

Marcos Mayo-Cubero

<https://orcid.org/0000-0001-6306-3090>

mmayo@nebrija.es

Universidad Antonio de Nebrija

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A multivariable analysis on news production in Spain: digital newsroom profile, polyvalent journalists and gender perspective

Abstract

This article explores how the main Spanish newsrooms structure news production in the digital convergence from a quantitative approach. The data come from a nationwide survey applied to 30 editors-in-chief of Spain's leading newspapers, radios, televisions, and digital natives. We study the newsroom size, news sections weight, freelancers, news agencies, and gender with multivariable analysis. We found that the gender gap has been overcome, and women are mostly in newsrooms (61%). Despite progress, women continue to have higher levels of unemployment and keep facing a glass ceiling in accessing the top positions. They just account for only 6.6% of the editors-in-chief in the sample. Likewise, we found a correlation between female journalists and the Society news section size. Findings suggest a specific news production organization by analyzing newsroom journalistic practice. Politics (23%) is the main news section and in decreasing order of importance: Society (18.5%), Business (16.5%), Sport (16.5%), International (14%) and Culture (11.5%). The average newsroom has

between 101 and 300 journalists, with less than 20% freelancers. The media industry demands a polyvalent journalist. Skills, abilities, and competencies that different professionals previously developed now converge in a single professional with a polyvalent and multitasking profile. We found that it is a widespread journalistic practice in most TV outlets for reporters to work for several daily editions of newscasts (midday and night) and even provide news content for other organization shows. Journalists no longer work for a specific section, not even for a news show, but they now work for the entire organization.

Keywords

Gender, women, digital journalism, freelance, digital convergence, journalistic practice, communication.

1. Introduction

1.1. Digital convergence

Change in communication is a constant, but the speed with which it has affected newsrooms worldwide in the last ten years is unprecedented (Neto-Medeiros *et al.*, 2019; Renó & Renó, 2015). As Deuze (2008) points out, the media do not escape the sensation of accelerated change, characteristic of liquid modernity, and this volatile and uncertain flow with which journalism fails to connect. Theoretical reflections predominate centered on the reconfiguration of the

internal newsroom organization inherited from the post-industrial period (Deuze & Witschge, 2018). Among them, digital convergence has had a profound impact (Díaz-Noci *et al.*, 2010). Scholars agree that there is a lack of quality evidence focused on the implications of digital convergence in newsrooms (Larrondo, 2014). Despite the acceleration of digital convergence for COVID19 impact, an international/national level, traditional/legacy (analog) newsrooms, digital newsrooms, and mixed models still coexist in journalism. In this last modality, there are three modes of integration: full, collaboration, and coordination of isolated formats (García-Aviles *et al.*, 2009). In China, a study has shown that journalists respond to media convergence with non-cooperation or non-acceptance (Yin & Liu, 2014). Díaz-Noci (2010) suggests that the best-prepared companies will be those with integrated newsrooms, polyvalent professionals, and a 24/7 operating logic. On the journalistic practice framework, Salaverría (2009) synthesizes the phenomenon in four primary dimensions: technological, business, professional, and content. Such digital convergence affects the outlets and the relationship with the audience (Noguera-Vivo, 2010). The public is changing how they access and consume news content (Larrondo, 2014). A US study found that direct Internet searches already rival television news as a source of information, while newspapers have lost the traditional preeminence to set the media agenda (Xenos *et al.*, 2018). International research on the impact of communication technologies (ICTs) on newsrooms concludes that digital newsrooms already outperform traditional newsrooms globally (ICFJ, 2015). A European study has explored how journalists perceive the implementation of ICTs in 40 major European newspapers. They found that Internet use has not served to reinforce one of the core duties of journalism: the social responsibility role (Fortunati *et al.*, 2009). It is essential to calibrate the implementation of ICTs by journalists to determine the magnitude of digital convergence's impact on news production (Boczkowski, 2004). Concerning the hierarchy in decision-making, an ethnographic analysis has observed that the converging newsrooms tend to have more horizontal power structures (Robinson, 2011). The overview of the Spanish ecosystem shows that we are witnessing an unprecedented expansion of digital convergence. In 2021, out of 2,874 active cybermedia, 1,361 (47.4%) were digital natives that showed a balance between a generalist orientation (52.5%) and a specialized one (48.5%) (Salaverría-Aliaga & Martínez-Costa, 2022).

1.2. *Economic crisis*

The media industry faces a significant challenge in adapting its newsrooms to technological change. The search for economic viability against consumers unwilling to pay for quality news content and the threat of new ways of disseminating information on social media have forced large companies to restructure their newsrooms. In the last ten years, the economic crisis in journalism and the precariousness of the profession have been decisive factors in the European media ecosystem, in which Spain has not been an exception. In a study on the impact of the crisis on Spanish news organizations, all the analyzed outlets had restructured their newsrooms, and 87% had reduced their number of journalists (Soengas-Pérez, Rodríguez-Vázquez & Abuín-Vences, 2014). The Valera-García study concludes that the main consequences of the Spanish media crisis have been the loss of news quality, the banalization of content, and the decrease in pluralism (2016). Consequently, restructuring processes in the organizations have been accompanied by a reluctance on many professionals since they assume entails an increase in the workload and a reduction in the workforce (Larrondo *et al.*, 2012). Professionals argue that the changes imposed by senior media executives have been excessive, and they have not had enough time to evaluate the success or failure of initiatives that have generated confusion (Ekdale *et al.*, 2015; Utesheva, Simpson & Cecez-Kecmanovic, 2016).

1.3. *The polyvalent journalist*

One of the most fertile topics in the communication field has been the study of the emerging profiles in digital newsrooms (Caminero-Fernández & Sánchez-García, 2018; Flores-Vivar, 2018; Mellado, Simon & Barria, 2007). The media industry tends to hire journalists with a multimedia background capable of producing news content for several mediums (Sixto-García, Xoengas-Pérez & Rodríguez-Vázquez, 2022). Such skills include writing, voiceover, recording, and audio-visual editing resources typical of a “functional polyvalence” (Salaverría, 2009). Skills, abilities, and competencies that different professionals previously developed now converge in a single professional with a polyvalent and multitasking profile. Thus, Lugo-Ortiz (2016) found that most outlets managers affirm that university is far from offering training tailored to such profile demanded by the Latin-American news industry. Such journalism practice has been confirmed by previous studies (González-Molina & Ortells-Badenes, 2012) and quantified by data from the *Annual Report of the Journalistic Profession* of the Madrid Press Association (APM): 54.1% of journalists must work for several sections (2014). The polyvalent and multitasking reporter must provide news content rapidly to multiple mediums while seriously weakening investigative reporting and news production quality (Higgins-Dobney & Sussman, 2013). This trend clashes frontally with the thesis defended by some academics who argue that only through specialization can the journalist delve deeper into the causes of the issue, place it in a broad context and offer a global vision (Fernández-Del Moral & Esteve, 1993). The manifest tension between polyvalence and specialization suggests the need for a serene, ethical, and scientific reflection (Mayo-Cubero, 2017). Whatever the medium, polyvalence can lead to a decrease in journalistic specialization and quality news production (Mayo-Cubero, 2021). Subcontracted news production has further altered journalists’ working routines and undermined quality standards (Daum & Scherer, 2018).

1.4. *Newsroom profile*

Data coming from the annual report of the APM (2021), a complete picture of the state of journalism in Spain, said that 31% of journalists work as freelancers. The employment stability journalists hired (full or part-time contract) is greater than freelancers who do not have a steady demand and are paid by a news item. Longitudinal data reveal a severe workforce reduction in the Spanish media due to the financial crisis. Thus, 41% of journalists work in media organizations with between 100 and 1,000 employees (APM, 2019). Among the four mediums analyzed, digital native is the one that has the most specific newsroom size. Research into the digital native newsrooms found that most have staffs made up of a dozen journalists (García-Santamaría, Clemente-Fernández & López-Aboal, 2013). News media’s dependence on news agencies has grown with these limited human resources. Especially to the digital native media, where 75% of its pieces come from news agencies (Boumans *et al.*, 2018). At this point, it is significant to reflect on how Castells’ theory of the power of communication (2009) is linked to the power of the media organizations. According to Castells’ approach, the media are not bearers of power but constitute the space of communication in which power is decided. By extension, when we theorize about the outlets, we also do it about the news agencies since they play a relevant role as providers of news content and disseminators of a way of seeing the world. Visual impact of the images distributed by the major international news agencies (Associated Press, Reuters, Agence France Presse, etc.) generates a “global newsroom” with similar news content provided to customers worldwide (Gynnild, 2017).

1.5. *Gender gap*

As in other fields of knowledge, the gender perspective has been gaining ground in communication research (Jenkins *et al.*, 2018; Ross & Carter, 2011). An international study found that women only account for a third of journalists (36%) worldwide in the media

industry (IWMF, 2011). In U.S. newsrooms, women account for 41.7% of journalists (IWMC, 2019). In Europe, equal gender is getting closer and closer. Women account for 48% in Eastern European newsrooms, 43.2% in Western Europe, and 43.4% in Northern Europe (IWMF, 2011). Specifically, data from Spain prove to be even more positive. A highly significant fact is that women make up for 46% of the sample used in the APM annual report (2021). Journalists hired by the mediums are balanced in terms of gender for the first time, according to the APM report, accentuating a trend registered in previous years (2021, 2020, 2019). In a specific analysis of Spanish television outlets, professor Berganza-Conde found that women accounted for 41.4% (2016). Therefore, the struggle for equality in Spanish journalism has positively influenced reducing the gender gap (APM, 2018). Another factor that might have influenced is advances in work-life balance (Mayo-Cubero, 2017b). However, women continue to have higher levels of unemployment than men, with 62% (APM, 2022) and keep facing a glass ceiling in accessing the top positions. A globally consistent trend is that most editors-in-chief in newsrooms are men. Digital News Report found that the percentage of women working in journalism with the percentage of women in top editorial positions shows a weak positive correlation. Despite this, in 11 out of 12 markets, there are considerably more women working as journalists than there are women among the top editors (Kirsten, Selva & Nielsen, 2022). Likewise, Reuters Institute found in 2021 that just 8% of top Spanish editors are female (Newman *et al.*, 2021). Delving deeper into the data by age, we observe that U.S. newsrooms employees aged 18 to 29 were almost 50 percent female. Among employees 30 and older, though, that number drops to a third (IWMF, 2019). Here another relevant future research question arises as to why so many women leave the profession.

1.6. Objectives and research questions

Several scholars have expressed the need to continue providing quality evidence to understand better how the assumption of different journalistic roles influences news production (Mellado & Hellmueller, 2015). There is also a need to explore further the role of newsrooms and journalists from the theory of framing (Brüggemann, 2014). The justification for this research is determined by the fact that no previous study has been recorded that has explicitly addressed this research problem: the analysis of news production and newsroom structure in the leading Spanish news organizations in four mediums from a gender perspective. Nor has the APM Annual Report, the most exhaustive study on the mediums ecosystem in Spain, followed this specific approach. Previous research has focused mainly on collecting data on the size of mediums organizations by the number of employees. Therefore, they have quantified not only journalists, but also workers in other areas (technical, administrative, management, etc.).

This paper aims to fill this knowledge gap by focusing exclusively on news production and adding more depth to the analysis. We would like to clarify the reason for the variables chosen; and the relationship between them and digital convergence. First, the research follows a deductive logic, from the general to the particular. We explore the size of the newsroom and the organization in news sections, the specific weight of each of them, and the gender ratio. Specifically, we also analyzed whether there is a correlation between women and any of the news sections analyzed. Secondly, once we have studied internal resources, we examine the other fundamental part of news production: external resources. We differentiate between external human resources (freelancers) and external material resources (news agencies). This multivariate analysis aims to help us understand the complex phenomenon of digital convergence in newsrooms.

The research questions that have guided this article are the following:

RQ1. What is the size of the newsrooms of the main mediums in Spain? Does it depend on the size of the mediums (newspapers, tv, radio, or digital native)?

- RQ2. How many freelancers are there in these newsrooms?
RQ3. Which are the most used Spanish and international news agencies?
RQ4. How are news sections organized in the newsroom? What is their importance according to the number of journalists?
RQ5. How many women are there in the newsrooms?

The following research hypothesis is then formulated:

- H1. There is a significant relationship between the number of women and some news sections.

2. Methods

2.1. Sampling

We designed an expert sample (editors-in-chief) since they possess a deep knowledge of the object of analysis. Their opinion is the most authoritative source to answer the research questions (Hernandez-Sampieri & Mendoza, 2018). Previously to elaborate the sample, we built a media census. The study population is the leading Spanish news outlets that meet two criteria: national scope (diffusion across Spain) and general thematic (generalist, non-specialist subject matter). We selected news organizations by observing audience data in each medium: televisions (Kantar Media), newspapers (Office of the Justification of Broadcasting), radio (General Media Study), and digital native (ComScore). Sampling was stratified by quotas to guarantee the representativeness of the analyzed media (Keyton, 2019; Sevillano, Pascual & Bartolomé, 2007; Vinuesa, 2005). This method ensured a proportional representation of the four mediums (Denscombe, 2017). We clarify that this sampling selection tends to be exhaustive since it practically includes the whole population studied that meets these two criteria (Table 1). Methods were posed from previous research. For instance, Soengas, Rodríguez-Vázquez and Abuín-Vences (2014) analyzed 14 media outlets in television, radio, and newspapers. We decided to complete this census by including digital native media and increasing the number of organizations to 30 media (Mayo-Cubero, 2017b). The sample size is also consistent with the APM annual report that uses a sample of the top 30 media representing 80% of national revenue (2018).

Table 1. Experts' sample (n=30).

	Media	Editors-in-chief
Newspapers	<i>El País</i>	Antonio Caño
	<i>El Mundo</i>	David Jiménez
	<i>La Vanguardia</i>	Màrius Carol
	<i>El Periódico</i>	Enric Hernández
	<i>ABC</i>	Bieito Rubido
	<i>La Razón</i>	Francisco Marhuenda
	<i>20 Minutos</i>	Arsenio Escolar
TV	TVE	J. A. Álvarez-Gundín
	Antena3	Gloria Lomana
	Cuatro	Juan Pedro Valentín
	Telecinco	Pedro Piqueras
	La Sexta	César González
	Telemadrid	Agustín De Grado
	TV3	Jaume Peral
	13TV	Alfredo Urdaci
	Intereconomía TV	Javier Algarrá

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Radio	Cadena SER	Rafael De Miguel
	Onda Cero	Julián Cabrera
	COPE	José Luis Pérez
	RNE	Alberto Martínez-Arias
Digital native	Eldiario.es	Ignacio Escolar
	Infolibre.es	Manuel Rico
	Elconfidencial.es	Nacho Cardero
	Publico.es	Carlos Bayo
	Libertaddigital.com	Raúl Vilas
	Vozpopuli.com	Jesús Cacho
	Que.es	Aránzazu Cuéllar
	Elplural.com	Enrico Sopena
	Elconfidencialdigital.com	Javier Fumero
	Estrelladigital.es	Joaquín Vidal

Source: Own elaboration.

2.2. Online survey and data analysis

We designed a first draft of data collection instrument based on previous research (Duhé, 2008; Ibáñez-Peiró, 2014). The first questionnaire was evaluated by a panel of three experts in communications studies from Spanish universities. Then, ten Spanish journalists working in the four mediums tested a second draft. These pre-tests guaranteed the internal and external validity of the survey (Keyton, 2019). The questionnaire was designed with 32 closed-ended, multiple-choice, and Likert-type scales. The online survey was applied to the experts' sample between April 13th and June 13th, 2015, and the average time to complete it was 35 minutes. We used the SPSS program, version 25, for the quantitative analysis. Even the online survey explored several angles on news production, only variables directly related to the research questions and the hypothesis were coded. The variables analyzed were subjected to the Shapiro-Wilk normality test since the sample had less than 50 cases (Mohd Razali & Bee Wah, 2011; Shapiro & Wilk, 1965). Since the distribution was non-parametric, Spearman's rho coefficient was the most suitable for bivariate correlation analysis and hypothesis contrasting according to literature. We also used some observational practices of newsroom ethnography and interview research to triangulate with qualitative methods (Aşık, 2019; Usher, 2015). Research that analyzed the response rates of 463 studies published in peer-reviewed journals found that the average response rate was 52.5% (Heerwegh & Loosveldt, 2008). So, we marked us to achieve a minimum response rate of 50% per medium for considering the findings valid, reliable, and significant (Figure 4). Finally, the initial target was exceeded mainly, and a highly satisfactory overall response rate of 76.6% was achieved (n=23).

3. Findings

3.1. Newsroom size

Findings suggest that the most usual size in major Spanish media newsrooms comprises between 101 and 300 journalists (56.5%). Thus, 73.9% of the news organizations analyzed have more than 51 journalists, while the remaining 26.1% have 50 or fewer journalists in their newsrooms. We have also reached a deeper level of measurement by analyzing each medium independently. Thus, we found that the most usual newsroom in newspapers and TV outlets is 101-300 journalists (66.6% cases of this medium). Likewise, the average newsroom in radio stations is 101-300 journalists (100% cases of this medium). Newsroom size is more limited in the digital native media. The findings suggest that the average newsroom in digital native is 11-20 journalists (60% cases of this medium).

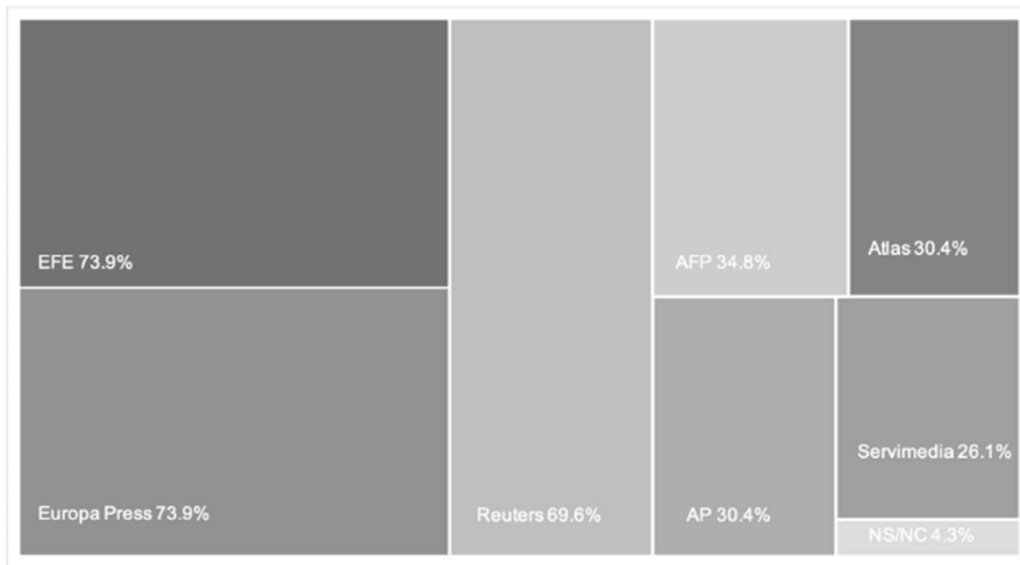
3.2. Freelancers

Findings suggest that 30.4% of news media analyzed has 95% of journalists on a permanent contract (full or part-time). Likewise, 69.5% of the media have 20% or fewer freelancers (Figure 6). In contrast, 21.8% of news organizations have more than 20% freelancers.

3.3. News agencies

Findings suggest that the most widely used Spanish agencies are EFE and Europa Press (SD = .44). Next in order comes Atlas (SD = .47) and Servimedia (SD = .44). As for the international agencies, Reuters (SD = .47) is the most used agency by far, followed by Agence France Presse (SD = .48) and Associated Press (SD = .47) (Figure 1).

Figure 1. National and international news agencies (n=23).

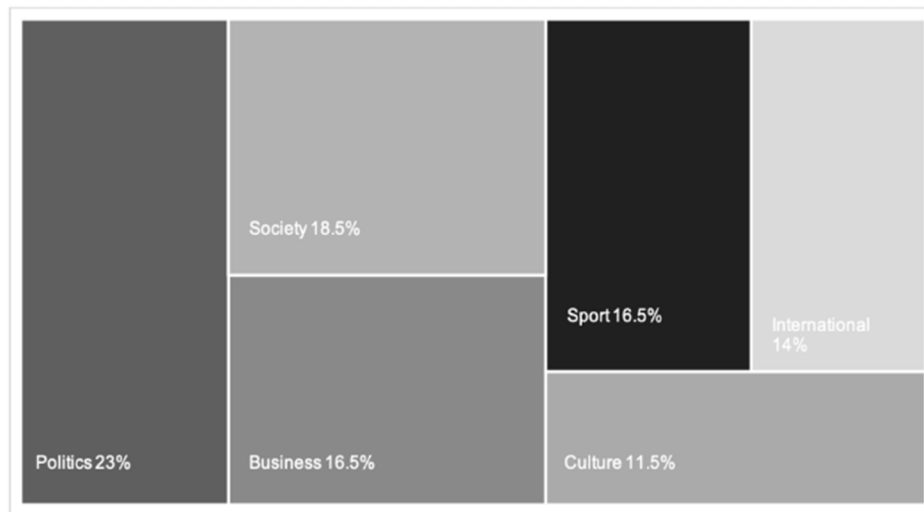


Source: Own elaboration.

3.4. News sections

We extracted corresponding descriptive statistics from each item (Politics, Society, Business, International, Sport, and Culture). The operationalization allowed us to compare the averages and determine the pondered weight of each section in the overall newsroom. Based on the know-how of pre-test by experts' sample and facilitating comparative, we made some decisions. We decided to integrate sub-sections that received staff allocations of less than 5% from respondents (less than 5% of journalists working on these sub-sections) into other macro-sections to which they are thematically linked and recorded allocations of more than 5%. Under this criterion, Local and Courts news sub-sections were integrated into Politics. Police/Criminal issues and Health news sub-sections were integrated into Society. Likewise, Science and Technology sub-sections were integrated into Culture. Findings suggest average newsroom has six macro-sections which integrate several sub-sections (Figure 2). We found that Politics is the news section with greater weight in the newsroom. Findings also suggest that news production by news sections as follows: 23% of the journalists work for Politics (SD = .64), 18.5% for Society (SD = 1.14), 16.5% for Business (SD = .83), 16.5% for Sport (SD = 1.02), 14% for International (SD = .88) and 11.5% for Culture (SD = .71). During the autoethnographic observation, we found that it is a widespread journalistic practice in most TV outlets for reporters to work for several daily editions of newscasts (midday and night). And even to provide news content for other shows of the organization.

Figure 2. News sections by journalists (n=23).

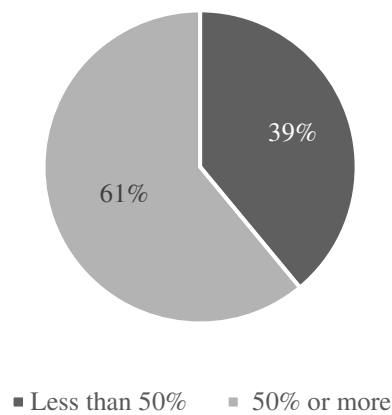


Source: Own elaboration.

3.5. Gender

Findings suggest that female journalists outnumber men in major Spanish news outlets. 61% of the newsrooms analyzed have more than 50% of women (Figure 3). However, this gender perspective radically changes if we look at the number of female editors-in-chief. Women just represent 6.6% of the experts' sample (Table 1).

Figure 3. Women journalists at the newsroom (n=23).



Source: Own elaboration.

3.6. Gender and news sections

The inferential analysis validates the H1 for a pair of variables (Table 2). Spearman's rho coefficient suggests a significant positive correlation of moderate intensity for the variable pair 'Women' and 'Society' ($\rho = .420, p < .05$).

Table 2. H¹ contrast test with Spearman's rho coefficient (n=23).

		Women	Politics	Business	International	Society	Culture	Sport
Women	Coefficient	1.000	.183	-.192	-.174	.420*	.275	.230
	Sig. (2-tailed)	.	.402	.381	.426	.046	.204	.290
Politics	*	.	1.000	.059	-.008	.307	-.147	.133
	*	.	.	.788	.970	.154	.503	.544
Business	*	.	.	1.000	.282	-.079	-.141	-.028
	*	.	.	.	.192	.721	.520	.900
International	*	.	.	.	1.000	-.154	.334	-.081
	*	.	.	.	.	.484	.120	.713
Society	*	.	.	.	.	1.000	-.099	.392
	*	.	.	.	.	.	.652	.064
Culture	*	.	.	.	.	.	1.000	-.045
	*	.	.	.	.	.	.	.840
Sport	*	.	.	.	.	.	.	1.000
	*

Note: * correlation is significant at the 0.05 level (2-tailed).

Source: Own elaboration.

4. Discussion and conclusions

Newsrooms at the leading Spanish outlets still have a considerable size despite economic crisis (Valera-García, 2016) and digital convergence (Díaz-Noci *et al.*, 2010). Findings suggest that the average newsroom size of the main Spanish media ranges between 101 and 300 journalists. The data are consistent with the trend recorded by APM's annual reports (APM, 2020, 2021, 2022). Specifically, in the digital native case, the most usual newsroom comprises between 11 and 20 journalists in line with previous research (García-Santamaría *et al.*, 2013). Regarding human resources management in these newsrooms, almost 70% of the Spanish news organizations have 20% or fewer freelancers. It is a moderate temporary rate in line with data coming from APM annual report, which sets freelancers' rate at 31% (2020). The slight deviation apart from the time of data collection might be understood by the different conformation of APM sampling (survey of journalists from local, regional, and nationwide outlets and with a generalist and specialized thematic) and this research (study of the editors-in-chief of the 30 major national and generalist thematic media). It might establish the hypothesis that the smaller the news outlet size in the Spanish media ecosystem, the higher its rate of freelance journalists. It will be worth monitoring whether this trend increases and what impact the pandemic has on the relevance of freelancers' work.

In addition to human resources, an essential part of raw material for news work comes from news agencies. Findings suggest that most news outlets contract the service of two national news agencies, EFE and Europa Press, plus an international news agency, mainly Reuters. Data shows the leadership of both national news agencies, EFE and Europa Press (73.9%), to a considerable distance of ATLAS and Servimedia. The same scenario applies to international agencies. Reuters (69.6%) holds a dominant position over the other most widely used foreign agencies, Agence France Presse and Associated Press. It would be interesting to explore whether this dominance of the British agency produces any bias or focus on the international news of Spanish media.

Findings suggest a specific news production organization by analyzing newsroom journalistic practice. Politics is the main news section with 23% of total journalists. In decreasing order of importance news sections follows: Society (18.5%), Business (16.5%), Sport

(16.5%), International (14%) and Culture (11.5%). Despite sampling limitations, we consider it original and significant to draw a profile of the news sections. Verified by the experts' sample, there seems a consistent trend towards integrating sub-sections, with generally more irregular workloads, into larger macro-sections. As noted before, Local and Courts sub-sections tend to integrate into Politics; Police/Criminal issues and Health into Society; and Science and Technology into Culture. As taken by editors-in-chief, a likely explanation might be to foster higher functionality and efficiency of the journalistic resources available. Specifically, increasing the volume of news pieces related to technology and science with topics linked to fake news, dis/misinformation, or data journalism might help understand the significant weight of Culture.

The autoethnographic observation suggests cases beyond the “functional polyvalence” by Salaverría (2009). For instance, it is usual practice for the journalist to work for the daily newscast (midday or night) and provide content for other news programs of the organization. News sections boundaries are blurred and those that existed between different programs or shows. Journalists no longer work for a specific section, not even for a news show, but they now work for the entire television outlet. These current dynamics occur independently of the medium and might lead to a decline in journalistic specialization (Mayo Cubero, 2021). In Deuze's (2008) words, it is liquid journalism, taking up the concept coined by Bauman (2000). Before digital convergence, news sections were independent areas with perfectly delimited topics and specialized professionals. Now, the polyvalence demanded to the journalists is also understood as ‘thematic’ in the sense that the reporter must work simultaneously for different sections of the newsroom (Politics, Society, Business, etc.). Functional polyvalence, professional precariousness, and loss of news quality are relevant future research strands.

From a gender angle, women are mostly in major Spanish media organizations' newsrooms. We highlighted those findings are slightly more positive (61%) but consistent with other studies (APM, 2021; 2020; 2019; Berganza-Conde *et al.*, 2016). Some factors that help understand this advance might be a positive impact of the feminist movement, professional discrimination's decrease (APM, 2018), and work-life balance progress (Mayo-Cubero, 2017b). Despite these advances, women continue to have higher levels of unemployment than men with 62% (APM, 2022), and keep facing a glass ceiling in accessing the top positions. Women account for only 6.6% of the editors-in-chief in the sample. Reuters Institute found similar data worldwide and in Spain, where just 8% of top Spanish editors were female (Newman *et al.*, 2021).

5. Limitations

Finally, we clarify that sampling does not represent all Spanish media (national, regional, and local organizations). However, we consider that the sample is valid, reliable, and robust enough to represent the leading news media in Spain (national scope and general thematic in four mediums). Likewise, although this research has a national scope, evidence could be relevant for researchers globally to draw conclusions or make comparisons. We hope methods have been explained in detail and might be replicated in different contexts.

References

- APM (2021). *Informe Anual de la Profesión Periodística 2021*. Retrieved from <https://www.apmadrid.es/publicaciones/informe-anual-de-la-profesion/>
- APM (2020). *Informe Anual de la Profesión Periodística 2020*. Retrieved from <https://www.apmadrid.es/publicaciones/informe-anual-de-la-profesion/>
- APM (2019). *Informe Anual de la Profesión Periodística 2019*. Retrieved from <https://www.apmadrid.es/publicaciones/informe-anual-de-la-profesion/>
- APM (2018). *Informe Anual de la Profesión Periodística 2018*. Retrieved from <https://www.apmadrid.es/publicaciones/informe-anual-de-la-profesion/>

- APM (2014). *Informe Anual de la Profesión Periodística 2014*. Retrieved from <https://www.apmadrid.es/publicaciones/informe-anual-de-la-profesion/>
- Aşık, O. (2019). Politics, power, and performativity in the newsroom: an ethnography of television journalism in Turkey. *Media, Culture and Society*, 41(5), 587-603. <https://www.doi.org/10.1177/0163443718799400>
- Bauman, Z. (2000). *Liquid modernity*. Cambridge: Polity Press.
- Berganza-Conde, R., Herrero-Jiménez, B. & Arcila-Calderón, C. (2016). Perceived influences and trust in political institutions of public vs private television journalists in Spain. *Communication and Society*, 29(4), 185-202. <https://www.doi.org/10.15581/003.29.4.sp.185-202>
- Boczkowski, P. J. (2004). The Processes of Adopting Multimedia and Interactivity in Three Online Newsrooms. *Journal of Communication*, 54(2), 197-213. <https://www.doi.org/10.1093/joc/54.2.197>
- Boumans, J., Trilling, D., Vliegthart, R. & Boomgaarden, H. (2018). The Agency Makes the (Online) News World Go Round: The Impact of News Agency Content on Print and Online News. *International Journal of Communication*, 12, 1768-1789. Retrieved from <https://bit.ly/2UJbtJn>
- Brüggemann, M. (2014). Between frame setting and frame sending: How journalists contribute to news frames. *Communication Theory*, 24(1), 61-82. <https://www.doi.org/10.1111/comt.12027>
- Caminero-Fernández, L. & Sánchez-García, P. (2018). El perfil y formación del ciberperiodista en redacciones nativas digitales. *Hipertext.net*, 16, 4-15. <https://www.doi.org/10.31009/hipertext.net.2018.i16.04>
- Castells, M. (2009). *Communication Power*. Oxford: Oxford University Press.
- Daum, E. & Scherer, J. (2018). Changing work routines and labour practices of sports journalists in the digital era: a case study of Postmedia. *Media, Culture and Society*, 40(4), 551-566. <https://www.doi.org/10.1177/0163443717714992>
- Denscombe, M. (2017). *The Good Research Guide: for small-scale social research projects*. London: McGraw-Hill Education.
- Deuze, M. (2008). The Changing Context of News Work: Liquid Journalism and Monitorial Citizenship. *International Journal of Communication- IJOC*, 2, 848-865. <https://www.doi.org/10.1093/bjsw/31.5.687>
- Deuze, M. & Witschge, T. (2018). Beyond journalism: Theorizing the transformation of journalism. *Journalism: Theory, Practice and Criticism*, 19(2), 165-181. <https://www.doi.org/10.1177/1464884916688550>
- Díaz-Noci, J. (2010). Medios de comunicación en internet: algunas tendencias. *El Profesional de la Información*, 19(6), 561-567. <https://www.doi.org/10.3145/epi.2010.nov.01>
- Duhé, S. F. (2008). Communicating Katrina: A Resilient Media. *International Journal of Mass Emergencies and Disasters*, 26(2), 112-127. Retrieved from <https://bit.ly/2NtoixL>
- Ekdale, B., Singer, J. B., Tully, M. & Harmsen, S. (2015). Making Change: Diffusion of Technological, Relational, and Cultural Innovation in the Newsroom. *Journalism and Mass Communication Quarterly*, 92(4), 938-958. <https://www.doi.org/10.1177/1077699015596337>
- Field, A. (2018). *Discovering Statistics Using IBM SPSS Statistics*. London: SAGE.
- Fortunati, L., Sarrica, M., O'Sullivan, J., Balcytiene, A., Harro-Loit, H., MacGregor, P., Roussou, N., Salaverria, R. & De Luca, F. (2009). The influence of the internet on European journalism. *Journal of Computer-Mediated Communication*, 14(4), 928-963. <https://www.doi.org/10.1111/j.1083-6101.2009.01476.x>
- García-Aviles, J., Carvajal-Prieto, M., Kaltenbrunner, A., Meier, K. & Kraus, D. (2009). Integración de redacciones en Austria, España y Alemania: modelos de convergencia de medios. *Anàlisi*, 38, 173-198. Retrieved from <https://bit.ly/2vvaivb5>

- García-Santamaría, J. V., Clemente-Fernández, M. D. & López-Aboal, M. (2013). La organización de las redacciones en los nuevos diarios digitales españoles y su relación con los nuevos modelos de negocio. *Textual and Visual Media*, 6, 141-160. Retrieved from <https://bit.ly/2PjFEkq>
- González-Molina, S. & Ortells-Badenes, S. (2012). La polivalencia periodística de los profesionales en las redes sociales [The Journalistic Multiskilling of the Professionals in Social Media]. *Estudios sobre el Mensaje Periodístico*, 18, 455-463. https://www.doi.org/10.5209/rev_ESMP.2012.v18.41000
- Gynnild, A. (2017). The Visual Power of News Agencies. *Nordicom Review*, 38(2), 25-39. <https://www.doi.org/10.1515/nor-2017-0412>
- Heerwegh, D. & Loosveldt, G. (2008). Face-to-face versus web surveying in a high-internet-coverage population: Differences in response quality. *Public Opinion Quarterly*, 72(5), 836-846. <https://www.doi.org/10.1093/poq/nfn045>
- Higgins-Dobney, C. L. & Sussman, G. (2013). The growth of TV news, the demise of the journalism profession. *Media, Culture and Society*, 35(7), 847-863. <https://www.doi.org/10.1177/0163443713495078>
- International Center for Journalists, ICEJ (2015). *The State of Technology in Global Newsrooms*. Retrieved from <https://bit.ly/2TTsvzT>
- International Women's Media Foundation, IWMF (2019). *2018-2019 IMPACT REPORT*. Retrieved from https://www.iwmf.org/wp-content/uploads/2020/11/2018_19_ImpactReport_final.pdf
- International Women's Media Foundation, IWMF (2011). *Global Report on the Status of Women in the News Media*. Washington, D.C. Retrieved from <https://bit.ly/2KPhQGF>
- Jenkins, J., Volz, Y., Finneman, T., Park, Y. J. & Sorbelli, K. (2018). Reconstructing collective professional identity: A case study of a women's journalist association in the post-second-wave feminist movement in the United States. *Media, Culture and Society*, 40(4), 600-616. <https://www.doi.org/10.1177/0163443717724604>
- Keyton, J. (2019). *Communication Research: Asking Questions, Finding Answers* (5th Ed.). New York: McGraw-Hill Education.
- Kirsten, E., Selva, M. & Nielsen, R. K. (2022). *Women and Leadership in the News Media 2022: Evidence from 12 Markets*. Reuters Institute for the Study of Journalism. Retrieved from https://reutersinstitute.politics.ox.ac.uk/sites/default/files/2022-03/Women_and_leadership_2022_FINAL.pdf
- Larrondo, A. (2014). News production in the "post-broadcasting" era: BBC Scotland's move towards convergence. *Media, Culture and Society*, 36(7), 935-951. <https://www.doi.org/10.1177/0163443714536078>
- Larrondo, A., Larrañaga, J., Meso, K. & Agirreazkuenaga, I. (2012). Media convergence and newsrooms: the case of the Basque Public Radio and Television (EITB). *El Profesional de la Información*, 21(4), 347-353. <https://www.doi.org/10.3145/epi.2012.jul.03>
- Lugo-Ortiz, L. (2016). The academy, the media and the ideal professional: the multimedia generalist journalist. *Communication and Society*, 29(4), 271-287. <https://www.doi.org/10.15581/003.29.4.sp.271-287>
- Masip, P., Díaz-Noci, J., Domingo, D., Micó-Sanz, J. L. & Salaverría, R. (2010). International research on online journalism: hypertext, interactivity, multimedia and convergence. *El Profesional de la Información*, 19(6), 568-576. <https://www.doi.org/10.3145/epi.2010.nov.02>
- Mayo-Cubero, M. (2021). Teaching Innovation Experience for COVID-19 Times: A Case Study on Blended Learning of Television Journalism Courses with Moodle. *Asia Pacific Media Educator*, 31(2), 178-194. <https://www.doi.org/10.1177/1326365X211048619>
- Mayo-Cubero, M., Lavín, E. & Gallardo-Camacho, J. (2017). The news coverage of the Lorca Earthquake in Spain: the journalist's social responsibility. *Ámbitos. Revista Internacional de Comunicación*, 35, 1-17. Retrieved from <http://institucional.us.es/ambitos/?p=2728>

- Mayo-Cubero, M. (2017b). *La especialización periodística como herramienta estratégica en la comunicación de catástrofes* [Journalistic specialization as a strategic tool in disaster communication]. Madrid: Universidad Complutense.
<https://www.doi.org/10.13140/RG.2.2.17132.59521>
- Medina, M. & Portilla, I. (2015). Media market research on immigrant audiences: Lessons learned from a critical analysis of the Spanish media survey. *International Journal of Communication*, 9, 501-522. Retrieved from <https://bit.ly/2GkLWwn>
- Mellado, C. & Hellmueller, L. (2015). Professional roles and news construction: a media sociology conceptualization of journalists' role conception and performance. *Communication and Society*, 28(3), 1-11. <https://www.doi.org/10.15581/003.28.3.1-11>
- Mellado, C., Simon, J. & Barria, S. (2007). Investigación de perfiles profesionales en periodismo y comunicación para una actualización curricular permanente. *ZER*, 23, 139-164. Retrieved from <https://bit.ly/2VTkP1U>
- Mohd-Razali, N. & Bee-Wah, Y. (2011). Power comparisons of Shapiro-Wilk, Kolmogorov-Smirnov, Lilliefors and Anderson-Darling tests. *Journal of Statistical Modeling and Analytics*, 2(1), 21-33. Retrieved from <https://bit.ly/2TbFS1F>
- Neto-Medeiros, B., Ishikawa, E., Groenli, T. M. & Ghinea, G. (2019). Newsroom 3.0: Managing Technological and Media Convergence in Contemporary Newsrooms. In *52nd Hawaii International Conference on System Sciences*, 6 (pp. 2407-2416). Retrieved from <https://scholarspace.manoa.hawaii.edu/handle/10125/59679>
- Newman, N., Fletcher, R., Schulz, A., Simge, A., Robertson, C. & Nielsen, R. K. (2021). *Reuters Institute Digital News Report 2021*. Retrieved from https://reutersinstitute.politics.ox.ac.uk/sites/default/files/2021-06/Digital_News_Report_2021_FINAL.pdf
- Noguera-Vivo, J. M. (2010). Panorámica de la convergencia periodística: los caminos hacia la redacción Google. *El Profesional de la Información*, 19(6), 652-657.
<https://www.doi.org/10.3145/epi.2010.nov.12>
- Renó, D. & Renó, L. (2015). Las nuevas redacciones, el 'Big Data' y los medios sociales como fuentes de noticias. *Estudios Sobre el Mensaje Periodístico*, 21, 131-142.
https://www.doi.org/10.5209/rev_ESMP.2015.v21.51135
- Robinson, S. (2011). Convergence crises: News work and news space in the digitally transforming newsroom. *Journal of Communication*, 61(6), 1122-1141.
<https://www.doi.org/10.1111/j.1460-2466.2011.01603.x>
- Ross, K. & Carter, C. (2011). Women and news: A long and winding road. *Media, Culture and Society*, 33(8), 1148-1165. <https://www.doi.org/10.1177/0163443711418272>
- Salaverría, R. (2009). Los medios de comunicación ante la convergencia digital. In *Actas del I Congreso Internacional de Ciberperiodismo y Web 2.0* (pp. 1-16). Retrieved from <https://bit.ly/2UyQbNR>
- Sampedro, V. & Martínez-Avidad, M. (2018). The Digital Public Sphere: An Alternative and Counterhegemonic Space? The Case of Spain. *International Journal of Communication*, 12, 23-44. Retrieved from <https://bit.ly/2VU3xl8>
- Shapiro, S. S. & Wilk, M. B. (1965). An Analysis of Variance Test for Normality (Complete Samples). *Biometrika*, 52(3), 591-611.
- Sixto-García, J., Xoengas-Pérez, X. & Rodríguez-Vázquez, A. I. (2022). Periodistas polivalentes y periodistas especializados. In R. Salaverría & M. P. Martínez-Costa (Eds.), *Medios nativos digitales en España. Caracterización y tendencias* (pp. 233-243). Salamanca: Comunicación Social.
- Soengas-Pérez, X., Rodríguez-Vázquez, A. I. & Abuín-Vences, N. (2014). La situación profesional de los periodistas españoles: las repercusiones de la crisis en los medios. *Revista Latina de Comunicación Social*, 69, 104-124. <https://www.doi.org/10.4185/RLCS-2014-1003>

- Usher, N. (2015). Newsroom moves and the newspaper crisis evaluated: space, place, and cultural meaning. *Media, Culture and Society*, 37(7), 1005–1021 .
<https://www.doi.org/10.1177/0163443715591668>
- Utesheva, A., Simpson, J. R. & Cecez-Kecmanovic, D. (2016). Identity metamorphoses in digital disruption: A relational theory of identity. *European Journal of Information Systems*, 25(4), 344–363. <https://www.doi.org/10.1057/ejis.2015.19>
- Valera-García, S. J. (2016). Quiebra total del sistema de medios español: requisitos para sobrevivir en el nuevo ecosistema. *Cuadernos de periodistas. Revista de la Asociación de la Prensa de Madrid*, 32, 101–116. Retrieved from <https://bit.ly/2UoeidT>
- Watt, R. & Collins, E. (2019). *Statistics for psychology*. London: SAGE.
- Women's Media Center, WMC (2019). *The status of women in the US Media 2019*. *Womens Media Center*. Retrieved from <https://bit.ly/2SW3g3K>
- Yin, L. & Liu, X. (2014). A gesture of compliance: Media convergence in China. *Media, Culture and Society*, 36(5), 561–577. <https://www.doi.org/10.1177/0163443714532975>
- Xenos, M. A., Scheufele, D., Brossard, D., Choi, D. H., Cacciatore, M., Yeo, S. & Su, L. Y. F. (2018). News media use and the informed public in the digital age. *International Journal of Communication*, 12, 706–724. Retrieved from <https://bit.ly/2XmV36v>