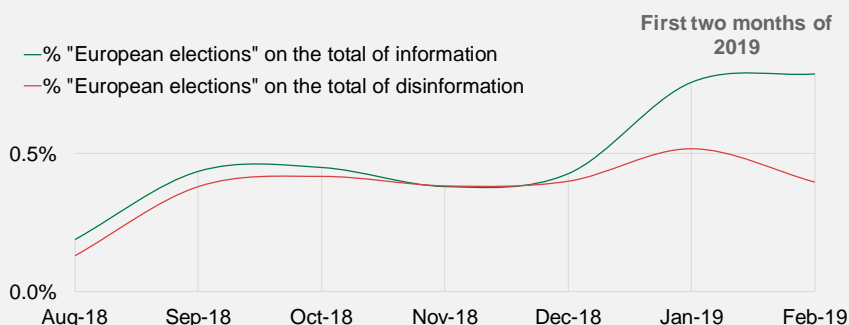
# Information and disinformation on the European elections

## NEWS-MEDIA COVERAGE OF THE EUROPEAN ELECTIONS IN ITALY IN THE FIRST TWO MONTHS OF 2019

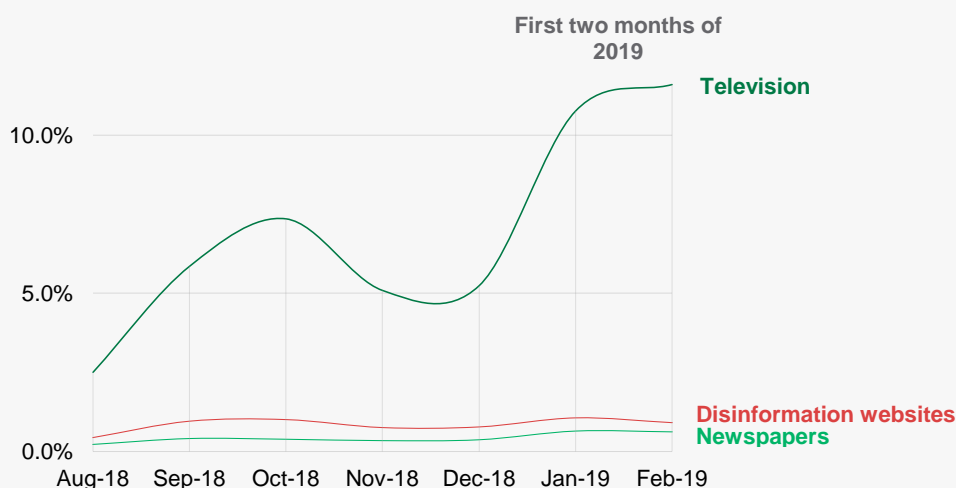
With reference to the first two months of 2019, it is noted that in Italy:

- the coverage of the European elections by the information and disinformation sources is on the whole higher than the previous two months
- disinformation contents, compared to the informative ones (especially of TV and radio), tend to focus more on issues with a strong emotional impact (including those of European relevance) rather than on the specific topic of the European elections

Incidence of the “European elections” topic on the total information and disinformation



Incidence of the “European elections” topic on the total content produced by single media



## SPACE DEDICATED TO THE EUROPEAN ELECTIONS IN ITALY BY SINGLE MEDIA

By focusing on single sources of information and disinformation, the analysis found that, in the first two months of 2019:

- television continues to dedicate the greatest space to European elections on the total of its supply of information
- however, disinformation websites continue to dedicate to the European elections a share of the total amount of their contents, on average, higher than newspapers (and news websites)

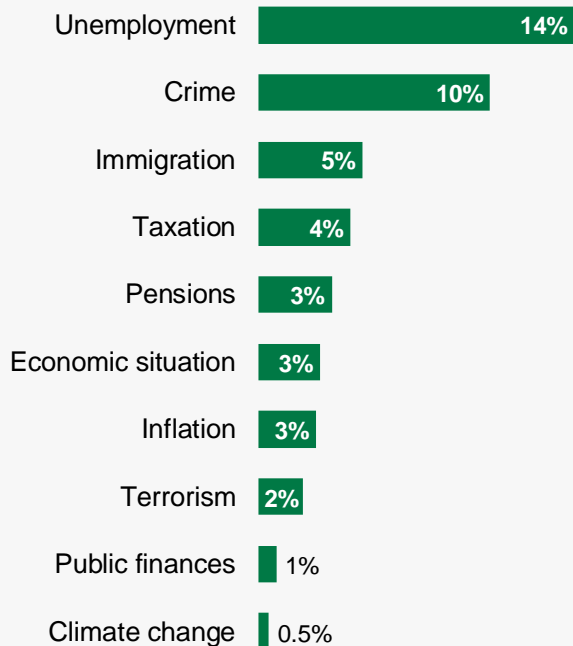
# +28%

on the previous two months

ONLINE DISINFORMATION ON EUROPEAN ELECTIONS PRODUCED ON AN AVERAGE DAY OF THE FIRST TWO MONTHS OF 2019

# Information and disinformation on topics of European relevance

Incidence of topics of European relevance on the total information (first two months of 2019)



## INFORMATION ON TOPICS OF EUROPEAN RELEVANCE

By focusing the analysis of the information produced in the first two months of 2019 on topics of European relevance identified by Eurobarometer, it can be observed that in Italy:

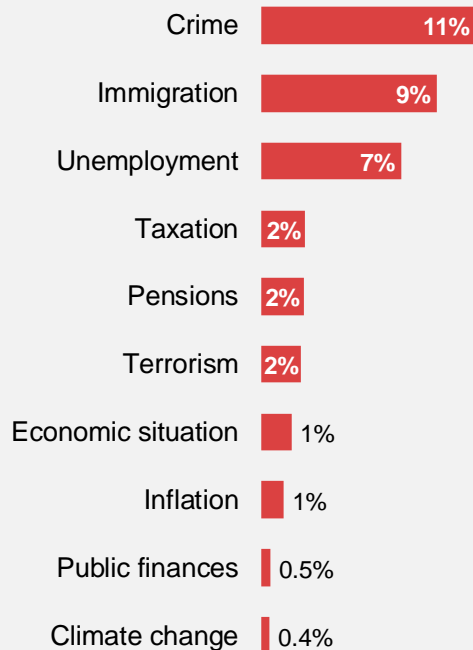
- unemployment and crime remain the topics with the greatest media coverage, with an incidence on the total of 14% and 10% respectively
- immigration (5%) rises to third place, while less space is dedicated to climate change (less than 1%)

AMONG THE TOPICS OF EUROPEAN RELEVANCE:

**UNEMPLOYMENT** IS THE MOST COVERED BY TELEVISION, RADIO, NEWSPAPERS AND ONLINE EDITORIAL SOURCES

**CRIME** IS THE MOST TREATED BY SOCIAL PAGES AND ACCOUNT OF INFORMATION SOURCES

Incidence of topics of European relevance on the total disinformation (first two months of 2019)



## ONLINE DISINFORMATION ON TOPICS OF EUROPEAN RELEVANCE

The distribution of online disinformation produced in the first two months of the year on topics of European relevance shows that:

- crime remains the theme most dealt with by sources of disinformation in Italy, with an incidence of 11% on the total
- in second and third positions are immigration (9% of the total contents produced by the sources of disinformation) and unemployment (7%)

AMONG THE TOPICS OF EUROPEAN RELEVANCE :

**CRIME** IS THE MOST DEBATED BY BOTH WEBSITES AND SOCIAL PAGES AND ACCOUNTS OF DISINFORMATION

**IMMIGRATION** IS THE ONE ON WHICH DISINFORMATION HAS THE GREATEST IMPACT

## SALIENT TERMS OF EACH TOPIC OF ONLINE DISINFORMATION IN THE FIRST TWO MONTHS OF 2019

The composition of each topic of disinformation allows to obtain indications about the specific object of the disseminated news, based on the salient terms associated with the topics.

In this sense, for each of the 5 main topics of disinformation in the first two months of 2019, we list the 30 most frequent terms that compose them:

### 1. CURRENT EVENTS (CRIME)

- anni
- fatto
- uomo
- polizia
- casa
- donna
- carabinieri
- stati
- napoli
- giorni
- persone
- giovane
- vita
- famiglia
- durante
- momento
- carcere
- donne
- figlio
- procura
- corso
- roma
- ospedale
- oggi
- moglie
- uomini
- arrestato
- auto
- mamma
- indagini

### 2. POLITICS/GOVERNMENT

- salvini
- governo
- italia
- ministro
- fatto
- presidente
- matteo
- politica
- lega
- paese
- movimento
- anni
- oggi
- italiani
- partito
- stelle
- caso
- voto
- francia
- cittadini
- fonte
- leader
- interno
- legge
- europa
- sinistra
- renzi
- nazionale
- paesi
- persone

### 3. WORK AND LIFESTYLE

- anni
- vita
- lavoro
- mondo
- tempo
- persone
- amore
- anno
- terra
- avere
- spesso
- caso
- corpo
- tutte
- ricerca
- volta
- oggi
- momento
- altre
- fatto
- possibile
- nuovo
- pensione
- volte
- attraverso
- viene
- studio
- giorno
- sistema
- mesi

### 4. ECONOMICS

- euro
- anni
- milioni
- italia
- legge
- fatto
- tutte
- anno
- oggi
- stati
- caso
- nazionale
- mondo
- rimanere
- persone
- lavoro
- sistema
- momento
- società
- qualsiasi
- tempo
- miliardi
- rispetto
- roma
- mercato
- dati
- bambini
- banca
- articolo
- grazie

### 5. WEATHER

- meteo
- italia
- nord
- neve
- aria
- sud
- freddo
- temperature
- giorni
- europa
- tempo
- pressione
- inizio
- regioni
- inverno
- settimana
- anticiclone
- centro
- fredda
- pubblicato
- primavera
- caldo
- condizioni
- aree
- acqua
- venti
- neviccate
- zone
- gelo
- precipitazioni



## THE COMPOSITION OF THE DATABASE

The information reported in this document are the result of Agcom elaborations carried out on a database built from data extrapolated through the platform developed by Volocom Technology.

In particular, the analyzes were conducted on the entire textual content extrapolated from about 8.4 million documents created in Italy from August 2018 to February 2019 by more than 1,900 information sources (national television and radio channels, newspapers, news agencies, websites of traditional publishers, native online news outlets, and related pages and accounts of social networks), and sources of disinformation (websites and social pages/accounts) identified as such by external subjects specialized in debunking activities. The amount of online disinformation produced in Italy was therefore estimated using a subjective methodology, i.e. considering the total number of documents created monthly by the aforementioned sources of disinformation.

The database is composed by the entire textual content of all documents produced during a day by every information and disinformation source. With document, we mean the entire article, in the case of newspapers and information websites; the transcription of a transmission segment, in the case of Tv and radio: all tweets/posts in the case of online platforms.

## TOPIC MODELING

For the study of the main topics of online disinformation, analyzes were carried out on the entire content disseminated by the disinformation websites in the first two months of 2019, adopting a methodological approach known as topic modeling.

A topic model is a statistic model for the automatic individuation of topics appearing in a collection of documents. In particular, the classification of the text together to the group of fake contents in determined topics was obtained by means of the use of a LDA-model (Latent Dirichlet Allocation) - an algorithm of not-supervised automatic learning considering the frequency and the co-occurrence of the terms used in the collection of documents. The same is at the basis of LDAvis (Sievert e Shirley, 2014), the interactive visualization system that supplies an overall vision on the identified topics (and of the way in which they differ), allowing at the same time a deep analysis of the most salient terms, associated to every one of them. In detail, every topic is represented by a circle, which amplitude shows the occurrence frequency in the entire group of the examined documents. Moreover, the topics have a position in the Cartesian coordinate system, being around the horizontal and vertical axes, representing the two main dimensions that explain the variability of the data.

## FURTHER INFORMATION

For more information on the methodological aspects, see Agcom Report (2018), [\*News vs. fake in the information system\*](#)

For more technical information and definitions regarding online disinformation, see Agcom Report (2018), [\*Online disinformation strategies and the fake content supply chain\*](#)

For further details and updates on the Agcom's activities in the field of online disinformation, it is possible to consult the area dedicated to [\*Technical Roundtable for safeguarding News-Media Pluralism and Fairness in the online Platforms\*](#)

All the numbers of the Online Disinformation Monitoring System can be consulted in a [\*specific section\*](#) of the Agcom website.



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