Quantifying digital-native and legacy, national and local news websites in Spain, their topic scope and platforms*

Samuel Negredo
Universidad de Navarra
negredo@unav.es

Pilar Sánchez-García
Universidad de Valladolid
pilar.sanchez@uva.es

Avelino Amoedo-Casais
María-Pilar Martínez-Costa
Ramón Salaverría
Universidad de Navarra
avamoedo@unav.es
marcosta@unav.es
rsalaver@unav.es

Submission date: May 2022
Accepted date: May 2023
Published in: June 2023

Recommended citation: NEGREDO, S.; SÁNCHEZ-GARCÍA, P.; AMOEDO-CASAIS, A.; MARTÍNEZ-COSTA, M. P. and SALAVERRÍA, R. (2023). "Quantifying digital-native and legacy, national and local news websites in Spain, their topic scope and platforms". *Anàlisi: Quaderns de Comunicació i Cultura*, 68, 81-96. DOI: <https://doi.org/10.5565/rev/analisi.3542>

Abstract

Digital media have become an integral part of the journalism industry and of audience habits – in 2021 our research registered 2873 active news websites in Spain. First, this paper explores trends facing online news; it sets out the criteria used to identify a news

* This study was supported by the Diginativemedia research projects "Digital-native media in Spain: characterization and trends", funded by the Spanish Ministry of Science, Innovation and Universities and the European Regional Development Fund (RTI2018-093346-B-C31), and "Digital-native media in Spain: Typologies, strategies, journalistic competences and sustainability", funded by National Investigation Agency, Spanish Ministry of Science and Innovation (PID2021-122534OB-C22).

brand as digital-native or non-native; and it presents the results of our classification. This includes: data on the presence of news titles both on proprietary platforms (print, radio, TV or app) in addition to their websites, and on external platforms (Facebook, Twitter, Instagram, YouTube and Telegram); their geographic scope (hyperlocal, local/regional or national/global); their subject (general or specialized coverage); and on ownership and language used. Almost 70% of the media were regional or local, while 60% covered general news, and one in three were linked to a print product, almost as many as those with their own app for users. Social media uptake is so widespread that more than 95% of the sites are on Facebook, with a similar number on Twitter, while more than 60% can be found on YouTube, and similarly on Instagram. Among specialized sites, sport is the largest category, comprising twice as many digital-native sites (106) than sites with traditional roots (46). The entertainment focus expands in the digital environment, and online-originated culture, business and science and technology outlets also outnumber legacy publications.

Keywords: digital journalism; online news; news publishing; news platforms; digital-native media; Spain

Resum. *Quantificació de llocs web de notícies locals i nacionals nadius i heretats a Espanya, el seu àmbit temàtic i les seves plataformes*

Els mitjans digitals s'han convertit en una part integral de la indústria del periodisme i dels hàbits de l'audiència: el 2021, la nostra recerca va registrar 2.873 llocs web de notícies actius a Espanya. En primer lloc, aquest article explora les tendències que afronten els mitjans periodístics digitals; després, estableix els criteris utilitzats per identificar una marca de notícies com a nadiua digital o no nadiua, i finalment presenta els resultats de la nostra classificació. Això inclou: dades sobre la presència de marques periodístiques tant en plataformes pròpies (premsa, ràdio, TV, web i app), com en xarxes socials (Facebook, Twitter, Instagram, YouTube i Telegram); el seu abast geogràfic (hiperlocal, local/regional o nacional/global); la seva temàtica (cobertura general o especialitzada); la propietat i la llengua. Entre els resultats, destaca que gairebé el 70% dels mitjans eren autonòmics o locals, mentre que el 60% cobria notícies generals, i un de cada tres estava vinculat a algun producte imprès, gairebé tants com els que tenien una app pròpia per als usuaris. L'acceptació de les xarxes socials està tan estesa que més del 95% dels mitjans són a Facebook, un nombre similar són a Twitter i més del 60% es poden trobar a YouTube i a Instagram. Entre els llocs especialitzats, l'esport és la categoria més gran en els mitjans nadius digitals (106), que suposen més del doble dels mitjans no nadius especialitzats en aquesta temàtica (46). Així mateix, l'atenció a l'entreteniment s'amplia en l'entorn digital, i els mitjans nadius digitals centrats en cultura, negocis i ciència i tecnologia superen en nombre les publicacions tradicionals.

Paraules clau: periodisme digital; notícies en línia; publicació de notícies; plataformes de notícies; mitjans natius digitals; Espanya

Resumen. *Cuantificación de sitios web de noticias locales y nacionales nativos y heredados en España, su ámbito temático y sus plataformas*

Los medios digitales se han convertido en una parte integral de la industria del periodismo y de los hábitos de la audiencia: en 2021, nuestra investigación registró 2.873 sitios web de noticias activos en España. En primer lugar, este artículo explora las tendencias que afrontan los medios periodísticos digitales; después, establece los criterios utilizados para identificar una marca de noticias como nativa digital o no nativa, y finalmente presenta los resultados de nuestra clasificación. Esto incluye: datos sobre la presencia de marcas periodísticas tanto en plataformas propias (prensa, radio, TV, web y app), como en redes sociales (Facebook, Twitter, Instagram, YouTube y Telegram); su alcance geográfico (hiperlocal, local/regional o nacional/global); su temática (cobertura general o especializada); la propiedad y la lengua. Entre los resultados, destaca que casi el 70% de los medios eran autonómicos o locales, mientras que el 60% cubría noticias generales, y uno de cada tres estaba vinculado a algún producto impreso, casi tantos como los que tenían app propia para los usuarios. La aceptación de las redes sociales está tan extendida que más del 95% de los medios están en Facebook, un número similar están en Twitter y más del 60% se pueden encontrar en YouTube y en Instagram. Entre los sitios especializados, el deporte es la categoría más grande entre los medios nativos digitales (106), que suponen más del doble de los medios no nativos especializados en esta temática (46). Asimismo, la atención al entretenimiento se amplía en el entorno digital, y los medios nativos digitales centrados en cultura, negocios y ciencia y tecnología superan en número a las publicaciones tradicionales.

Palabras clave: periodismo digital; noticias en línea; publicación de noticias; plataformas de noticias; medios nativos digitales; España

1. Introduction and background

The research presented here is part of a project to identify and classify all news websites active in Spain in 2021, including both digital-native news media and online journalistic publications with roots in traditional print or broadcast media. We believe that our market is a fruitful one to explore, given that in Europe, according to Nichols, Shabbir and Nielsen (2016), "digital-born news media are generally more prominent in Spain and France, with relatively weak legacy news media, than in Germany and the UK, where legacy media remain strong" (p. 6).

News websites, including digital-native operations, have existed for more than 25 years: some titles survived the early 2000s dot-com crisis, and others rose from two global crises: the Great Recession, spurred by the consolidation of traditional media particularly between 2008 and 2014 (Negredo et al., 2020), and, more recently, by the Covid-19 health crisis and its repercussions since early 2020.

Our research focuses on: 1) the digital-native or legacy (traditional) nature of the sites; 2) the proprietary and external platforms on which they are available; 3) their geographical scope; 4) their main subject; and 5) other aspects, such as whether they belong to a publishing group, or which languages they are available in. For preliminary analyses based on partial aspects of this data, see Negredo and Martínez-Costa (2021) and Sánchez-García and Amoedo-Casais (2021).

The next section will introduce the quantitative method we used, which was combined with further exploration of the cases collected in the study. Then the results will be presented and discussed. First, we review recent works on the characteristics of the digital news media that we researched, and on the trends that we set out to explore, thus placing our Spain-wide study in an international context.

1.1. Separated at birth or very different beasts?

Our research examines both digital-native media and sites with traditional roots. We compare them with each other because we consider the two kinds of news source to be complementary.

Researchers have tried before to identify differences between digital-born news organizations and their legacy counterparts. For instance, a report by Bruno and Nielsen (2012) focused on online news ventures that had three characteristics: their "journalistic" approach; that they felt "online" and "born digital" both in origin and in identity; and that they had been created as "start-ups", which Bruno and Nielsen defined as "not affiliates of existing legacy media or spun off from older print or broadcast-based organisations" (2012: 4). Other authors have noted that digital-native media follow specific patterns of evolution and innovation, relatively different from those detected in non-native media (Küng, 2015; Tandoc, 2018).

Digital-native media emerged in the wake of declining non-natives (Postman, 2000; Scolari, 2012; Salaverría, 2017) and have adopted technological change fast and flexibly (Pavlik, 2000; Nee, 2013; Westlund, 2013), introducing new processes and roles for content production (Caminero and Sánchez-García, 2018) and establishing different models of audience relationships (Jenkins and Carpentier, 2013; Sparviero, 2019) that have permeated other kinds of media.

Studying such a phenomenon requires a multi-faceted approach. A study of Latin American "online-native" news media explored their "alternativeness" and their "digitalness". The first concept covered "editorial philosophies and practices, ownership, funding, type of content published, and organizational goals", and the latter was measured based on the presence of three parameters: multimedia, interactivity and participation (Harlow and Salaverría, 2016: 1011).

1.2. Local independent ventures and expansive networks

Editorial models and business and ownership models are intertwined. In Sweden, Jangdal (2021) found that independent hyperlocal media "offer a diverse range of topics, providing inhabitants with a wide variety of information about what is happening in their communities, and with a clear emphasis on local material as opposed to regional or national material" (p. 450).

A counterexample is *Patch.com*, an ambitious, US-wide, digital-native initiative that supports 1,200 hyperlocal sites. After an expansive phase following its launch in 2007, it was forced to make severe layoffs, and the sites were criticized for their reliance on official sources and their lack of engagement with communities (St. John III, Johnson and Nah, 2014). However, the company has since managed to become profitable and to reach large audiences, supported by artificial intelligence and user-generated content (Kafka, 2019).

In Spain, following in the footsteps of private talk radio networks and newspapers such as *El Mundo* and *Diario 16*, which expanded nationally in the decades after the democratic transition period, some of the largest digital-native sites, namely *ElDiario.es* and *El Español*, have based their territorial expansion on alliances with hyperlocal, local and regional sites, thus enhancing their coverage and their audience reach.

Recent studies (Negreira-Rey, López García and Vázquez-Herrero, 2020) confirm this increase in local and hyperlocal media, driven by small media groups, entities or collectives, and embodying new models of proximity journalism. They have influenced the growth of the digital-native media map exponentially, and, like other media, face the challenge of their own sustainability (Kurpius, Metzgar and Rowley, 2010).

1.3. The temptations of sensationalism, partisanship and commercialism

Fierce competition for readers' attention and almost non-existent barriers to entry result in some sites lowering journalistic standards and deviating from core professional values. In their analysis of sensationalism in digital-native news publications, Kilgo et al. (2016) found that "even 'hard' news topics such as government affairs and science/technology were at times treated sensationally just as much as traditionally sensationalized categories such as crime or lifestyle and society" (2016: 1510).

According to Martínez-Costa, Sánchez Blanco and Serrano (2020), the distinction between hard news and soft news affects five areas: news topic; production; focus; style, presentation and format, and reception. They found that most authors identify the topic as the main criterion. This is a trend of digital news outlets that we explore in this study.

News sites catering for polarized audiences, blurring the separation between politicians and the press and sometimes giving voice to extremist views have bred the phenomenon of "hyperpartisan media", comprising outlets that sometimes define themselves as "alternative media", as opposed to mainstream media (Atton, 2001; Heft et al., 2020). These sites have also been defined as "alternative online political media". Based on a study of nine outlets in the United Kingdom, McDowell-Naylor, Cushion and Thomas (2021) identified four overlapping types: electoral hyperpartisans, cultural partisans, political cycle specialists, and vernacular macro-blogs.

The growing importance of alternative revenue streams such as branded content, affiliate marketing and public relations services alongside news operations may also shape some of the content that is available on these websites (Vara-Miguel et al., 2021), and may be decisive in the launch of new verticals on certain topics with commercial potential, at least in terms of "brand safety" for advertisers, in contrast to more contentious affairs including politics, social conflict or even health issues.

These practices, in which marketing criteria take precedence, correspond to the need to compete in the "attention economy" (Kaplan, in Roca, 2008: 136) for a dispersed and reduced audience that reacts more emotionally to soft content, and is focused on entertainment and spectacle. This partly explains why the practice of clickbait, using captivating headlines and soft or misleading news (Bazaco, Redondo and Sánchez-García, 2019), is increasingly widespread in native and non-native media, skipping the journalistic criteria of relevance. This phenomenon even favors the emergence and expansion of media focused on sensationalistic and clickbait content, closer to the practice of marketing, mentioned above, than to journalism. Such a situation is linked to research on *fake news* (Trninić, Kupresanin and Bokan, 2022) and the infodemic, especially due to the interconnection between websites and social networks (Massarani et al., 2021).

Thus, digital change is not only reflected in the increase in media outlets, but also in changes to traditional news criteria, both in content and in editorial approach, targeted towards never-ending commercialism in the search for audiences.

1.4. Gatekeeping, but not like it used to be

Online platforms have redefined the concept of journalism institutions and professionals as gatekeepers, at a time when sources use them to publish directly to audiences, users select information from a broader range of sources, and algorithms influence the visibility of content (Wallace, 2018). This environment affects how existing and new media are shaped.

In the current context of online news, algorithms make something akin to human decisions in search engines and on social networking sites (Codina, Lopezosa and Rovira, 2022). Search engine optimization (SEO), social media optimization (SMO) and other adjustments to the editing of stories and to each site's news coverage aim to improve their performance on social media, on Google Search, and on newer recommendation services such as Google Discover.

Artificial Intelligence (AI) is starting to be applied throughout the journalistic process. Its comprehensive use is still embryonic (Graefe and Bohlken, 2020), but it already generates interest as an enabler for new forms of digital media profitability (Caswell and Dörr, 2018). In newsrooms, user analytics influence editorial decisions at the levels of daily news coverage and business strategies (Corzo and Salaverría, 2019; Lamot and Paulussen, 2020). Practices imported from the world of advertising, such as datafication, now affect digital journalism's democratic role (Willig, 2022) in terms of professional criteria and the news agenda.

2. Methodology

So far we have summarized the state of digital news media when we conducted our research. Next, we will present the method we employed to identify and classify all active news sites in Spain and to detect and explain certain underlying trends, starting with content analysis design, testing and coding, followed by the distinction between digital native sites and those with traditional roots.

For this study, which is part of an ongoing project (Salaverría, Martínez-Costa and Breiner, 2018), our group of researchers established and updated the criteria for searching for and classifying active digital news sites in Spain. Our unit of analysis was as follows: a news/editorial outlet with an autonomous brand identity and content, located in Spanish territory or with a specific edition for Spain, which was updated with new editorial content at least once in the three months prior to observation. The database was created in 2021 and updated in 2022 to add new entries and delete inactive ones through a quality control of records and variables. We found N = 3949 sites, of which 2873 were active, while 1076 were inactive and excluded from the analysis.

A codebook was developed and different coding procedures were performed for self-evident data and variables that required interpretation. Site name, URL, location, active/inactive status, languages and publishing company/group were entered or updated by a researcher. All other categories were tested for inter-coder agreement on a subsample (N = 350) statistically representative of all active cases in our database (N = 2873). The codebook was improved based on testers' suggestions and discrepancies, which were resolved case by case, by agreement among them. Database updates, coordination, directly observable parameters (launch date/year, social networking profiles, geographic scope, languages, location, company, publishing group) and coordination of inter-coder agreement tests were managed by three other authors of this work.

Sites were classified either as digital native or non-native (with traditional roots), based on the medium in which they originally appeared and which medium they considered to be their main one. Thus, digital natives are understood to be those that were launched on online media as their main format, while non-native or traditional media are considered to be those that were launched before the internet era, or were founded with an offline (print or broadcast) format as their main medium.

3. Results

In this section, we provide data on the aspects of Spanish digital media most closely aligned with our research aims, and we reference other works that have studied complementary aspects. We found 2873 active news sites in Spain, of which 1364 were digital natives (47.5%) and 1509 had roots in traditional platforms (52.5%).

3.1. Availability on proprietary and external platforms

Regarding the availability of each news operation on traditional platforms, taking into account all media, 32.6% had some kind of print product, 26.5%

offered a radio service, and 9.5% were present on television. Specifically, 31.2% of the digital-native brands were present on other platforms beyond the web: 14.3% had a print product, while almost half of non-natives did (49.1%); 6.6% were present on broadcast radio, contrasting with 44.5% among non-natives; and 3.3% were available on television, compared to 15% of the sites with traditional roots.

Applications ("apps") for devices, available from the App Store or Google Play, were offered by 31.5% of the sites (906), but the contrast is stark: only 15.7% of digital-native brands offered an app (214), as opposed to no fewer than 45.9% of outlets with traditional roots (692).

Table 1 shows a different perspective on these figures: what proportion of titles present on each kind of platform were digital-native or non-native. For instance, there were three apps for legacy journalism outlets for every app from a digital-native operation.

Table 1. Availability of active digital media in Spain by platform, 2021

	Digital-native media		Non-native media		Total	
Website	1364	47.5%	1509	52.5%	2873	100%
Print	195	20.8%	741	79.2%	936	100%
TV	45	16.5%	227	83.5%	272	100%
Radio	90	11.8%	672	88.2%	762	100%
App	214	23.6%	692	76.4%	906	100%

Source: authors' own work based on the Diginativemedia project database.

All types of Spanish news websites had adopted social media: Overall, 96.5% were present on Facebook, 95.8% on Twitter, 62.1% on Instagram, 60.8% on YouTube and 13.5% on Telegram in the first quarter of 2021. Each platform's uptake was quite homogeneous: any difference between native and non-native, general and specialized sites, was less than one percentage point for Facebook and Twitter, and less than five percentage points for YouTube, Instagram and Telegram (Sánchez-Blanco and Sádaba, 2021).

3.2. Geographical scope

The majority of digital native media companies were regional and local (835; 61.2%). In the case of non-native regional and local media, the figure is even higher (1141), which is 306 more. There were 509 digital-native sites with a national or global scope (37.3%), which outnumbered the 335 non-native national outlets (22.2%). Hyperlocal was a very small segment: we found just 20 digital natives, representing just 1.5% of sites of this kind (Table 2).

Table 2. Geographical scope of active digital media in Spain, 2021

	Digital-native media		Non-native media		Total	
Hyperlocal	20	1.5%	33	2.2%	53	1.8%
Local/Regional	835	61.2%	1141	75.6%	1976	68.8%
National/Global	509	37.3%	335	22.2%	844	29.4%
Total	1364	100%	1509	100%	2873	100%

Source: authors' own work based on the Diginativemedia project database.

3.3. Subject

As for the most widespread subject matter, 60.4% of Spanish digital media covered general news, compared to 39.6% offering specialized content. Differences were even greater among online media with traditional roots, on which general news (67.6%) are more than twice as common as specialised news (32.4%). In contrast, among digital-native sites, the proportion between general news (52.5%) and specialized media (47.5%) was more balanced (Table 3).

Table 3. Subject matter of active digital media in Spain, 2021

	Digital-native media		Non-native media		Total	
Generalist	716	52.5%	1020	67.6%	1736	60.4%
Specialized	648	47.5%	489	32.4%	1137	39.6%
Total	1364	100%	1509	100%	2873	100%

Source: authors' own work based on the Diginativemedia project database.

Coding the 1137 specialized news outlets by subject, based on 19 categories, enabled us to identify the most and least widespread subject matter. Sport (13.4%), leisure and entertainment (13.2%), professional (11.3%) and cultural publications were the most popular. More than one hundred digital-native sites (106) were focused on sport, but just 46 non-natives.

The leisure and entertainment category was dominated by digital content, such as series and films; video games, consumer technology, as well as travel, society, varied trends, lifestyle and gossip. Sites with content for professionals was the third largest category, with more sites with traditional roots. Cultural publications came fourth, with 11%.

Other relevant categories were business and the economy, with 7.6% of digital natives, almost two percentage points more than non-natives; and science and technology, politics, fashion and motoring. Every other category fell below 2%, although this may include relevant publications in qualitative terms of brand relevance or audience following. There were huge differences in areas such as religion and spirituality, which accounted for 14 sites with traditional roots but just 5 digital natives; or education, for which there were almost twice as many legacy titles online than digital-native outlets; and, reversing the ratio, environmental publications, with 12 digital natives against just 2 sites with traditional roots (Table 4).

Table 4. Subject areas of active specialized digital news sites in Spain, 2021

	Digital-native media		Non-native media		Total	
Other	14.5%	94	22.7%	111	18%	205
Sport	16.4%	106	9.4%	46	13.4%	152
Leisure & Entertainment	13%	84	13.5%	66	13.2%	150
Technical & Professional	9%	58	14.3%	70	11.3%	128
Culture	11.3%	73	10.6%	52	11%	125
Business & Economy	7.6%	49	5.7%	28	6.8%	77
Science & Technology	6.9%	45	1.6%	8	4.7%	53
Politics	4.6%	30	2.2%	11	3.6%	41
Fashion & Trends	2.3%	15	5.3%	26	3.6%	41
Motoring	3.5%	23	3.1%	15	3.3%	38
Health	1.9%	12	1.4%	7	1.7%	19
Religion & Spirituality	0.8%	5	2.9%	14	1.7%	19
Food & Gastronomy	2.2%	14	1%	5	1.7%	19
Education	0.9%	6	2.2%	11	1.5%	17
Home & Family	0.9%	6	1.8%	9	1.3%	15
Environment	1.9%	12	0.4%	2	1.2%	14
Bullfighting	1.2%	8	0.8%	4	1.1%	12
Not identified	0.9%	6	0.4%	2	0.7%	8
Humor	0.3%	2	0.4%	2	0.4%	4
Total	100%	648	100%	489	100%	1137

Source: authors' own work based on the Diginativemedia project database.

3.4. Other dimensions of Spanish digital media: languages and ownership

Looking at language, the proportion of digital-native media published in Spanish (87%) is considerably higher than on sites with traditional roots. Other official languages in Spain are also present on digital-native media, but to a lesser extent than on media with an offline presence: Catalan (9.6% vs 22.9%), Basque (2.4% vs 4.4%) and Galician (2.3% vs 2.8%). The exceptions are media which describe themselves as using the Valencian language, with 2.9% among digital natives and 1.9% among non-natives.

With respect to ownership, there are 24 media companies or groups that publish more than eight sites, and 22 that publish between five and eight sites, considering both digital-native sites and brands with traditional roots. Only one out of seven digital-native media outlets belongs to a group publishing at least five brands. This is less than half of what we found among non-natives: one in three sites is part of a company publishing several titles.

4. Discussion and conclusions

This quantitative snapshot of the digital news media market in Spain leads us to try to shed light on the trends we identified, in dialogue with other studies.

To start with, we were looking at quantitative similarities and differences between traditional and digital-native media. In terms of geographic and topical areas, of the 2873 active news websites we found in Spain, 39.7% (1141) are both non-digital-native and regional/local. Meanwhile, 35.5% (1020) of them are non-digital-native and cover general news. So regional/local traditional media publishing on a wide range of topics are the backbone of the Spanish media map. Nevertheless, digital-native media already account for 60.3% of all national or global online news titles in Spain (509 of 844), and 42.3% of all regional or local sites (835 of 1976).

A particular concern of ours is deviations from journalism's core informational purposes, and the availability of digital news covering different interests. Generalist sites predominate over specialized media, nourished by national and regional content, but local and hyperlocal general news is a natural avenue for digital-native media expansion. It would be useful to distinguish between hard and soft news outlets, although many larger sites would present a combination of both. Some generalist digital-native media offer context and interpretation, but others, at all geographical scales, express ideological activism and partisanship in their news coverage, down to *ad hominem* attacks or campaigns against institutions or companies. Besides the segmentation by age targets developed in some large broadcasters' online portfolios, we found little content for young or elderly people, although some digital-native media offer specialized content aimed at multigenerational audience niches interested in new digital and entertainment habits.

The subject areas covered by the largest number of specialized outlets are sports, leisure and entertainment, followed by technical and professional publications, and those in the culture arena. Socially relevant topics such as health and the environment are covered by fewer specialized sites, mostly digital-native ones. Another challenge is to enable language diversity to flourish at least as much on digital-native media as among legacy media.

Besides the quantitative differences and the questions about diversity and purpose that we have just addressed, in this article we also set out to explore the dilemma facing digital news publishers, in terms of developing their own platforms and facing the challenge of building a readership, or populating external platforms and possibly developing a dependency on them for audience acquisition and setting editorial priorities. Starting with the media organizations' own properties, there are three-times as many branded news apps for legacy media than for digital-native media. This may be viewed as a weaker position for many digital-natives. Apps are "stickier" than mobile browsing for news; that is, apps are "associated with higher levels of loyalty and attention" from mobile news users, which "increases the incentive for publishers to monetize these traits" (Nelson and Lei, 2018: 620). Therefore, besides the expansion of digital-native publishers into print or broadcast, they may see a digital-native app as an investment offering new opportunities to develop their relationships with audiences, offer new services and contents, and explore brand extensions and new revenue streams.

As regards external platforms, many sites across all categories have a social media presence, generally on Facebook and Twitter, but a majority is also on Instagram and YouTube. Moreover, formats such as podcasts are published in a distributed manner, owing to platforms like YouTube, iVoox and Spotify being more popular for user consumption than the news media's own sites and apps (Amoedo-Casais, Moreno and Martínez-Costa, 2021). This points to the platformization of news and the dependence of media organization performance on external artificial intelligence (Simon, 2022).

Finally, our study set out to identify the ownership of the publications. Many digital-native outlets, as well as smaller sites linked to print professional or local titles, exist outside the realm of large publishing and broadcasting corporations. We found some companies with a portfolio of specialized or community publications, but the majority of sites are independent, not linked to any medium or large publishing group: only one in seven digital natives is published by a company owning five or more titles, compared to approximately one in three non-native outlets belonging to such a company. Retis and Cueva Chacón (2021) mapped 103 Latinx digital-native outlets in the United States, and these are "a mostly independent effort where the majority of outlets have less than 15 people and are not backed by the traditional media conglomerates" (2021: 51). In Spain, some national digital-native sites have woven alliances with regional/local and specialized digital natives as they compete with traditional sites. Future research may examine this relationship between national digital-native publishers and regional or specialized affiliates, as well as companies developing networks of local media.

A limitation of this study is that it provides a quantitative overview of Spanish digital media, regardless of each outlet's size. We aimed to organize, in part, this fragmented scenario, by grouping the cases by media companies. This is a difficult challenge to address, as newsroom size – the number of staff members working in each outlet – may be misleading due to the increasing reliance on part-time contributors and the shared resources between publications in media groups as a result of business consolidation and multimedia convergence. Audience size is another way to weigh the relative importance of each news organization in the market, although many of the smaller outlets are not audited (Iserte, 2022a), including general news operations (Iserte, 2022b) and specialized sites (Iserte, 2022c). Qualitative studies on aspects such as production, contents and other structural aspects may focus on leading or outstanding cases, but mapping the whole market and tracking the trends will still be needed.

Bibliographical references

Amoedo-Casais, A., Moreno, E. and Martínez-Costa, M. P (2021). "Oferta y consumo de pódcast de los medios digitales". In: Salaverría, R. and Martínez-Costa, M. P. (coords.). *Medios nativos digitales en España. Caracterización y tendencias*. Salamanca: Comunicación Social, 213-230.

ATTON, C. (2001). *Alternative media*. London: Sage Publications Limited.

BAZACO, A., REDONDO, M. and SÁNCHEZ-GARCÍA, P. (2019). "Clickbait as a strategy of viral journalism: conceptualisation and methods". *Revista Latina de Comunicación Social*, 74, 94-115.
<https://doi.org/10.4185/RLCS-2019-1323>

BRUNO, N. and NIELSEN, R. K. (2012). *Survival is Success: Journalistic Online Start-Ups in Western Europe*. Oxford: Reuters Institute for the Study of Journalism. Retrieved from <https://reutersinstitute.politics.ox.ac.uk/sites/default/files/2017-12/Survival%20is%20Success%20Journalistic%20Online%20Start-Ups%20in%20Western%20Europe.pdf>

CAMINERO, L. and SÁNCHEZ-GARCÍA, P. (2018). "El perfil y formación del ciberperiodista en redacciones nativas digitales". *Hipertext.net*, 16, 4-15.
<https://doi.org/10.31009/hipertext.net.2018.i16.04>

CASWELL, D. and DÖRR, K. (2018). "Automated Journalism 2.0: Event-driven narratives: From simple descriptions to real stories". *Journalism practice*, 12 (4), 477-496.
<https://doi.org/10.1080/17512786.2017.1320773>

CODINA, L., LOPEZOSA, C. and ROVIRA, C. (2022). "Periodismo y algoritmos: de la era de la información a la era del algoritmo". *Documentación de Ciencias de la Información*, 45 (1), 1-5.
<https://doi.org/10.5209/dcin.79269>

CORZO, S. M. and SALAVERRÍA, R. (2019). "Medios nativos digitales y analíticas web: cómo interviene el conocimiento de la audiencia en la construcción de noticias". In: MARTÍNEZ-FERNÁNDEZ, V. A. et al. (eds.). *La innovación de la innovación: del medio al contenido predictivo. Actas del III Simposio Internacional sobre Gestión de la Comunicación (Xescom, 2018)*. Santiago de Compostela: Universidade da Coruña; XESCOM, 233-247.

GRAEFE, A. and BOHLKEN, N. (2020). "Automated Journalism: A Meta-Analysis of Readers' Perceptions of Human-Written in Comparison to Automated News". *Media and Communication*, 8 (3), 50-59.
<https://doi.org/10.17645/mac.v8i3.3019>

HARLOW, S. and SALAVERRÍA, R. (2016). "Regenerating Journalism: Exploring the 'Alternativeness' and 'Digital-ness' of Online-Native Media in Latin America". *Digital Journalism*, 4 (8), 1001-1019.
<https://doi.org/10.1080/21670811.2015.1135752>

KÜNG, L. (2015). *Innovators in digital news*. London: Bloomsbury.

HEFT, A., MAYERHÖFFER, E., REINHARDT, S. and KNÜPFERM, C. (2020). "Beyond Breitbart: Comparing Right-Wing Digital News Infrastructures in Six Western Democracies". *Policy & Internet*, 12 (1), 20-45.
<https://doi.org/10.1002/poi3.219>

ISERTE, L. (2022a, March 10). "Los medios digitales no auditados de Aragón llegan a cerca de dos millones de usuarios cada mes". *Extradigital*. Retrieved from <https://www.extradigital.es/los-medios-digitales-no-auditados-de-aragon-llegan-a-cerca-de-dos-millones-de-usuarios-cada-mes/>

— (2022b, March 15). "Aragón Digital es líder de audiencia entre los medios no auditados en la comunidad". *Extradigital*. Retrieved from <https://www.extradigital.es/aragon-digital-es-lider-de-audiencia-entre-los-medios-no-auditados-en-la-comunidad/>

— (2022c, March 24). "Enjoy Zaragoza se posiciona entre los medios digitales no auditados más leídos en Aragón". *Extradigital*. Retrieved from <https://www.

extradigital.es/enjoy-zaragoza-se-posiciona-entre-los-medios-digitales-no-auditados-mas-leidos-en-aragon/>

JANGDAL, L. (2021). "Hyperlocals matter: prioritising politics when others don't". *Journalism Practice*, 15 (4), 438-455. <https://doi.org/10.1080/17512786.2020.1739551>

JENKINS, H. and CARPENTIER, N. (2013). "Theorizing participatory intensities: A conversation about participation and politics". *Convergence*, 19 (3), 265-286. <https://doi.org/10.1177/1354856513482090>

KAFKA, P. (2019, February 11). "The alternative to your dying local paper is written by one person, a robot, and you". *Recode*. Retrieved from <https://www.vox.com/2019/2/11/18206360/patch-local-news-profitable-revenue-advertising-hale>

KILGO, D. K., HARLOW, S., GARCÍA-PERDOMO, V. and SALAVERRÍA, R. (2018). "A new sensation? An international exploration of sensationalism and social media recommendations in online news publications". *Journalism*, 19 (11), 1497-1516. <https://doi.org/10.1177/1464884916683549>

KURPIUS, D., METZGAR, E. and ROWLEY, K. M. (2010). "Sustaining hyperlocal media". *Journalism Studies*, 11 (3), 359-376. <https://doi.org/10.1080/14616700903429787>

LAMOT, K. and PAULUSSEN, S. (2020). "Six Uses of Analytics: Digital Editors' Perceptions of Audience Analytics in the Newsroom". *Journalism Practice*, 14 (3), 358-373. <https://doi.org/10.1080/17512786.2019.1617043>

MARTÍNEZ-COSTA, M., SÁNCHEZ-BLANCO, C. and SERRANO-PUCHE, J. (2020). "News consumption of hard and soft topics in Spain: Sources, formats and access routes". *Communications*, 45 (2), 198-222. <https://doi.org/10.1515/commun-2019-2051>

MASSARANI, L. M., LEAL, T., WALTZ, I. and MEDEIROS, A. (2021). "Infodemia, desinformação e vacinas: a circulação de conteúdos em redes sociais antes e depois da COVID-19". *Liinc em Revista*, 17 (1), e5689.

MCDOWELL-NAYLOR, D., CUSHION, S. and THOMAS, R. (2021). "A typology of alternative online political media in the United Kingdom: A longitudinal content analysis (2015-2018)". *Journalism*, 24 (1). <https://doi.org/10.1177/14648849211059585>

NEGREDO, S., MARTÍNEZ-COSTA, M. P., BREINER, J. and SALAVERRÍA, R. (2020). "Journalism Expands in Spite of the Crisis: Digital-Native News Media in Spain". *Media and Communication*, 8 (2), 73-85. <https://doi.org/10.17645/mac.v8i2.2738>

NEGREDO, S., MARTÍNEZ-COSTA, M. P. (2021). "Tipos de medios nativos digitales: plataformas, alcance geográfico, lenguas y grupos empresariales". In: SALAVERRÍA, R. and MARTÍNEZ-COSTA, M. P. (coords.). *Medios nativos digitales en España. Caracterización y tendencias*. Salamanca: Comunicación Social, 35-54.

NEE, R. (2013). "Creative Destruction: An Exploratory Study of How Digitally Native News Nonprofits Are Innovating Online Journalism Practices". *International Journal on Media Management*, 15, 3-22. <https://doi.org/10.1080/14241277.2012.732153>

NEGREIRA-REY, M. C., LÓPEZ GARCÍA, X. and VÁZQUEZ-HERRERO, J. (2020). "Mapa y características de los cibermedios locales e hiperlocales en España". *Revista de Comunicación*, 19 (2), 193-214. <https://doi.org/10.26441/RC19.2-2020-A11>

NELSON, J. L. and LEI, R. F. (2018). "The Effect of Digital Platforms on News Audience Behavior". *Digital Journalism*, 6 (5), 619-633. <https://doi.org/10.1080/21670811.2017.1394202>

NICHOLS, T., SHABBIR, N. and NIELSEN, R. K. (2016). *Digital-born news media in Europe*. Oxford: Reuters Institute for the Study of Journalism. Retrieved from <https://reutersinstitute.politics.ox.ac.uk/sites/default/files/2017-09/Digital-Born_News_Media_in_Europe.pdf>

PAVLIK, J. (2000). "The impact of technology on journalism". *Journalism Studies*, 1 (2), 229-237. <https://doi.org/10.1080/14616700050028226>

POSTMAN, N. (2000). "The humanism of media ecology". *Proceedings of the Media Ecology Association*, 1 (1), 10-16.

RETIS, J. and CUEVA CHACÓN, L. M. (2021). "Mapping digital-native U.S. Latinx news: Beyond geographical boundaries, language barriers, and hyper-fragmentation of audiences". *#ISOJ, Official Research Journal of the International Symposium on Online Journalism*, 11 (1), Spring 2021, 35-64. Retrieved from <https://isoj.org/wp-content/uploads/2021/04/ISOJ-Journal-Spring-2021.pdf#page=35>

ROCA, M. (2008). "Entrevista a Marty Kaplan: Rethinking entertainment". *Trípodos*, 23, 135-143.

SALAVERRÍA, R. (2017). "Tipología de los cibermedios periodísticos: bases teóricas para su clasificación". *Revista Mediterránea de Comunicación*, 8 (1), 19-32. <https://doi.org/10.14198/MEDCOM2017.8.1.2>

SALAVERRÍA, R., MARTÍNEZ-COSTA, M. P. and BREINER, J. (2018). "Map of digital news media at Spain in 2018: quantitative analysis". *Revista Latina de Comunicación Social*, 73, 1034-1053. <https://doi.org/10.4185/RLCS-2018-1295-54en>

SÁNCHEZ-BLANCO, C. and SÁDABA, C. (2021). "Papel de las redes sociales". In: SALAVERRÍA, R. and MARTÍNEZ-COSTA, M. P. (coords.). *Medios nativos digitales en España. Caracterización y tendencias*. Salamanca: Comunicación Social, 143-156.

SÁNCHEZ-GARCÍA, P. and AMOEDO-CASAIS, A. (2021). "Medios nativos digitales generalistas y especializados". In: SALAVERRÍA, R. and MARTÍNEZ-COSTA, M. P. (coords.). *Medios nativos digitales en España. Caracterización y tendencias*. Salamanca: Comunicación Social, 55-68.

SCOLARI, C. A. (2012). "Media ecology: Exploring the metaphor to expand the theory". *Communication Theory*, 22 (2), 204-225. <https://doi.org/10.1111/j.1468-2885.2012.01404.x>

SIMON, F. M. (2022). "Uneasy Bedfellows: AI in the News, Platform Companies and the Issue of Journalistic Autonomy". *Digital Journalism*, 10 (10), 1832-1854. <https://doi.org/10.1080/21670811.2022.2063150>

SPARVIERO, S. (2019). "From passive consumption of media goods to active use of media brands: on value generation and other differences". *Communication & Society*, 32 (3), 67-79. <https://doi.org/10.15581/003.32.3.67-78>

ST. JOHN III, B., JOHNSON, K. and NAH, S. (2014). "Patch.com. The challenge of connective community journalism in the digital sphere". *Journalism Practice*, 8 (2), 197-212. <https://doi.org/10.1080/17512786.2013.859835>

TANDOC, E. C., Jr. (2018). "Five ways BuzzFeed is preserving (or transforming) the journalistic field". *Journalism*, 19 (2), 200-216.
<https://doi.org/10.1177/1464884917691785>

TRNINIĆ, D., KUPRESANIN VUKELIĆ, A. and BOKAN, J. (2002). "Perception of 'Fake News' and Potentially Manipulative Content in Digital Media. A Generational Approach". *Societies*, 12 (3).
<https://doi.org/10.3390/soc12010003>

VARA-MIGUEL, A., SÁNCHEZ-BLANCO, C., SÁDABA CHALEZQUER, C. and NEGREDO, S. (2021). "Funding Sustainable Online News: Sources of Revenue in Digital-Native and Traditional Media in Spain". *Sustainability*, 13, 11328, 1-17.
<https://doi.org/10.3390/su132011328>

WALLACE, J. (2018). "Modelling Contemporary Gatekeeping". *Digital Journalism*, 6 (3), 274-293.
<https://doi.org/10.1080/21670811.2017.1343648>

WESTLUND, O. (2013). "Mobile News". *Digital Journalism*, 1 (1), 6-26.
<https://doi.org/10.1080/21670811.2012.740273>

WILLIG, I. (2022). "From audiences to data points: The role of media agencies in the platformization of the news media industry". *Media, Culture & Society*, 44 (1), 56-71.
<https://doi.org/10.1177/01634437211029861>