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OPEN INNOVATION IN DIGITAL JOURNALISM COMPANIES

A Systematic Literature Review

Innovación abierta en empresas periodísticas digitales. Una revisión sistemática de la literatura.

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ABSTRACT

Innovation, a term associated with the industrial and economic spheres, has had an impact on journalism by driving the adaptation and reinvention of structures, workflows and content in digital media companies. Through a Systematic Literature Review (SLR), this study explores the various innovation processes adopted by news organizations, together with their feasibility and limitations, classified and quantified in 31 scientific articles in English and Spanish drawn from seven databases. The central question of the study was: what are the trends in open innovation in digital-native news companies, and what factors enable or hinder them?

PALABRAS CLAVE

Innovación abierta
Periodismo
Medios digitales
Modelo de negocio
Empresa periodística

RESUMEN

La innovación, un término asociado a lo industrial y económico, ha impactado al periodismo, impulsando la adaptación y reinvención de estructuras, flujos y contenidos de las empresas digitales. A través de una Revisión Sistemática de Literatura (RSL) esta investigación explora los diversos procesos de innovación adoptados en las empresas informativas, su factibilidad y limitantes, clasificados y cuantificados en 31 artículos científicos en inglés y en español, de siete bases de datos. La pregunta central de este estudio fue ¿cuáles son las tendencias en innovación abierta en empresas periodísticas nativas digitales, así como los factores que las viabilizan o dificultan?

1. Introduction

Open innovation in digital journalism companies has become a field of growing interest, the importance of which lies in the transformation it has brought about in the productive dynamics of the media. According to Chesbrough (2019), this paradigm enables companies to combine internal and external resources to develop new offerings, which is essential to the sustainability of news organizations in the digital age. This approach has been studied by, among others, Aitamurto & Lewis (2012), who emphasize that openness to external collaboration and the integration of audiences not only fosters the creation of content better suited to public demand, but also improves the quality of information, a key factor in an age of information overload.

Today, journalism companies around the world, particularly digital natives, are incorporating open innovation practices in an effort to speed up their adaptation to the digital environment, in response to rapid technological change and the need to attract increasingly fragmented audiences. Such practices may involve openness to models such as crowdsourcing and crowdfunding, as demonstrated by well-known outlets like The Guardian and BuzzFeed (Tejedor et al., 2020), which points to a shift toward collaborative and flexible structures. These ventures have not only redefined the role of audiences; they have also enabled companies to diversify their sources of funding, which is crucial to their survival in an environment marked by the crisis of traditional revenue models (Negredo et al., 2020).

A review of research on the subject reveals a growing interest in open innovation applied to digital journalism over the last five years, reflected in the fact that 61% of the studies were published during this period. Most of the articles, drawn mainly from Scopus, ResearchGate and Web of Science, analyze emerging trends in the application of technology and collaborative models for the production and distribution of content (Mills & Wagemans, 2021). These studies stress that, although the concept of open innovation is increasingly recognized, challenges to its implementation persist, particularly in relation to funding and the formation of multidisciplinary teams (Vásquez-Herrero et al., 2023).

To understand the study variable, the literature agrees that open innovation describes a model in which organizations combine internal and external resources to accelerate the development of products, services or processes, taking advantage of knowledge flows among multiple actors. According to Chesbrough (2006), open innovation allows companies to incorporate external sources of innovation, such as users or technology partners, thereby providing greater flexibility and responsiveness to market demands. Three key aspects can thus be identified: 1) the implementation of new technologies, 2) the active participation of audiences in content production, and 3) the adoption of alternative funding models, such as crowdfunding (Aitamurto & Lewis, 2012).

In order to standardize the criteria regarding the object of study, a digital journalism company is understood as an organization that carries out its activities in an environment integrating various multimedia platforms for the creation and dissemination of content. In operational terms, these companies are usually made up of multidisciplinary teams and use flexible business models to adapt to the demands of the digital market and emerging technology. The key criteria for understanding their development can be summarized as: 1) organizational flexibility, 2) the adoption of new forms of digital content production, and 3) the participation of, and adaptation to, the consumption habits of digital audiences (García-Avilés et al., 2018).

2. Opportunities of open innovation:

Although the concept of innovation is related to progress, it is not always linked to technological development. Nevertheless, Zaragoza-Fuster & García-Avilés (2018) insist that innovating entails implementing substantial changes not only to the product, but also to the process, marketing or organization of the company, with the aim of improving results hand in hand with technology. In many cases, this transformation involves external collaboration rather than relying solely on the organization's own internal resources.

Competition between traditional journalism companies—now multiplatform—and new players in the information market has given rise to various crises, such as the closure of media outlets, staff cuts and other forms of precarization of the news business. The response has often taken the form of independent collaborative journalism ventures; in Spain alone, for example, 579 media outlets were created between 2008 and 2015 (Valero-Pastor & González-Alba, 2018). Globally, the most powerful news organizations have invested in tools that capture audiences' consumption habits, giving them access to audiences that are more segmented by topic and geography.

Consequently, media outlets that wish to survive in an increasingly diversified and technology-dependent market use innovation as a resource to set themselves apart from the competition and to win over ever more specific and demanding segments; it is these audiences that will ultimately determine whether the outlet remains in the market. In this regard, Kaivo-oja (2013) highlights the driving role of two innovation paradigms in relation to the modern journalistic profession: open innovation and closed innovation. However, both face a common difficulty in the position of the journalist—a key actor in the process—who requires resources and information that encourage new proposals.

Bringing the study terms together, open innovation is understood to become a key tool enabling journalism companies to adapt to the demands of audiences and new technologies. Indeed, the ability of these companies to survive in a highly competitive environment depends on their capacity to implement innovative technologies, promote audience participation in the co-creation of content and develop alternative funding models (Negredo et al., 2020).

The adoption of open innovation by digital journalism companies not only improves their ability to create more personalized and segmented content; it also strengthens their economic sustainability by diversifying their sources of revenue. This integration process entails a structural transformation of the media, which must adapt rapidly to technological demands and to new forms of digital content consumption (Valero-Pastor & González-Alba, 2018).

2.1. Digital journalism and innovation

Previous work shows that, despite significant progress in understanding open innovation in sectors such as technology and business, its application in journalism remains an under-researched field. Buschow (2020) underlines this gap, particularly as regards how audiences can become actively involved in the collaborative creation of news content without compromising its quality. Aitamurto & Lewis (2012) also pointed to this gap when highlighting the limited impact of open application programming interfaces (APIs) on news media, revealing a lack of in-depth studies on the ability of journalism companies to integrate these technologies efficiently.

This is also because, for years, the news industry has underfunded research and development (R&D) efforts and has undervalued the wisdom of external ideas (Aitamurto & Lewis, 2012). Nevertheless, the overwhelming culture of convergence is creating new scenarios for business development and new professionalization challenges for news organizations, so one way of responding to digitalization is for companies to embrace open innovation. The aforementioned authors, for example, offer a key to the study of open innovation in journalism through the case of US media outlets that applied open APIs in their dealings with audiences, an important starting point on the path to open innovation.

Studies on open innovation and journalism have begun to be linked with research in the fields of technology and business models. Klass (2020) notes that the incorporation of funding models such as crowdfunding complements the open innovation approach by allowing media outlets to explore ways of sustaining themselves financially without relying solely on advertising or subscriptions. This intersection between business models and journalistic innovation offers a more complete picture of the opportunities and challenges facing digital media. From this same perspective, Parra et al. (2008) refer to four major challenges facing journalism companies in cyberspace: 1) defining a business model, 2) adapting to new standards in the acquisition and transmission of knowledge, 3) attracting readers who are abandoning conventional media, and

4) achieving a new and effective formal treatment of the product. Defining a profitable and effective business model remains one of the great unresolved issues for online journalism.

One of the main differences between the studies reviewed is their focus on technology: while some, such as García-Avilés et al. (2018), concentrate on how technology facilitates innovation in production and narrative processes, others, such as Retis & Cueva (2020), examine the financial challenges that limit the adoption of open practices among Latin American media. These differences highlight the need to adapt open innovation strategies to the specific realities of each region and type of media outlet.

Today, innovation is regarded as a key factor for companies—including journalism companies—and for the development of countries. Open innovation stimulates innovative capacity, accelerates knowledge transfer and intensifies companies' capacity for endogenous and exogenous collaboration, thus strengthening the competitiveness reflected in performance, productivity, profitability and market share (Chesbrough, 2006; Chesbrough et al., 2008; Enkel et al., 2009).

Along these lines, Aposta (2016) considers digital journalism companies to be platforms that operate through structures typical of multimedia companies, integrating newspaper printing, website management and the distribution of content on radio, television and mobile devices.

For the present research, the concept of "open innovation" has been taken as the study variable, while the "digital journalism company" has been taken as the object of study. In operational terms, the combined concept is addressed through the following dimensions: 1) the factors that enable open innovation in journalism companies, 2) the factors that limit it, and 3) the trends in the application of open innovation in these companies.

The overall aim is to explore the application of open innovation in digital journalism companies in order to identify the factors that drive and limit its implementation. Based on the knowledge gaps identified, the specific objectives of this systematic literature review are: 1) to determine the key elements that enable open innovation in digital journalism companies, 2) to identify the obstacles that hinder the adoption of these practices, and 3) to analyze the main trends in the application of open innovation in the journalistic context.

3. Method

The overall procedure is framed as a systematic literature review (SLR). For Creswell (2003), SLRs are relevant at the outset of research because they allow the researcher to identify studies similar to the one being undertaken, enabling a "dialogue" with previous literature; this provides a frame of reference for justifying the relevance of one's own inquiry and allows new results to be contrasted with those of earlier studies. Within this framework, Hernández et al. (2014, p. 68) state that one of the purposes of SLRs "is to analyze and discern whether previous theory and research suggest an answer (even a partial one) to the research question or questions, or whether they provide a direction to follow within the approach of our study".

Accordingly, academic documents were identified and compiled following the general method of systematized review, which, according to Codina (2017), is characterized by four features that lend rigor to the search: 1) systematicity, 2) comprehensiveness, 3) explicitness, and 4) reproducibility. More specifically, the PRISMA method was used, which seeks to meet the main objectives of SLR research by following standardized steps (Cruz-Sosa, Martín Quintana & Álamo-Muñoz, 2023).

To operationalize the study, we began by specifying the general characteristics of the search, addressing the main elements that must be clearly defined for any SLR: 1) types of documents (empirical research and SLRs presented as scientific articles), 2) time span (15 years), 3) languages (Spanish and English), and 4) geographical area (Ibero-America). These study-specific elements are well suited to the research objectives, as they provide sufficient

coverage of information sources, time ranges, languages and geographical locations to yield valid results, albeit still partial with respect to the global scale of the problem.

The research involved reviewing seven databases: Scopus, Web of Science, Google Scholar, ResearchGate, Dialnet, Redalyc and SciELO. The first two are subscription-based and the other five are open access; the first two are high-impact, while the rest are of medium impact.

The document search involved specifying the keywords "open innovation" and "journalism company" in each database, using the Boolean inclusion operator (AND). The articles were then narrowed down to the last 15 years (2008-2023), restricting the selection to open-access documents, to the Spanish and English languages, to papers published in Ibero-American journals and to papers aimed at providing information on one of the three specific research questions. While these served as inclusion criteria, the exclusion criteria were: 1) the keywords appearing outside the title or abstract, 2) the rest of the article being in another language, despite the title and abstract being in one of the included languages (Spanish or English), and 3) the general subject of the article belonging to a discipline other than communication.

The path that PRISMA made it possible to follow, from the initial volume of data to the final number, can be summarized in the following steps: the overall results across the seven databases amounted to 39,004 documents based on the keywords alone. These were then reduced to 80 documents after applying the inclusion criteria, before finally—after applying duplicate filters and exclusion criteria—being narrowed down to 31 selected articles.

In short, the SLR procedure produces a summary of scientific articles published in indexed journals in seven databases over the last 15 years, which, combined with the other inclusion criteria, provided a broad perspective on the advances and new models applied in the field under study.

Table 1. Criteria for the analysis of scientific articles

Analysis criteria **Articles consulted: 31 (100%)**	**Articles**	**%**
By question answered		
Question 1. What elements enable the implementation of open innovation by digital journalism companies?	13	42
Question 2. What factors limit the implementation of open innovation in digital journalism companies?	07	23
Question 3. What are the trends in the application of open innovation in digital journalism companies?	21	68
By age		
Five years or less	19	61
Between six and ten years	09	29
Between eleven and fifteen years	03	10
By language		
Spanish	10	32
English	21	68
By information source		
Web of Science	03	10
Scopus	17	55
ResearchGate	04	13
Dialnet	02	06
Google Scholar	03	10
SciELO	01	03
Redalyc	01	03
By country		
Bangladesh	01	03

Brazil	01	03
Chile	01	03
Colombia	01	03
Ecuador	01	03
Spain	18	59
The Netherlands	01	03
England	01	03
USA	06	20

Source(s): Vásquez Acosta & Alarcón Llontop, 2025

4. Results and discussion

The overall count of the 31 final documents analyzed showed that 61% were no more than five years old; 68% were articles in English, and the same proportion addressed question three, on open innovation trends in journalism companies; and 64% came, in equal parts, from ResearchGate and Google Scholar.

Figure 1. Frequency of keywords in the research papers



Source(s): Vásquez Acosta & Alarcón Llontop, 2025

Figure 1 shows the most frequent keywords in the selected studies; those most used in the abstracts and their frequency include digital-native media (10), open innovation (9), digital journalism (8), business model (6), innovation (6), startup (4), crowdsourcing (4), crowdfunding (3), journalism lab (4) and journalism (4).

The results and their analysis presented below are organized according to the key themes and the grouping of the content of the reviewed articles in line with the research questions.

Table 2. Factors enabling open innovation in digital journalism companies

N°	Factor identified	Authors	Representation in the SLR

1	Innovating in funding models with flexible organizations and multidisciplinary teams	Paúcar & Carrión (2019) Vásquez-Herrero et al. (2023) Valero-Pastor & González-Alba (2018)	7 %
2	Audience participation in the management of news content	Sabaté-Gauxachs et al. (2018) Roig Telo, et al. (2012) Sixto-García et al. (2021	10 %
3	Use of technologies according to staff's level of training	Manfredi-Sánchez et al. (2019) García-Avilés et al. (2018) Mills & Wagemas (2021) Deuze (2008)	10 %
4	Free access to information and openness of the news production process	García-Perdomo & Magaña (2020) Carpes da Silva & Gruszynski (2020)	7%
5	Viable economic structures led by professionals and managers.	Peña-Ascacíbar & Álvarez-Peralta (2021)	7 %

Source(s): Vásquez Acosta & Alarcón Llontop, 2025

One of the factors that enables open innovation in digital journalism companies is the implementation of strategies that encourage audience participation in the management of news content, even if this means that media outlets stop prioritizing immediacy—without, of course, neglecting the quality of the writing. This fits very well with the growing tendency to slow down fast journalism, prioritizing the opening of mechanisms for public participation in content production rather than limiting it to sharing or commenting (Sabaté-Gauxachs et al., 2018). One example is crowdsourcing strategies, which facilitate external participation and are complemented by crowdfunding strategies, as clear evidence of the degree of public involvement, the intensity of which can be increased if greater permeability between the creative-managerial side and the audience is encouraged (Roig Telo et al., 2012).

Although all of this is regarded as highly positive, audience participation must entail meticulous verification of the content produced, given the risks and consequences it could pose for the outlet (Sixto-García et al., 2021). Another prominent factor that enables open innovation in digital journalism companies is the use of technology—initially to fulfil a complementary role, that is, to take over repetitive and routine tasks such as writing and fact-checking, among others, so as to make room for the journalist's personal, distinctive and innovative contribution (Manfredi-Sánchez et al., 2019).

It must also be recognized that technology has been playing a relevant and cross-cutting role (García-Avilés et al., 2018) in the transformation of news organizations, which must be able to respond to the demands imposed by the digital context; this will entail adjustments to their processes and products, as well as equipping all the staff involved with new skills (Mills & Wagemas, 2021). In this way, traditional corporate structures are being left behind, giving way to more collaborative and flexible forms of organization that facilitate the creation of rich forms of transmedia storytelling, better suited to the increasingly prominent figure of the news consumer/producer (Deuze, 2008)—all of this thanks to technology.

A third factor that helps incorporate open innovation into digital journalism companies is the adoption of funding models with flexible organizations and multidisciplinary teams (Valero-Pastor & González-Alba, 2018), which is very common among digital-native news outlets and, in

turn, affects the way they relate to their audience (Vásquez-Herrero et al., 2023). This is closely related to a fourth factor, which sets the need for viable economic structures against the requirement that they be run by journalism professionals committed to the nature and values of the profession, and not solely from a business perspective, as is the case in large traditional media (Peña-Ascacíbar & Álvarez-Peralta, 2021).

Free access to information and to the news production process motivates audiences to become involved in innovation processes. For example, access to the documents used as sources for journalistic publications strengthens public trust and gives a fuller idea of how investigative journalism is carried out (García-Perdomo & Magaña, 2020). Likewise, if media outlets disclose the sources of the funding that sustains them and how they use their profits, they give a clear sign of transparency that will be appreciated by the public (Carpes da Silva & Gruszynski, 2020).

Table 3. *Factors limiting open innovation in digital journalism companies*

N°	Factor identified	Authors	Representation in the SLR
1	Conventional business model of a journalism company	Vázquez-Herrero et al. (2023) Sabaté-Gaucxachs et al. (2018) Retis & Cueva (2020) Negredo et al. (2020) Zaragoza-Fuster & García-Avilés (2018) Jara et al. (2023)	19%
2	Journalism companies require financial support or supplementary income to implement open innovation	Carlson & Usher (2016) Vara-Miguel et al. (2021) Peña-Ascacíbar & Álvarez-Peralta (2021)	10 %
3	The journalistic profession (training) is not geared toward open innovation	Buschow (2020) García-Perdomo & Magaña (2020) Sixto-García et al. (2021) García-Avilés et al. (2018)	13%
4	Limited preparedness to implement and adapt open innovation processes	Jara et al. (2023) González (2016) Páucar & Coronel-Salas (2019) Zaragoza-Fuster & García-Avilés (2018)	13%

Source(s): Vásquez Acosta & Alarcón Llontop, 2025

As for the factors that hinder open innovation in digital journalism companies, the first is the decision regarding the business model the company will adopt, since this could jeopardize its sustainability, given the relationship between the type of user, the business model and user preferences (Vázquez-Herrero et al., 2023). In this respect, one alternative is hybrid business models, which allow a fledgling venture to become part of a larger company that provides it with financial backing while it consolidates its preferences and funding (Sabaté-Gaucxachs et al., 2018).

The foregoing shows the need for digital journalism companies to have financial support or supplementary income that allows them to pursue open innovation strategies, which do not

necessarily end successfully (Carlson & Usher, 2016). Paradoxically, one of the reasons that has led to the failure of these emerging news initiatives is that the development of the journalistic profession is not geared toward open innovation. A lack of business knowledge, combined with competition and the time it takes to consolidate the initiative, often works against them (Buschow, 2020).

Table 4. Trends in the application of open innovation in digital journalism companies

N°	Trend identified	Authors	Representation in the SLR
1	"Lean Startup" mindset	Valero-Pastor & González-Alba (2018) Deuze & Witschge (2018)	7 %
2	Content creation tailored to diverse audiences	Aitamurto & Lewis (2012) Deuze (2008) Kaivo-oja (2013) García-Orosa et al. (2020) Klaß (2020) Negredo et al. (2020) Sixto-García et al. (2021) García-Avilés et al. (2018)	26 %
3	Incorporation of technology	Salaverría (2020) Zaragoza-Fuster & García-Avilés (2018) Carlson & Usher (2016) Salazar (2018) Lewis et al. (2019) Mills & Wagemans (2021)	19 %
4	Diversity of funding sources	Tejedor et al. (2020) Retis & Cueva Chacón (2020) Vara-Miguel et al. (2021) Jara et al. (2021) Ataur-Rahman & Masudur-Rahman (2023)	16 %

Source(s): Vásquez Acosta & Alarcón Llontop, 2025

Of the 31 scientific articles consulted, 21 provided information on potential trends in the application of open innovation in digital journalism companies. Of these, eight articles address content creation tailored to diverse audiences, in response to the ever-increasing fragmentation of the market (Aitamurto & Lewis, 2012); this leads to specialization in building value into the content offered (García et al., 2020), an aspect that will progressively lay the foundations for a special interrelationship between users and producers, rather than with the products offered as such (Deuze, 2008).

Six articles highlight the incorporation of technology, which has facilitated innovation in production and distribution processes, the generation of new business projects, the development of digital applications and experimentation with multimedia formats in line with new narratives (Zaragoza & García, 2018). This is consistent with the consumption preferences of young audiences and of innovators in general; what is required, however, is a deliberate readiness to keep pace with the dizzying advance of technology, which today demands that journalism companies adopt and adapt to the implications of artificial intelligence (Lewis et al., 2019; Salazar, 2018).

Another trend identified is the incorporation of technology at all levels of operation, as a result of experimentation through *media labs* or journalism laboratories, which have facilitated open innovation through significant external contributions that improve the quality of content and production processes, generate new business partnerships and develop new, more profitable consumer experiences. This is how Mills & Wagemas (2021) see it: they consider that laboratories built around the development of products and processes, and above all around the creation of value for the public, involve social and sense-making functions. It is precisely these aspects, according to Durmusoglu (2004), that capture the essence of open innovation, associating it with the purposive use of internal and external knowledge flows to accelerate internal innovation and expand external markets for its use.

Five of the articles reviewed focus on the diversity of funding sources, highlighting that crowdsourcing and crowdfunding have become two funding modalities which, according to Bakker (2012), Gómez & Sandoval (2016) and Mastrini & Becerra (2017), cited by Jara et al. (2023), help journalism entrepreneurs to survive without compromising pluralism and independence vis-à-vis the public sphere. However, profitability levels are low in most cases; in addition, there is the traditional advertising-based funding scheme, generally inherited from traditional news media that have become digital or hybrid outlets. In either case, digital news media in general are betting on diversifying their funding sources.

Finally, with two articles, comes the Lean Startup mindset, identified in Table 4 with the concept developed by Ries (2011). It also represents a starting point for a venture in the digital ecosystem, as it prioritizes the optimization of production and management processes, allowing—in this case—the news organization to get up and running quickly and to use its resources as efficiently as possible, given its digital-native nature. In addition, the academic literature stresses the need to identify users' problems, empathize with them and offer them useful solutions from the very outset (Valero-Pastor & González-Alba, 2018).

5. Conclusions

The conclusions of this SLR can be summarized in the presentation of the factors that enable the implementation of open innovation, obtained after identifying the difficulties of application, the trends and how these have changed over the last 15 years in the context of digital news media; among them, the importance of integrating emerging technologies and encouraging the active participation of audiences stands out.

With regard to the factors enabling open innovation in journalism companies, it should be noted that, in digital journalism, striking a balance between the creative core and the community is fundamental to implementing open innovation. This entails understanding the true role of new audiences—their profiles, habits and rejections—in order to channel the collective toward genuine and potentially disruptive involvement. This can be achieved not only through crowdsourcing or crowdfunding strategies, but also by fostering collaborative projects that add quality to content management.

In this sense, transparency and free access to information are keys to open innovation, as well as an opportunity to build strong, trust-based ties with audiences. One way to involve them is therefore to make them participants in the process of constructing information, for example by publishing the documents obtained by journalists during fieldwork. Although this practice is already applied in traditional online journalism, it is enhanced as audiences interact with, or build new information from, the data disclosed, thereby applying a transmedia logic to news production. There are, then, several factors that favor open innovation in journalism companies, already documented so that interested entrepreneurs in the field can take them up, compare them, put them into practice, evaluate them and—of course—update and reinvent them.

As regards the difficulties in applying open innovation, this SLR shows that digital journalism companies still regard open innovation as a dimension linked mainly to improving platforms. This initial obstacle arises from failing to value the rest of the outlet's activities in a cross-cutting manner—such as services, the formation of work teams and community

management—even though several of these are at the heart of the digital ecosystem. On the other hand, it must be recognized that the notion of open innovation involves harnessing the possibilities of technology to improve products, services and production; this scenario remains distant because there is no clear idea of the investment and sustained collaborative networks it requires. A commitment to daily news coverage is therefore more attractive and safer in the short term. Overcoming the closed innovation paradigm, as well as taking on the training of staff and the logistics that its implementation requires, makes the path real but not promising for many news companies—an obstacle to be overcome by always highlighting the advantages of open innovation over any obstacles inherent in the very act of innovating.

With regard to the trends identified, the implementation of data and innovation laboratories is a first step toward incorporating open innovation into a journalism company. The most prominent variables for the process include accessibility for the management and analysis of reliable data, updating, the use of open data, usability monitoring and the recording of social media performance. It is clear, then, that transformation processes in online journalism must be complemented by others regarded as trends in the sector, such as immersive journalism, mobile journalism (MoJo) and mash-ups, among others, with particular attention paid to audience engagement metrics. Open innovation for journalism companies does not, therefore, imply improvement practices that exclude others; quite the opposite: it offers ground still to be tested and explored.

This review stands out for addressing not only technological aspects but also organizational and management aspects, which are essential for the integration of open innovation into journalism companies, thus providing a solid basis for future research. It also offers a comprehensive view of innovative strategies in news media, underlining the crucial role of various collaborative approaches and the necessary incorporation of emerging technological applications. A further strength lies in the quality of the findings and the substantial agreement regarding the redefinition of journalism companies' business models, which links economic sustainability with greater interaction with, and transparency toward, audiences.

Nevertheless, the research has limitations, such as the restriction of the languages of the selected publications (Spanish and English only), which may exclude relevant studies in other languages that could offer complementary or divergent perspectives. In addition, this SLR focuses on studies from Western regions, which limits the applicability of the findings to more diverse global contexts where technological and media dynamics may differ. Finally, although a detailed analysis of trends is presented, rapid technological change in journalism may generate new models and challenges not yet addressed by the literature reviewed. This suggests the need to update the results continually, and future researchers are thus invited to continue unravelling the subject with new approaches and broader inclusion criteria, among other things.

Finally, on balance, this study not only provides up-to-date empirical evidence but also invites the scientific community to explore in greater depth the creation of more robust and sustainable collaborative models for digital media. It further underlines the need to investigate how artificial intelligence and other disruptive technologies can be integrated into open innovation processes, opening up new avenues of research at the intersection of technology and media sustainability.

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