

Fact-checking in war: Types of hoaxes and trends from a year of disinformation in the Russo-Ukrainian war

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Abstract

This study explores the verification of the contents related to the coverage of the Russo-Ukrainian war during the first year of the conflict. We address the analysis of false information collected from the *EDMO* database by the Spanish fact-checking organizations: *AFP Factual* and *Comprovem*, *EFE Verifica*, *RTVE Verifica*, *Maldita.es*, *Newtral* and *Verificat*. Based on the results obtained, a typology has been established to identify the style, format and content of the misinformation under study. In this way, we follow the main trends in the manipulation dynamics that shaped the media coverage of the latest war in European territory. In total, up to 307 verifications by verifiers working in the Spanish context are analyzed. Unlike the hoaxes related to the origin of the coronavirus, in which the preferred format was the text message, in the invasion of Ukraine visual evidence has prevailed in the media coverage of the conflict during the initial phase of the conflict. We will see which are the social networks in which the greatest traffic and viralization of false news is detected, exposing users to manipulative content to a greater extent. Likewise, the potential implementation of a transnational network to combat disinformation in war contexts will be assessed. We will pay special attention to the important role of Spanish fact-checkers both at the European level and in identifying false information, avoiding its dissemination in Latin America. And, finally, we will detect the new challenges that war fact-checking faces, as a result of the evolution of falsification strategies in the construction of the collective narrative about the Russo-Ukrainian war in the post-truth era.

Keywords

Media literacy; Hoaxes; News coverage; Disinformation; Warlike fact-checking; Fake news; Fact-checkers; Verification; Infociation; War journalism; Propaganda; Wars; Ukraine; Russia.



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1. Introduction

The aim of this research is to analyse the role of fact-checking organisations in the journalistic coverage of Russia's invasion of Ukraine and the verifications made during the first year of the war. This study explores the challenges that this new scenario poses for the field of verification and reporting in armed conflicts, focusing on the coverage of the Russian-Ukrainian war.

We address the analysis of the verifications collected in the database of the *European Digital Media Observatory (EDMO)* by the Spanish fact-checking organisations¹. In total, up to 307 verifications carried out by the participating institutions are analysed: *AFP Factual* (including *AFP Comprovem*), *EFE Verifica*, *RTVE Verifica*, *Maldita.es*, *Newtral* and *Verificat*. In addition to the distribution of the contents verified by these organisations, the narratives are analysed according to themes, months, countries involved, etc.

Unlike the hoaxes related to the origin of the coronavirus, where text messages were the preferred format (**Molina-Cañabate; Magallón-Rosa, 2023**), in the invasion of Ukraine the relevance of visual evidence prevailed in media coverage of the conflict during the initial phase of the fighting (**Fernández-Castrillo; Ramos-Vera, 2023a; 2023b**), becoming the focus of attention, monitoring and verification by fact-checking organizations.

Furthermore, the evolution in the development of increasingly diversified strategies for the propagation of hoaxes leads us to evaluate the role of decontextualization and the part played, in this respect, by certain actors on social platforms as possible predominant elements in the current information war.

Referred to as the First World War of the 21st century (**Martino, 2022**) because of the level of global involvement by groups of internet users who have helped in the verification of information through *Open-Source Intelligence (OSINT)* tools for the collection, analysis and linking of data for the dissemination of public information, but also because of the consequences for international geopolitics. It is one of the most recent examples of hybrid warfare in which the use of platforms, media and social networks is added to military, political, technological, economic, and psychological strategies to destabilise the adversary and influence international public opinion (**Carmack, 2022; Petrocchi, 2022; Susska; Chernii; Sukharevska, 2022**).

This is therefore an ideal context for the development of new methods of manipulation and the viralization of hoaxes, which makes it necessary to review the current state of information and content verification strategies, networks and actions at the international level. Based on the data collected, we will evaluate Spain's situation in the global fight against disinformation in war contexts –taking the Russian-Ukrainian conflict as an object of study–, as well as the limits and possibilities of setting up a transnational fact-checking network in war contexts.

Finally, a series of recommendations are put forward in the form of a decalogue concerning how to respond to disinformation in war conflicts and to try to help improve media coverage in this type of situation.

2. State of play**2.1. Disinformation and the presence of social platforms in war journalism**

In the case of war conflicts where the interest of international public opinion is shared and is reflected in the daily media coverage, social platforms have become a fundamental source and channel for the circulation of content. They are intermediaries that allow journalists and media to access a wide variety of content that would otherwise be very difficult to obtain in situ in such a short time, such as images and testimonies of some of the victims (**Sacco; Bossio, 2015**).

As an example, the integration of testimonies of Albanian Internet users through their blogs in the coverage of the Kosovo War served to denounce human rights violations by the Serbian authorities in the late 1990s (**Carreras-Álvarez; Román-San-Miguel, 2011**) and, among the main achievements of the Arab Spring, is the convergence between traditional and social media, both for the organisation and mobilisation of citizens and to vindicate and give visibility to the events (**Soengas-Pérez, 2013; AlSayyad; Guvenec, 2015; Ortiz-Galindo, 2016; Soengas-Pérez; Assif, 2017**).

The construction of the collective narrative on war conflicts is no longer the exclusive monopoly of the media due to the influence of the dynamics introduced by the growing presence of User-Generated Content (UGC) (**Fernández-Castrillo, 2014**) but also by the propaganda strategies of the countries involved.

“ This study explores the challenges that this new scenario poses for the field of verification and reporting in armed conflicts, focusing on the coverage of the Russian-Ukrainian war ”

This situation is particularly significant in the case of crisis and disaster coverage in general –and war in particular–, due to the limitations of access to the main locations and sources of information (**Micó et al.**, 2008; **Sánchez-Gonzales; Martos-Moreno**, 2020).

In this context, the proliferation of news content makes it difficult to identify the origin and authorship of the information, reinforcing the role of the image as the axis of a collective narrative that is illustrated rather than narrated (**Rodríguez-Tranche**, 2019). Photography as a supposed guarantee of maximum objectivity gives greater strength to the manipulation of the image (**Caballo-Méndez; De-Santiago-Mateos**, 2021), leading to a lack of contextualisation, which is one of the main threats when it comes to interpreting distant realities with a broad impact, as in the object of study in question.

It is also worth noting the important evolution of the role of the journalist from gatekeeper to gatewatcher (**Bruns**, 2003), especially evident in war contexts in which the journalist’s work as a “content curator” is enhanced (**Loo-Vázquez et al.**, 2016), where in addition to filtering and blocking information, he or she must focus on the selection and dissemination of other people’s content.

In the case of the Russian invasion of Ukraine, social networks have not only become relevant for the distribution and viralization of certain content, but also for the lack of access to the platforms themselves within the territories in conflict. In March 2022, Russia’s communications regulatory agency, *Roskomnadzor*, blocked access to *Facebook* and *Twitter* throughout the country in the face of the restriction by these social networks –and also by the European Union– on the dissemination of news from media outlets such as *Russia Today* and the agencies *Sputnik* and *RIA Novosti* (**Milmo**, 2022; **Kemp**, 2023; *Statcounter*, 2023)².

A recent study on the presence of social networks in the coverage of the Russian-Ukrainian war by two of the main digital media in the countries involved –*Ukrayinska Pravda* and *Rossiyskaya Gazeta*– highlights the need for

“greater transparency in the selection of UGC published in the media, especially in the case of screenshots, a type of content that is increasingly present based on appropriationism and the selection of fragments from user-created videos” (**Fernández-Castrillo; Ramos-Vera**, 2023a).

Therefore, as **Himma-Kadakas** and **Ojamets** (2022) point out, the development of advanced verification skills through social networks and the alliance of *OSINT* organisations with fact-checking organizations are two new factors determining the coverage of war journalism today.

2.2. Prevailing narratives and disinformation in the Russian-Ukrainian war

In the most recent imaginary of the Russo-Ukrainian conflict we find series of narratives that, according to **Lazarenko** (2019), are summarised in a Russian strategy centred on the incorporation of Crimea, Russia’s fraternal link with Ukraine and the protection of Russian speakers in the diaspora due to Russophobia (**Karpchuk; Yuskiv**, 2021), versus a Ukrainian narrative centred on the heroic struggle against invading imperialism and Russian-funded and supported separatists.

These narratives sometimes lead to sub-narratives about the “neo-Nazi insurgency in Kiev” to justify Russia’s position in the conflict and contribute to extending the battlefield to the struggle for hegemony between imaginaries. From this perspective, the main Russian disinformation narratives detected in the wake of the Euromaidan protests in 2013-2014 have focused on portraying Ukraine as a ‘Nazi state’, a ‘failed state’ or a ‘non-state’.

In this context, it is worth mentioning **Zawadzki’s** (2022) study of pro-Russian, anti-Ukrainian and anti-US accounts on *Twitter*, *Facebook* and *Vkontakte* –the Russian version of *Facebook*, created in 2006–. According to the results, some of the monitored accounts were deleted and many of the remaining accounts were classified as bots.

For his part, **Ibitowa** (2022) attempted to document the fact that media coverage is always tainted by attempted propaganda manipulation by the parties to the conflict. As an example, he notes that the killing of two people on 15 November 2022 in the Polish village of Przewodow –six kilometres from the Ukrainian border– was initially attributed to a missile attack by the Russian army, but eventually both Warsaw and Washington were forced to exonerate Moscow (**Ibitowa**, 2022).

In this evolution of tactics and narrative, **Aral** (2023) observes that Russian disinformation has shifted from the third decade of the 21st century from bots to the support of real profiles to create credible narratives and cascade them.

Temporally, in this evolution of the Russo-Ukrainian war, the first phase focused on discrediting countries supporting Ukraine, while later Russia’s disinformation strategy focused on curbing public debate on possible *NATO* expansion by polarising and viralizing content aimed at immigrant populations in neighbouring countries (**Aral**, 2023; **Yarova**, 2023).

By way of example, the Czech Republic has strengthened its strategic line to combat disinformation and the actions carried out by the *Centre Against Terrorism and Hybrid Threats* (*Centrum proti terorismu a hybridním hrozbám*, *CTHH*) have been joined by the *Prague Security Studies Institute* (*PSSI*), the *Czech Elves* (*Čeští elfové*), *Manipulátoři.cz*, *Demagog.cz* or the *NELEŽ* project (**Cabada**, 2022).

“The main Russian disinformation narratives detected in the wake of the Euromaidan protests in 2013-2014 have focused on portraying Ukraine as a ‘Nazi state’, a ‘failed state’ or a ‘non-state’”

Regarding the evolution of narratives in the last year of war, for Viktoriia Romaniuk, deputy director of the Ukrainian fact-checking organisation *StopFake*,

“Russian disinformation shifted its focus from the initial narratives to new ones: falsehoods related to arms deliveries to Ukraine, military support from Western countries, the food and energy crisis, and false stories discrediting refugees from Ukraine” (*Maldita.es*, 2023a).

“The first phase focused on discrediting countries supporting Ukraine, while later Russia’s disinformation strategy focused on curbing public debate on possible *NATO* expansion by polarising and viraling content aimed at immigrant populations in neighbouring countries”

In this sense, some narratives of the invasion of Ukraine still resemble those of the post-Soviet strategy (Vorster, 2022), and are based on information intoxication, enemy exhaustion, inoculation of mistrust towards leaders, intensification of class divisions, incrimination of the enemy, or propagation of threats, among others (Stancu, 2019).

2.3. EU reports on disinformation during the conflict

In June 2018, the *European Council* mandated the then *High Representative of the Union for Foreign Affairs and Security Policy*, Federica Mogherini, and the *European Commission* to draft a project on coordination among Member States against disinformation. The *Action Plan* was presented in December of the same year and endorsed by the *European Council*.

Among the most prominent measures was an *Early Warning System (EWS)* to alert European partners in the event of a disinformation campaign and the implementation of common measures if necessary.

For its part, the *European External Action Service (EEAS)* has a specific task force on *Foreign Information Manipulation and Interference (FIMI)*, which addresses the problem of disinformation and possible foreign interference.

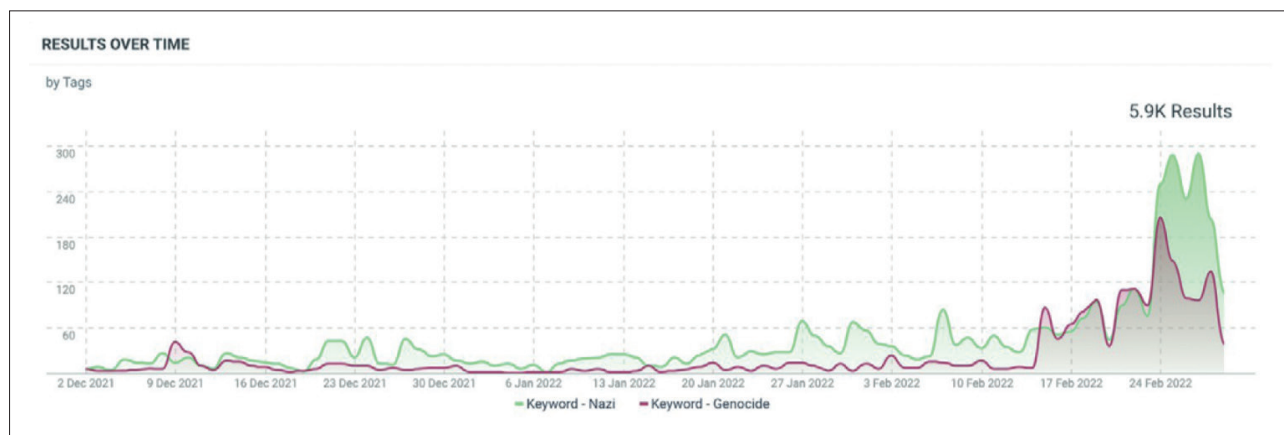
According to the 2022 *Activity Report*,

“Russia’s use of *FIMI* in its war against Ukraine has provoked an unprecedented reaction from the European Union. Sanctions against media outlets such as *RT* and *Sputnik*, which are directly controlled by the Kremlin and used as instruments of war propaganda, have demonstrated a strong determination to impose the costs of *FIMI*’s activities’ (*EEAS*, 2023, p. 3).

By 2023, this unit had the largest budget in its history with €14.6 million, which allowed it to strengthen cooperation with its international partners and boost projects on analysing and creating resilience strategies that have played a key role in documenting the actions carried out by the Kremlin since 2015.

FIMI has detected two levels of action regarding disinformation actions by the Russian state: one domestic and the other international. The first consists of manipulation and disinformation practices ranging from censorship to the banning of independent media on Russian territory in order to prevent any kind of domestic opposition to the war and targeted media coverage, including entertainment content. While the international one aims to undermine support for Ukraine, sowing doubts about who the aggressor is and exploiting sensitive issues for the EU such as migration and refugees, the rising cost of living and gas, among others (*EEAS*, 2023).

Some of the main disinformation narratives are aimed at the *Eastern Partnership (EaP)*, an initiative launched in 2009 to strengthen relations between the EU, its member states and its six eastern neighbours: Ukraine, Georgia, the Republic of Moldova, Armenia, Azerbaijan, and Belarus. Among the main objectives is to inoculate the fear of possible interference and the feeling that the citizens of these countries have no choice over their decisions (*EEAS*, 2021).



Graph 1. Presence of the terms “Nazi” and “genocide” in Russian state-controlled media coverage of Ukraine. Source: *EEAS*, 2023.

In this line, and from the *Ukraine War Resource Hub* –launched by the *EU Disinfo Lab*–, they have identified some of the main organisations and projects dedicated to combating hoaxes during the Russian-Ukrainian war, among which the following stand out: *Detector Media*, *EDMO*, *EUvsDisinfo*, *Facta.news*, *Fake fact-checks*, *ISD*, *NewsGuard Disinformation Tracking Center*, *The Washington Post’s fact-checking section*, *UkraineFacts*, etc. (*EU Disinfo Lab*, 2022).

The *Ukraine Facts* project, meanwhile, has seen fact-checking organizations from all over the world debunk more than 2,800 hoaxes about the war in Ukraine. This initiative takes over from the database created by the *International Fact-Checking Network (IFCN)* at the beginning of the pandemic as a result of learning from other collaborative fact-checking proposals such as *Verificado* (Mexico and Uruguay), *Comprova* (Brazil), *Reverso* (Argentina) and *Cross-Check* (Sánchez-Duarte; Magallón-Rosa, 2020).

2.3.1. What is EDMO?

Established in June 2020 as an EU-funded body, the *European Digital Media Observatory (EDMO)* is a partnership under the leadership of the *European University Institute* in Florence (Italy). *EDMO* brings together fact-checkers, media literacy experts and academic researchers with the aim of understanding and analysing misinformation, in collaboration with journalistic organisations, online platforms and industry professionals.

It currently has fourteen national or multinational centres (hubs or observatories) covering the 27 Member States of the European Union, as well as Norway. Each hub constitutes a network of organisations active in one or more Member States, to provide specific knowledge of local environments with the aim of strengthening the detection and analysis of disinformation campaigns (*EDMO*, 2023).

One year after the invasion, the *EDMO* database had a total of 2074 verifications. Of these, as many as 166 referred to Ukrainian President Zelensky in the headline, compared to 84 for Putin and six for Spain as a country.

EDMO’s Ukraine section (2022) had initially identified these five main narratives during the first months of the war:

1. The prejudice that Ukraine is a Nazi country.
2. The idea that President Zelensky is not fit to lead and is a Nazi.
3. Western media publish “fake news”.
4. The exaggerated economic consequences of the war for Europe.
5. Ukrainian refugees are violent and ungrateful and are treated better than EU citizens.

In addition, *EDMO* alerted international experts to the fact that disinformation detection practices have focused on English-speaking countries in the Western world, leaving Central and Eastern Europe unattended. According to *EDMO Ukraine*, disinformation is cross-border and cross-linguistic, so it is important to support preventive pre-bunking actions to avoid the spread of hoaxes in other EU languages (*EDMO*, 2022).

3. Objectives and research questions

The main objectives of this study are to collect the verifications of Spanish fact-checkers and to study the behaviour and patterns of disinformation dissemination during the first year of the Russian invasion of Ukraine.

Secondary objectives include the possibility of analysing the distribution of hoaxes by typology, subject, month, country involved, etc.

Based on these objectives, the following hypotheses were proposed:

- H1. President Zelensky-related hoaxes are one of the most potent narratives of the Russian disinformation strategy.
- H2. The first weeks of war account for a very significant part of the content verified by *fact-checking* organisations.
- H3. Hoaxes are adapted to local contexts in order to maintain the strategic tension over the war.

In turn, the research questions that were asked were:

- Q1. What is the distribution by month of the verifications carried out by the fact-checking organisations? What reading can be made of the results?
- Q2. Which verification organisations uploaded the most items to the *EDMO* database, and is there a pattern?
- Q3. How many checks were repeated between the different fact-checkers?
- Q4. What types of verifications were carried out?
- Q5. Which were the countries referred to in the verification or hoax?
- Q6. What were the main social networks or platforms that fact-checking organisations identified in their checks?

4. Methodology

The analysis and study of this type of collaborative fact-checking projects, which are becoming more and more frequent, raises the need to establish a combination of quantitative methodologies –on the number of verifications, format, time distribution, etc.– and qualitative ones, such as narrative and discursive strategies and the choice of the design of the database they share.

From this perspective, and as we pointed out in the introduction, the fact-checking organisations selected were six: *AFP Comprovem* (in Catalan), which is part of *AFP Factual*, *EFE Verifica*, *RTVE Verifica*, *Maldita.es*, *Newtral* and *Verificat*.

“ The verification work of fact-checking organisations is determined by news cycles, but also by the intensity of the coverage of the Russian-Ukrainian war itself ”

For its part, the selected sample was chosen from the database made public by the *EDMO*, which can be downloaded and updated over the course of a year. The dates of the analysis range from 24 February 2022 to 23 February 2023³.

From a methodological point of view, the first selection was to eliminate those pieces of information that had more than one update in the database itself. Afterwards, hoaxes repeated by the different fact-checking organisations were located –repetition was defined as the identical duplication of an unequivocal hoax–, either between different journalistic brands or between the same brand when it published it in more than one different article. We also detected publications that included groups of hoaxes, which were suppressed when calculating certain frequencies, because they generated distortions as they could not be considered –within the given unit of analysis– as an individual hoax⁴.

In other words, for the content analysis, two units of analysis were selected: the verification, explanation and contextualisation articles carried out by the fact-checkers and the unequivocal hoaxes identified by the journalistic organisations. In the first case, the sample was extended to 307 publications of which, after eliminating duplications, updates, and compilations, 211 verifications remained.

To draw up the distribution by geographical regions, the hoaxes were first coded by the countries involved, and on that basis, they were grouped into geographical regions, states directly involved in the conflict and the nation of origin of the verification. In this way, the following classification was established, in which the following territories could be detected:

1. Ukraine.
2. Russia.
3. Europe: Poland, United Kingdom, Serbia, Netherlands, Italy, Germany, Romania, Finland, Belarus, Czech Republic, and the Vatican. Includes hoaxes involving the European Union as a body.
4. Spain.
5. North and Central America: USA, Mexico, and Canada.
6. Middle East and North Africa: Qatar, Israel, and Afghanistan.
7. Asia and Australia: Japan, Australia, China, and North Korea.

On the other hand, it should be pointed out that the terms selected when classifying hoaxes by theme have been taken based on the hoax itself, and not its subsequent verification. In other words, if a falsehood has been spread about an attack with military vehicles, and it is subsequently corroborated that the offensive has been perpetrated solely with weapons, it will be classified under the theme of Military vehicles.

Regarding the typology of verifications, we start from the work of **Wardle** and **Derakhshan** (2017) who identify the following types of *dis/mis/malinformation*:

- Satire or parody: not intended to cause harm but with the potential to mislead.
- Misleading content: misleading use of information for the purpose of framing an issue or an individual.
- Impostor content: impersonation of content from original sources.
- False connection: headlines, images or subtitles do not match the content.
- False context: original content is shared with false contextual information.
- Manipulated content: the original information or images are manipulated with the intention to mislead.
- Fabricated content: the new content is 100% fake and is designed to mislead and cause harm.

In addition, a new one was added: the explanatory post. This is content whose veracity could not be corroborated by the fact-checkers, so they decided to provide contextualisation.

These explanatory narratives are part of the fact-checking organisations' literacy strategy that goes beyond traditional fact-checking itself. It was decided to choose this categorisation for further indexing by types, as part of the concept of misinformation includes *misinformation*, but also intentional malpractice (*disinformation* and *malinformation*).

Regarding the formats (audio, video, text, etc.) and themes, beyond the frequency of categorisation, we were also interested in analysing whether these were linked to current events or to the way the war itself unfolds.

Finally, we focused on checking whether there was an internationalisation of the hoaxes verified by Spanish organisations and whether this allowed us to identify possible patterns.

5. Analysis of results

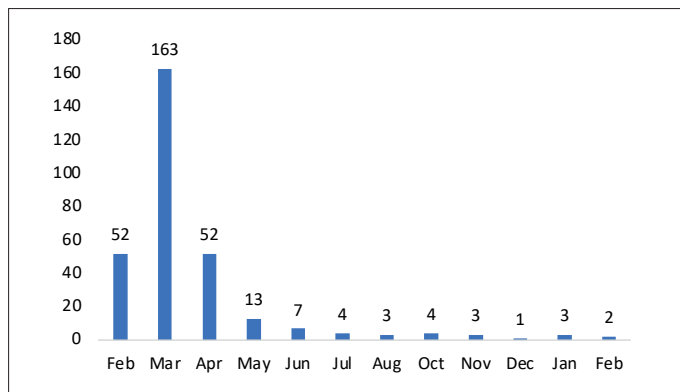
5.1. Spanish fact-checkers and their pieces on misinformation analysis

The verification work of fact-checking organisations is determined by news cycles, but also by the intensity of the coverage of the Russian-Ukrainian war itself. In order to measure how the chronological issue is related to the verification cycles, it was decided to examine two variables: the number of verifications shared monthly by each organisation and their

repetition –either by the same media outlet when different hoaxes are grouped together or when it shares coverage with other media outlets–. It was also decided to analyse the distribution of the verifications identified and uploaded to the *EDMO* database by the different journalistic projects to analyse possible dynamics and differences.

5.1.1. Month-by-month analysis

The month of March (Graph 2) is not only the month with the highest number of verification articles over the year analysed, but also the one in which the topic of the Ukrainian War is most present directly –with a total of 160 verifications.



Graph 2. Number of verifications analysed by Spanish fact-checkers distributed by month. Source: *EDMO*.

Although the percentage of misinformation in February is lower, it must be considered very high if we consider that the war had only been going on for six days and that all the claims examined during this period were about the start of the conflict. From April onwards, hoaxes about the Russo-Ukrainian war decrease, coinciding with a lower level of public interest in it (see Figure 1). In September, a turning point is perceived, with fact-checking organizations not contradicting any information.⁵

This does not mean that disinformation has stopped circulating on social networks and platforms, but rather that the content that has circulated in Spain or that fact-checking organisations have received for consultation has been significantly reduced.

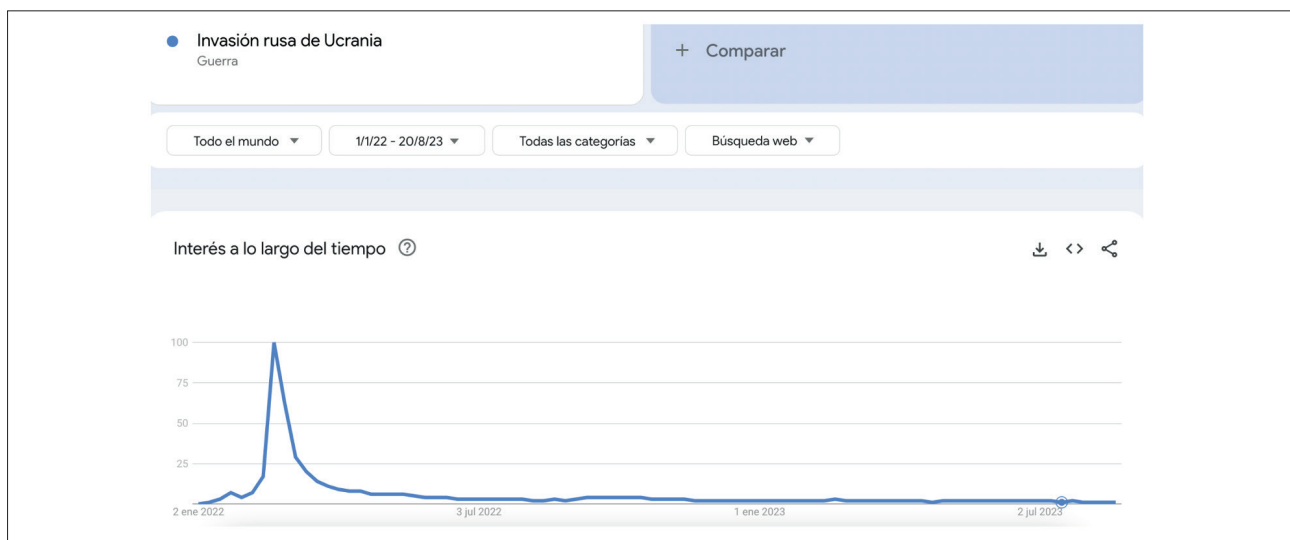
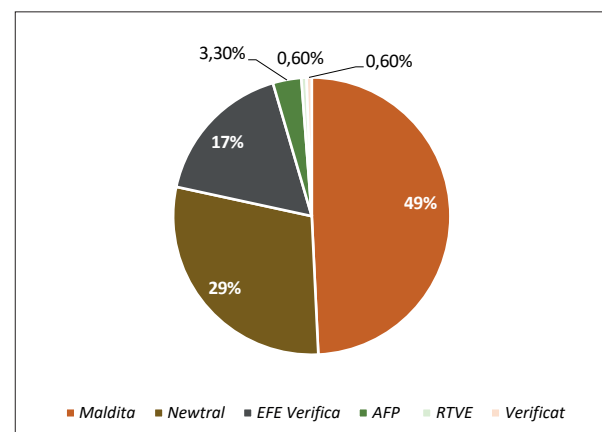


Figure 1. Search volume for *Google's* indexed term on the Russo-Ukrainian war, corresponding to “Russian invasion of Ukraine”. Source: *Google Trends*

5.1.2. Fact-checker analysis and repetitions of hoaxes

The total number of verifications identified and uploaded to the *EDMO* database has been uneven among the different verifiers. The organisation that analysed and verified the most disinformation on the conflict was *Maldita.es*, while the second most verified was *Newtral*, followed by *EFE Verifica*. In this regard, it should be mentioned that *Maldita.es* –as the driving force behind *Ukraine Facts*– is the media outlet that has focused most of its work on disproving hoaxes on this issue. Its verifications accounted for almost half of the total number of pieces carried out by journalistic organisations.



Graph 3. Percentage of hoaxes verified by each fact-checking organisation between February 2022 and February 2023.

On the other hand, we highlight that more than half of the publications categorised in the *EDMO database* are repeated, up to 164 of the initial 307 (53.42%). In this regard, we must point out that journalistic criteria, consultations on

the part of citizens themselves with the different communication channels of fact-checking organisations and the relevance of dubious content are three fundamental reasons to explain a possible coincidence in the verification of dubious or false content.

Maldita.es is the organisation that disseminated the most unequivocal verifications (70 out of 149), nearly half of the non-repeated hoaxes were shared by this medium. On the other hand, *AFP* (*Comproven* and *Factual*) repeated proportionally more hoaxes denied by other fact-checkers –80%, although they only analysed a total of 10.

In this respect, the possible competition between the organisations *Newtral* and *Maldita.es* also stands out, as the two fact-checkers with the most resources and the most relevance, which means that more than half of their hoaxes are also duplicated –61.8% and 53.02% respectively.

On the other hand, the media with the fewest repeated verifications are *RTVE Verifica* (it only carries out two analyses, but both are unequivocal), and *EFE Verifica*, which, out of 55 news items, 61.82% had not been analysed or verified by other fact-checkers.

5.1.3. Clusters of hoaxes

There are 18 verification and explanatory articles written by fact-checkers that not only analyse a single piece of disinformation, but also compile a collection of several hoaxes on the same subject in a single publication. These are characterised by bringing together disinformation belonging to the same period or associated with the same individual, such as the attack on the Mariupol hospital or the alleged drug addiction of the Ukrainian president. In this respect, *Maldita.es* is the media outlet that has used this method most frequently, with a percentage of 66.66%. *EFE*, *Newtral* and *RTVE Verifica* carry out this action in isolation, while *APF* and *Verificat* do not use this narrative and discursive technique.

5.2. Characteristics of hoaxes analysed by fact-checkers

This section analyses the verification of individual unambiguous hoaxes, that is, hoaxes that are not repeated among the different fact-checking organisations, nor are several hoaxes grouped together in a single piece of information. The aim is to study the type of format, geographic distribution, subject matter, types, etc. This is why the sample is reduced in number, from 307 to 211 checks.

5.2.1. Analysis by type of format in which misinformation is shared

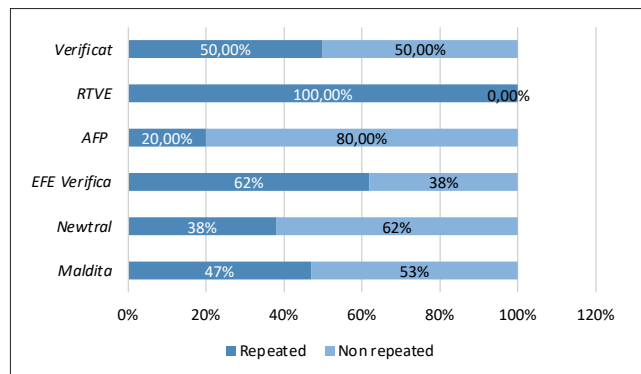
The combination of text with image and video is the most common among the verifications analysed, occurring 83.41% of the time. When there is only one format, the issuer or distributor of disinformation tends to share it through text (53%), followed by video (26%) and image (21%). The isolated use of audio is infrequent, occurring only once and not in combination with any other format.

In this sense, it is relevant that more than half of the text-only hoaxes (51.61%) correspond to the categories of fabricated content and explanatory content. In other words, almost all the fabricated content was transmitted through text –11 of the 13 total hoaxes⁶.

5.2.2. Frequency of occurrence of specific regions in the hoaxes

In most cases, the hoaxes do not refer to a single region, but to several. The country most affected by the disinformation, predictably, was Ukraine.

Russia is the second-most mentioned country in the checks, almost half of those referring to Ukraine. For its part, the Europe category not only groups together countries that specifically encompass the continent, but it has also been considered relevant to include those hoaxes that name the European Union as an institution. In this sense, part of the disinformation involves countries bordering Ukraine –Poland, Romania and Belarus– and EU or neighbouring countries –the United Kingdom, Serbia, the Netherlands, Italy, Germany, Finland and the Czech Republic. The North American presence is mostly justified by the United States, although to a lesser extent the presence of *NATO* member Canada, and Mexico can also be observed.



Graph 4. Percentage of hoaxes repeated by each fact-checker in the period of one year.

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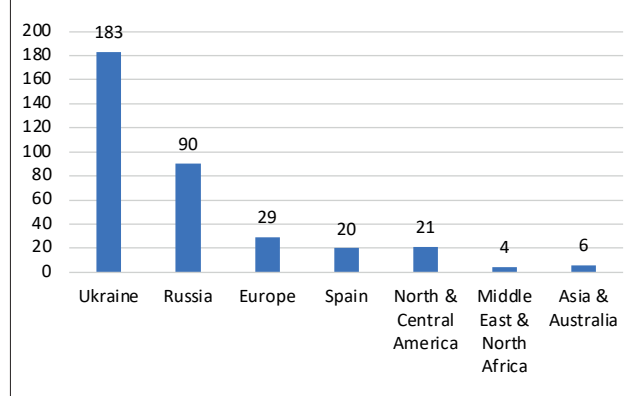
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Graph 5. Number of hoaxes referring to each geographical region.

Finally, it is necessary to highlight the number of hoaxes involving Spain as a country, up to twenty. In this regard, it should be remembered that the verifications have been published and distributed by Spanish fact-checkers, who in many cases receive requests for analysis from their fellow citizens.

It could be assumed that Spanish citizens are exposed to more misinformation about their country than about any other foreign nation. However, this figure does not exceed 10% of the total hoaxes analysed. This indicator could mean a greater importation of hoaxes and less creation of narratives developed specifically for Spain.

5.2.3. Frequency of occurrence of each topic in hoaxes

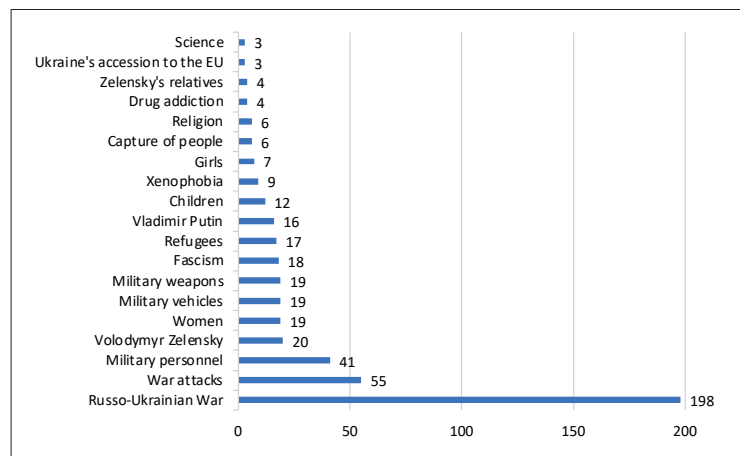
The analysis of the themes was carried out by means of twenty categories, which were selected based on the criterion of relevance to the research objectives. It was considered essential to include in the study some themes that did not have a result of more than 10% of the total, in order to complete the description qualitatively.

In accordance with the expected perception, the Russo-Ukrainian war is the theme that appeared most often in the total number of hoaxes, either directly or indirectly –contextually.

On the other hand, the Ukrainian president is the person most affected by disinformation. His Russian counterpart Vladimir Putin has 20% fewer verifications referring to him.

The Ukrainian president is accused of multiple issues: alleged drug addiction –20% of the hoaxes related to Zelensky deal with this issue–, sympathy with Nazi ideology, following beliefs such as Satanism or allegedly fleeing Ukraine.

In this vein, it is interesting to see how the narrative related to Zelensky's flight relies on different narrative strategies, such as the chroma-key recordings or a meeting that was supposed to take place in Kiev but allegedly took place in Poland. The same is true of narratives linking the Ukrainian president to cocaine use or his affinity with fascism, both of which are attributed to heterogeneous aspects. Some examples are: the fictitious presence of cocaine in his office through manipulated images, his theoretical statements about cocaine use on television through false captions, his photographs with manipulated T-shirts with swastikas, and so on.



Graph 6. Number of hoaxes referring to each subject.

On the other hand, the main characteristic of inaccurate stories involving the Russian president is that he is often not the direct protagonist. In other words, third parties refer to him and alleged statements of support for Putin are used. This is the case of tweets supposedly written by political representatives Pablo Echenique or Adrián Barbón.

On the other hand, and as can be seen in Graph 6, the number of verifications that point to women stands out, usually being presented in the dichotomy of victims or heroines. The victims are presented as vulnerable either because of their age –girls or elderly women– or because they are pregnant.

At the same time, a remarkable percentage of hoaxes about refugees stand out, ones which are characterised by content that may incite xenophobia (47%) either because people fleeing war are racially degraded when crossing the border into Poland, or because they are accused of false acts of uncivil behaviour in countries where they have been granted asylum.

On the occasions when reference is made to the capture of individuals, disinformation broadcasters spread rumours about arrests, arrest warrants or prisoners of war.

Finally, although there is not a great deal of repetition in the theme of Ukraine's accession to the European Union, it is essential to mention that there are as many as three narratives that attempt to link Ukraine's EU membership with its participation in the war.

5.2.4. Typology

As noted in the methodology, and based on the typology of **Wardle** and **Derakhshan** (2017), it should be noted that the most frequent type of misinformation is false context, in which text is combined with an image or video.

More than half of hoaxes follow this structure, whereby potential issuers prefer to start from what they consider to be "visual evidence", which accompanied by text would serve as a way of justifying the veracity of the claims.

In this regard, it should be pointed out that, through the classification of disinformation used, a hoax can go from being considered fabricated to being considered false context, only by incorporating a real, non-manipulated image or video.

The categories of impostor, manipulated, fabricated and explanatory content ranged from 6.2 to 10%. Specifically, and in reference to impostor content, 70% of the hoaxes grouped in this category have supplanted the identity of renowned foreign media outlets –CNN, *Al Jazeera*, *Time*, *BBC* and *Excelsior*. CNN was the most affected media brand.

From this perspective, and beyond the original typology presented by Wardle and Derakhshan (2017), it is essential to highlight the explanatory content. With this type of information, news organisations have found a method and a narrative format to contextualise disinformation that, due to its characteristics, cannot be disproved with evidence, but whose narratives are similar to certain hoaxes.

On the other hand, misleading content only constitutes 3.8% of all the verifications analysed, and it has been noted that it always attempts to negatively frame an individual, whether a natural person (50%) or a legal personality (50%) understood as a State or a political community of law such as the European Union.

Finally, it should be noted that the false connection is the second-least used type of disinformation –the last is satire–, and in all cases the issuer decided to incorporate false subtitles to spread disinformation about the presidents of different countries. The most disadvantaged representative when it came to modifying his original words in another language through text was the president of Russia, Vladimir Putin (60%). Volodymyr Zelensky and Joe Biden were also victims of the fake connection, but to a lesser extent.

5.2.5. Distribution channel

The distribution channel is no longer so relevant in the analysis of disinformation circulation because strategies are increasingly diversified. However, the preference for certain networks or platforms allows us to analyse the routes of access to disinformation.

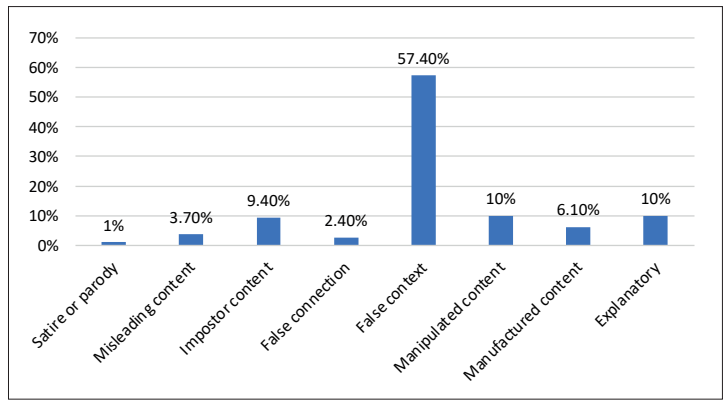
The distribution of hoaxes has been detected through three types of platforms: social networks, instant messaging applications and websites. The results shown in Graph 8 are consistent with the perception of distrust of Spanish citizens towards social networks (Amoedo et al., 2021). It should be noted that, in addition to the prominent role that TikTok has acquired, the Social networks category refers only to those contents in which the verifiers did not name a specific social network, but rather indicated it generically.

5.2.6. Results provided by fact-checking organisations

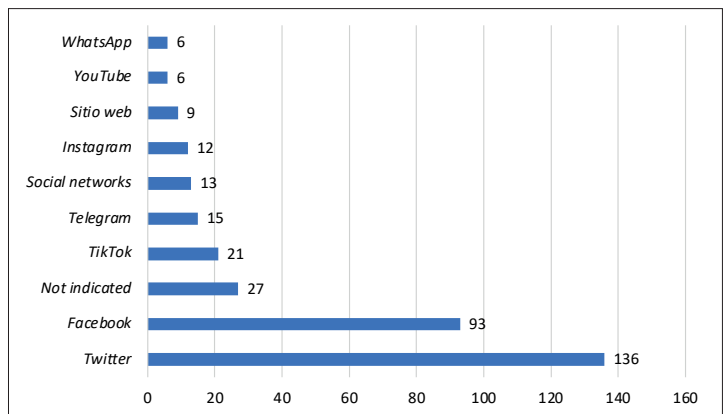
Finally, it should be noted that a part of our results coincides with those offered by the fact-checking organisations themselves on the anniversary of the first year of war in Ukraine.

One example is *Newtral*, which analysed up to 144 hoaxes about the war (*Newtral*, 2023). In March alone, *Newtral* disproved 53 of the 144 disinformation hoaxes about the invasion, which was the month in which they verified the most false content related to the conflict (Pereñeló, 2023). After March, April and May 2022, January 2023 was the month with the most verifications uploaded to the *EDMO* database.

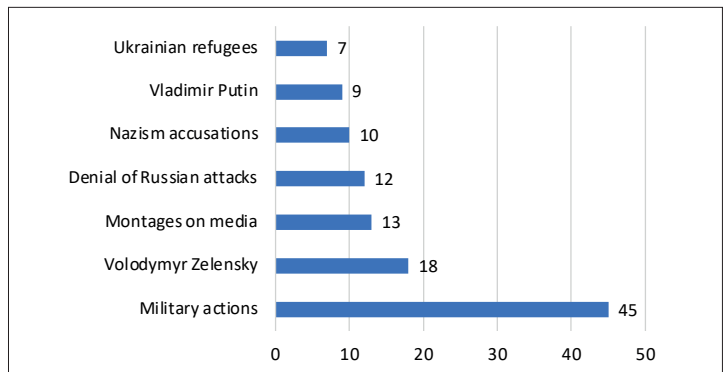
For its part, the *Ukraine Facts database* developed by the *IFCN* and led by *Maldita.es* had, after the first year of war, categorised up to 357 verifications in Spain –the same as in India, making it the country with the second highest number of total verifications after Ukraine (703).



Graph 7. Percentage of hoaxes according to type of disinformation.



Graph 8. Distribution channel of hoaxes according to the platform used.



Graph 9. Main disinformation narratives on Russia and Ukraine. Source: *Newtral*.

Of these, more than 170 were verified by the journalistic organisation *Maldita.es*. According to the organisation's data, the ten most frequently verified misinformation contain images and videos that were taken elsewhere on dates prior to the war, fake tweets, dissemination of stills from video games, or attempts to discredit real images through claims that they were staged (*Maldita.es*, 2023b).

“ The hoaxes related to President Zelensky are the most powerful narratives of the Russian disinformation strategy ”

6. Discussion and Conclusions

In relation to the first two hypotheses, it is confirmed that hoaxes related to President Zelensky are one of the most powerful narratives of the Russian disinformation strategy. Similarly, the data also indicate that the first weeks of the war accounted for a very significant part of the content verified by fact-checking organisations.

Also highlighted is how hoaxes are internationalised to adapt to local contexts depending on different news cycles and the involvement of the countries mentioned.

On the other hand, and as we have seen in previous research, the role of Spanish fact-checking organisations (mainly *Maldita.es* and *Newtral*) and their relevance in verifying dubious content is very relevant, even in a context of global disinformation such as the Russian invasion of Ukraine.

Their relevance is significant not only because of the number of verifications, but also because they often anticipate hoaxes that end up circulating in Latin American countries. From this perspective, we could point out that more hoaxes were identified in Spain than in other countries, but also that the role and prominence of these fact-checking organisations means that less content is left unverified than in other countries.

We also consider as very positive the attitude of the EU institutions towards open data on such an important issue as misinformation. The collaboration between fact-checking organisations, but also the fact that researchers can access data quickly, not only allows for a much better understanding of the phenomenon, its consequences, and limitations, but also for the development of more precise responses and strategies to identify both the narratives and their viralization cycles. As we have seen, the development of verification skills and the emergence of *OSINT* organisations that have played an important role in verifying images and videos of the Russian invasion of Ukraine are two new factors shaping the coverage of war journalism today.

The need to standardise the fields of data collection, verification processes and methodologies, and prior training, as well as to agree on formats and designs for how verified information is presented, is also apparent. In this sense, we can consider that the repetition of almost half of the hoaxes can be interpreted as a good sign, since a greater number of publications on the same narrative also implies a greater propagation of refutations. However, it is necessary to further analyse the effect of repeated messages on the reception of potential consumers who are informed by the different fact-checking organisations during the war processes.

In conclusion, and based on the results obtained, a series of recommendations are put forward to tackle disinformation and improve news coverage of today's wars:

1. The need for correspondents to be trained in image and video verification also becomes apparent, as they are the preferred witnesses of conflicts. Their role as intermediaries and journalistic brand for the media organisation they represent gives them a double credibility to tell what is happening but also to disprove possible misinformation.
2. From the point of view of the internal organisation of collaborative *fact-checking* projects, it is essential to establish beforehand the common criteria of the database to be shared by all organisations. In order to carry out subsequent analyses, it is essential that all media can carry out their documentation work with as much standardisation as possible.
3. In addition to recovering the importance of the distribution channel in internal categorisation, it is important to establish the time variable of verification. From this perspective, the date and time of identification of the possible misinformation as an internal category, as well as the date of publication of the verification, are information with a relevant subsequent use. An analysis of the time elapsed between the two periods can be crucial to establish early warning mechanisms.
4. On the other hand, indicating the specific social network or platform through which the manipulated information has gone viral can help to get a clearer idea of the target audience of the disinformation and the level of reliability of the platform itself in its detection mechanisms.
5. The differentiation between the potential perpetrator and the distributor of hoaxes through social networks and platforms by fact-checking organisations can provide a better understanding of the possible objectives and intentions behind disinformation and, also, identify the coordination of certain campaigns.
6. It would be advisable for fact-checking organisations to broaden their pool of experts to reduce a possible gender gap in the contextualisation and verification of conflict-related narratives.
7. We believe it is appropriate for fact-checking organisations that have an internal database to categorise verifications to explore new narratives that help to better understand the complexity of war conflicts and better explain the disinformation strategies deployed by the different actors involved.

8. Fact-checking organisations involved in collaborative initiatives should establish standardised dissemination metrics to distinguish new disinformation from already verified content that repeatedly reappears depending on the news cycle. The aim should be to reduce the viralization of already verified hoaxes as much as possible.

Also highlighted is how hoaxes are internationalised to adapt to local contexts depending on different news cycles and the involvement of the countries mentioned

9. It is recommended that verifications that affect global narratives or refer to different countries be published in English. The internationalisation of hoaxes is one of the most frequent characteristics of conflicts, crises, and global events.

10. It is essential to strengthen partnerships with fact-checking organisations in neighbouring countries. Such countries, in addition to being much more directly affected by the consequences of war, are limited by the fact that global monitoring of disinformation in more minority languages is much smaller.

7. Notes

1. The full *EDMO* database can be found at this link:

<https://edmo.eu/war-in-ukraine-the-fact-checked-disinformation-detected-in-the-eu>

2. In January 2023, Russia was home to 106 million active users of social networks and Ukraine 26.7 million. According to data collected in February 2023, the most used social networks in Russia are *VK* (75.3%); *WhatsApp* (71.5%); *Telegram* (64.4%); *Odnoklassniki* (43.5%); *TikTok* (42.6%); *Viber* (34.7%); *Instagram* (24%); *Pinterest* (13%); *Skype* (11.7%); *Discord* (8.2%); *Facebook* (7%) and *Twitter* (5.7%), among others (**Kemp**, 2023). While the most popular social platforms in Ukraine are *Facebook* (42.67%); *Twitter* (13.39%); *Instagram* (13.29%); and *YouTube* (8.54%) (*Statcounter*, 2023).

3. The possible bias of the selected sample is determined by the verifications uploaded to *EDMO* by the journalistic organisations themselves. In any case, we considered it appropriate to use this database because it allowed us to compare, through a common categorisation, the verification dynamics among Spanish organisations.

4. However, it was decided to count clusters when the unit of analysis was defined as newspaper articles disseminated by any fact-checking organisation in the *EDMO* network. This is the case for the frequency of hoaxes repeated among themselves, which refers not only to articles that show sets of hoaxes, but also to those that also expose them individually.

5. This may be because the last month of the summer was marked by a swift Ukrainian counter-offensive towards the Russian side around Kharkov.

6. This trend can be linked to the fact that it is easier to produce information from scratch using text than generating an image or a video, which not only requires more effort, but also specific tools.

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