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ARTICLE

AI Adoption in Transitional Media Systems

The Integration of AI in Newsrooms across the Western Balkans

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This paper examines AI integration in three transitional Western Balkan countries: Albania, Kosovo, and North Macedonia, all characterised by structural constraints, scarce resources, and ongoing professional transformation, which may influence the way they adopt technology. This research is based on the Unified Theory of Acceptance and Use of Technology (UTAUT), and a cross-sectional survey of 227 journalists and editors conducted during 2025. The results show that AI adoption is still at its initial, uneven phase across the region: reported usage is low, there is a lack of training, and institutional support is also minimal. The general tendency for performance expectations of AI is toward scepticism, but the tendencies concerning effort expectancy and facilitating conditions tend to be neutral, which denotes a transitional rather than a resistant attitude. Disagreements between online and television media support the idea that AI attitudes are influenced by the

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organisational structure. Implementing UTAUT in the context of journalism research and positioning AI adoption in transitional media systems, this study broadens the geographical and theoretical domain of AI-in-journalism research.

Keywords: artificial intelligence, newsroom, technology adoption, UTAUT, transitional media systems, Western Balkans

Introduction

Automated content creation and transcription, data mining, customisation, and systems of generation are no longer isolated experiments in AI technologies, but a part of digital news infrastructures. However, as earlier arguments have taught us to think of AI as being focused on efficiency and automation (Diakopoulos, 2019), recent studies highlight how rather than AI implementation being a technical issue it is far more a social and organisational one. AI changes the balance of power in the newsrooms, questions conventional statements concerning professional authority, and introduces some new forms of epistemic mediation between journalists and their audiences (Lewis et al., 2019; Møller et al., 2025). For this paper, we have based our understanding and definition of AI on the one from Lewis et al. (2026), who define artificial intelligence as:

> "computational systems that learn from data to recognize patterns, make predictions, and generate content – automating or extending tasks at scales and speeds beyond practical human effort – though with capabilities and limitations that vary unevenly across tasks".

Although research on AI in journalism is currently expanding rapidly, recent literature is largely limited to North America and Western Europe. Research in these contexts indicates that AI is frequently introduced in a deliberate, planned way to improve productivity, facilitate investigative reporting, and streamline audience engagement (Thurman et al., 2025). Simultaneously, there are issues around algorithm bias, the level of transparency, editorial independence, and job losses (Marconi, 2020; Munoriyarwa & de-Lima-Santos, 2025). However, little emphasis has been placed on the experience of AI adoption in transitional or resource-constrained media systems where institutional vulnerability, economic demands, and uneven professionalisation might essentially define the pattern of adoption of technology.

This research fills that gap by analysing the views of journalists on AI integration in three Western Balkan countries: Albania, Kosovo, and North Macedonia. Instead of adopting AI as a linear process of technological diffusion, we theorise that AI adoption is a contextualised negotiation between organisational capabilities, technological opportunities, and professional standards. In this way, we place AI integration in a setting in which the professional authority of journalism will be renegotiated in conditions of structural constraint. The Western Balkans provide an interesting context for such an analysis because the media there has insufficient financial resources, endures political and economic pressures, mixed regulatory frameworks, and continuous professional change (Dobek-Ostrowska & Kleut, 2023). With editorial autonomy and institutional stability already weak, AI integration

might not be viewed as an opportunity for innovation, but more as a threat to professional control and credibility. The analysis of AI integration within this area will thus provide us with an opportunity to see the process of technological adoption when the zone of innovation meets institutional vulnerability.

The choice of Albania, Kosovo, and North Macedonia has been made for several reasons. First, as similarities, these countries have followed common socialist or communist paths, Kosovo and North Macedonia as part of the former Yugoslavia, and Albania under the Hoxhaj regime. Second, as Dobek-Ostrowska & Kleut (2023) assert, all three countries have the same media system, that is, the *media in transition* model. Third, they have small media markets, with limited financial resources, weak economic sustainability, and limited technological investment capabilities. All of which has a direct influence on the capacity of news organisations to implement AI technologies. Moreover, the media system of these countries is further characterised by weak editorial independence and high levels of political and economic pressure (Dobek-Ostrowska & Kleut, 2023).

From a theoretical perspective, this article contributes in two significant ways. On the one hand, it incorporates the Unified Theory of Acceptance and Use of Technology (UTAUT) (Venkatesh et al., 2003) into the field of journalism as an analytical framework for integrating AI at the organisational level and shows that professional routines, institutional support systems, and ethics mediate technology acceptance in journalism by modifying the main constructs of UTAUT (performance expectancy, effort expectancy, and facilitating conditions) in the newsroom. On the other hand, by placing the adoption of AI in transitional media systems, this research adds to the current discussion on journalism concerning technological change, the authority of the profession, and the transformation of newsrooms. It shows that AI integration cannot be seen only through the prism of the diffusion of innovation or technological determinism. Rather, it should be situated as a negotiated process that has been influenced by institutional capacity, professional culture, and structural vulnerability. In this way, the article expands the geographical and theoretical coverage of AI-in-journalism research and offers a methodology with which to study technological adoption in other, equally limited media settings.

AI integration into journalism

The integration of artificial intelligence (AI) across the globe has brought another big change to journalism. AI tools have been used to automatically create content, customise news feeds, identify misinformation, and support editorial decision-making. Diakopoulos (2019) indicates that algorithms are transforming the news-making process by enhancing journalistic work but not by eliminating it. On the same note, Simon (2024) highlights that automation in journalism is mostly applied to efficiency and data management rather than creativity. However, Møller et al. (2025) point out that it is not only a matter of efficiency, but also about redefining the professional authority and legitimacy of journalism. When it comes to studying AI in journalism, the researcher's focus is narrowed down to two main themes: 1. AI as an enhancing tool, improving the speed of reporting, data analysis, and engagement with the audience (Thurman et al., 2025); and 2. AI as a challenge, where

transparency, accountability, and the bias of algorithms emerge as ethical and professional concerns (Linden, 2017; Beckett, 2019).

AI integration into newsrooms

AI has become increasingly prevalent in media newsrooms around the world, changing professional jobs and workflows. According to empirical research, 73% of businesses utilise AI for automation and 68% for data analysis, suggesting a move toward editorial processes that are driven by technology (Sonni et al., 2024). The studies conducted on different media systems show that AI technologies have brought about efficiencies in newsroom operations and increased the capability to produce investigative and data-driven news (Hollanek et al., 2025).

The integration of AI in newsrooms has been unequal, based on structural, economic, and cultural aspects. One comparative analysis of European news agencies conducted by Fanta (2017) highlights that the automation of newsrooms tends to recreate the hierarchies of labour that existed previously rather than destroying them. The leading editors are left in charge of the quality of the stories and editorial values while AI conducts the lower-level analytical or linguistic work. Furthermore, a European Broadcasting Union (EBU) report (2025) showed that European newsrooms use AI technology currently for transcription, visualisation, personalisation, or analysis of the audience. European newsrooms, therefore, are not just experimenting with AI but embedding it strategically (European Broadcasting Union, 2025). The most common form of such integration is strongest in news organisations with the financial and technical means to build proprietary systems, and small outlets often depend on third-party technologies like automated transcription tools or social media sentiment analysis tools (Thomson Foundation, 2024).

However, the growth of AI in the media ecosystem has begun to raise controversy with regard to editorial autonomy and tech addiction. Editorial systems that are AI-driven may have some minor effects on the selection and framing of news, potentially delivering algorithmic bias to editorial decision-making (Marconi, 2020).

The implementation of AI in journalism is a developing phenomenon that has not yet been adopted in the Western Balkans either. Previous research points out that most media professionals are aware of the possibilities of AI, but a potential change in its implementation is hindered by major structural setbacks, such as insufficient finance, poor infrastructure, and an absence of professional training (Çipuri et al., 2025a). Various studies have shown that there is a limited application of AI in newsrooms in (Gërguri, 2026; Çipuri et al., 2025a), but there are differences among Western Balkan countries on the level of adoption, as well as in attitude towards AI. There is a more positive attitude towards AI in Serbia than in Bosnia and Herzegovina, where it is most negative (UNS, 2025).

AI adoption is not solely a matter of technological capability but is deeply embedded in newsroom cultures, power relations, and professional routines (Lewis et al., 2019). This is particularly relevant to Western Balkan media systems, which are often characterised by resource constraints, political and economic pressure, and ongoing transformations in journalistic practices. In such environments, positive attitudes toward AI may not translate

into effective adoption if institutional support, editorial autonomy, or professional safeguards are insufficient. To address this in our research, we formed the following research question and hypotheses:

RQ1: How do journalists in three Western Balkan countries perceive the integration of artificial intelligence in newsrooms?
H1: Media type impacts journalists' attitude towards the integration of AI into newsrooms.

Conceptual framework: Applying UTAUT to AI integration in newsrooms

The integration of artificial intelligence into journalism represents a significant step toward the transformation of the profession and practice of journalism, shaping how news is created, verified and published. While AI tools are often discussed in terms of their technical capabilities, their adoption in journalism is a social and organisational process influenced by professional norms, institutional contexts and individual perceptions. To build this theoretical framework we have used the Unified Theory of Acceptance and Use of Technology (UTAUT), which provides a comprehensive and integrative framework for analysing the adoption and use of emerging technologies within organisational settings through four core determinants: performance expectancy, effort expectancy, social influence, and facilitating conditions (Venkatesh et al., 2003; Venkatesh, 2022). These constructs explain how individuals evaluate new technologies, how easily they can be integrated into everyday work, how organisational and social pressures shape adoption, and whether institutional support structures enable sustained use. This framework is particularly well suited and relevant in analysing AI adoption in newsrooms in which professional routines and institutional constraints strongly determine technological change.

Previous research on technological innovation in journalism has frequently employed the Diffusion of Innovations (DOI) Theory (Rogers, 2003) to explain how new technologies are introduced and adopted within news organisations. Studies applying the DOI framework have shown that the diffusion and adoption of technological innovations in journalism are shaped not only by the characteristics of the innovation itself but also by organisational contexts, newsroom practices, professional dynamics, and individual differences among journalists (Garrison, 2000; Ekdale et al., 2015; Holman & Perreault, 2023). While this perspective has made an important contribution to understanding technological change in journalism, its primary focus is on explaining how innovations spread, rather than on the organisational and individual factors that shape journalists' perceptions and acceptance of new technologies. In the context of AI integration in journalism, journalists' perceptions are influenced not only by the characteristics of the technology itself but also by editorial routines, professional autonomy, organisational support, ethical considerations, and expectations from editors and colleagues. These dimensions are particularly important for understanding journalists' perceptions of AI integration and are more explicitly addressed by UTAUT through its constructs of performance expectancy, effort expectancy, social influence, and

facilitating conditions. Therefore, while the Diffusion of Innovations Theory provides valuable insights into how technological innovations spread across news organisations, UTAUT offers a more suitable framework for examining the organisational and individual factors influencing journalists' acceptance of AI in North Macedonia, Kosovo, and Albania.

The empirical research demonstrates the relevance of the UTAUT framework for understanding adoption of artificial intelligence in journalism and newsroom environments. Studies have shown that journalists' willingness to engage with AI-driven tools is significantly shaped by perceived usefulness and efficiency, ease of integration into editorial workflows, organisational expectations, and availability of institutional and ethical support structures (Lewis et al., 2019; Trang et al., 2024). These findings confirm that technology adoption in journalism follows patterns similar to other organisational contexts, while also being influenced by specific professional conditions.

In this context, performance expectancy refers to journalists' perceptions that AI technologies can enhance editorial efficiency, accelerate news production, support data processing, or assist in verification tasks. Effort expectancy relates to the perceived usability of AI tools and their compatibility with existing editorial workflows, particularly under conditions of time pressure and limited technical training. Social influence captures the role of editors, media managers, owners, and broader institutional narratives promoting innovation in shaping journalists' attitudes toward AI adoption. Facilitating conditions encompass the availability of organisational resources, technical infrastructure, training opportunities, and ethical or editorial guidelines that enable sustained and responsible use of AI tools.

Accordingly, this study empirically examines performance expectancy, effort expectancy, and facilitating conditions, while treating social influence as a contextual background, given its diffuse and uneven distribution across Western Balkan newsroom environments, where institutional innovation is promoted primarily through informal norms and localised newsroom practices rather than uniform organisational policies, a situation shaped by structural constraints such as insufficient finances, poor infrastructure, and the lack of professional training.

Building on these three UTAUT conditions, this study interrogates how journalists in three Western Balkan countries perceived the integration of AI in their newsrooms, leading to the following research question:

> **RQ2:** How do UTAUT conditions (performance expectancy, effort expectancy, and facilitating conditions) shape journalists' perceptions of AI integration in newsrooms across the three countries?

The role of individual and professional characteristics in perceived AI risks

Although UTAUT conceptualises age, gender, and experience as moderators of technology acceptance (Venkatesh et al., 2003), later syntheses show their effects vary across technologies, sectors, and institutional contexts and are not stable across domains (Marikyan &

Papagiannidis, 2022). Subsequent research also indicates that the model does not fully capture affective and risk-based responses, particularly when technologies threaten jobs or professional roles. In such contexts, attitudes, fear, uncertainty, and perceived risks often outweigh performance-related factors in shaping acceptance (Martins et al., 2014; Dwivedi et al., 2019; Tamilmani et al., 2021).

In the case of AI integration in journalism, acceptance is not only a matter of efficiency and usability but also involves professional, ethical and occupational risks including concerns about job displacement, algorithmic bias and the erosion of editorial judgment. Empirical studies show that journalists tend to associate AI integration with job insecurity, loss of professional autonomy and ethical uncertainty (Lewis et al., 2019; Trang et al., 2024). A qualitative study with Canadian news workers illustrates how journalists often feel unprepared to navigate the ethical challenges of AI, particularly in relation to transparency, bias and responsibility for AI assisted content especially in organisations lacking training and/or formal guidelines (Misri et al., 2026). Similarly, a recent study of generative AI further demonstrates that journalists are increasingly concerned about the way in which AI redistributes power and authority within newsrooms, potentially weakening human editorial control and professional decision-making (Munoriyarwa & de-Lima-Santos, 2025).

These concerns are also reflected in a large-scale survey of more than 1,000 UK journalists where the study found that 62% of respondents perceive AI as a threat to journalism, even though most of them already use AI tools regularly (Thurman et al., 2025). The survey also shows that attitudes toward AI integration vary by age, gender and professional position. Young journalists tend to use AI more frequently but remain uncertain about the long-term career perspectives, while senior editors are more concerned about editorial authority and accountability.

These findings indicate that journalists' perceptions of AI are shaped not only by organisational and technological conditions but also by who they are and where they are positioned within the profession. Differences in age, gender and professional experience appear to structure how AI-related risks are interpreted and evaluated in newsroom settings. In consequence, this study examines how these individual and professional characteristics condition journalists' perceptions of the risks associated with AI integration in newsrooms across Western Balkan countries, as framed in the following research question:

RQ3: How do age, gender and professional experience moderate journalists' perceptions of the risks associate with the AI integration in newsrooms?

Methods

Design, sample, and procedure

The study design contains a cross-sectional online questionnaire to address the perception, attitude, and experience of journalists on the use of AI in newsrooms in the Western Balkans. The survey was carried out among journalists and editors who are currently employed in

the news organisation in three Western Balkan countries, Albania, Kosovo, and North Macedonia, between May and July 2025.

The sampling was done using a non-probabilistic sampling strategy, which incorporated snowball and purposive sampling methods. Such a strategy is typical in journalism research, especially in cross-national and regional studies where extensive sampling frames are either impossible or unreliable (Hanitzsch et al., 2019; Mellado et al., 2017). Three channels were used to circulate the survey. First, the editors were contacted directly through publicly available email addresses and asked to distribute the survey in their organisations. Second, professional networks, such as national associations of journalists, were used to distribute the questionnaire. Third, a snowball sampling technique was used by requesting the participants to send the survey to their colleagues. No personally identifiable data were gathered, and all the procedures were in accordance with ethical research practices and the General Data Protection Regulation (GDPR).

According to public data, Albania has 2,623 journalists (Union of Albanian Journalists, 2025), Kosovo 720 (Mehmeti, 2025) and North Macedonia 1,089 (Blazevski, 2024). However, these figures are for journalists that cover politics, culture, sports, music, etc., this study focused only on journalists that work in newsrooms and report on hard news on a daily basis. There is no public data on this category of journalists. Therefore, the sample consists of 227 respondents from all three countries, Albania (n = 102), Kosovo (n = 80), and North Macedonia (n = 45). Most of the respondents reported being journalists/reporters (78.4%, n = 178), with a small percentage being in editorial or managerial positions (21.6%, n = 49). The age range fell between 18 and 65, with most participants aged 25–34 (44.9%, n = 102). IBM SPSS Statistics (version 21) was used for all analyses.

Measures

Measurements were conducted taking into account that respondents had the opportunity to provide scaled responses in the Likert format, where the values were defined as follows: 1 = Strongly disagree, 2 = Disagree, 3 = Neither agree nor disagree (neutral), 4 = Agree, 5 = Strongly agree. The questionnaire was divided into three different parts that included the journalists' perception of AI integration, AI impact, and the future.

In addressing RQ1 – perceptions of AI integration across countries – this analysis draws on survey data concerning the current deployment of AI in respondents' newsrooms, perceived improvements in efficiency, beliefs about AI's contribution to enhanced performance, self-assessed adequacy of knowledge and skills, ease of use of AI tools, and the sufficiency of training opportunities provided.

RQ2 has been measured on three indicators of UTAUT dimensions:

- Performance Expectations (PE) were assessed based on respondents' agreement with the following four statements: 1. AI has increased efficiency in our newsroom; 2. AI helps improve the accuracy of our reporting; 3. AI can help identify new information from data/materials; and 4. AI improves audience engagement.

- Effort expectancy (EE) was measured by the results of responses related to agreement, neutrality or disagreement with the statements that: 1. AI is easy to use; and that 2. respondents feel they have sufficient knowledge about this technology.
- FC for the integration of AI in newsrooms were measured with variables that measured journalists' responses to statements related to training of journalists in newsrooms for this technology, the need to have guidelines for the use of AI and the need for it to be used transparently in content creation.

To examine the outcomes of PE, EE, and FC, the respective indicator variables for each construct were subjected to computation (SPSS) to derive the mean scores of determinants of AI adoption within newsrooms across the countries under study. In examining RQ3, data were collected on respondents' personal and professional attributes, encompassing variables of age, gender and length of professional experience in journalism (categorised into five intervals: < 1 year, 1–5 years, 6–10 years, 11–20 years, > 20 years).

Results

The findings of this paper on the integration of AI in the newsrooms of western Balkan media provide data that vary on several factors such as the type of media outlet where the journalists work, whether it is an online or television content, age, gender and work experience of the journalists who participated in the research. However, there is less variation in other factors such as the country in which the journalists operate.

To test the hypothesis of this paper, results generated by crossing data from the media type variable divided between television and online media, with some of the other variables such as usage, efficiency gains, assistance in improving content, confidence in knowledge about AI, training of journalists in this technology, and the need for transparency in its use were measured. Results show a higher use of artificial intelligence by online newsrooms among the journalists asked whether their newsroom uses this type of technology: 37.1% of journalists working in online media gave a positive answer, choosing the options 'I agree' and 'I completely agree', while in the case of television journalists the same attitude was only 17.6%. Similar differences are also observed in the attitudes of journalists regarding the finding that this type of technology has increased efficiency in the newsroom: 22.8% of online media journalists responded positively compared to 13.6% television journalists, although the percentage of those who disagree remains similar in both groups: 52.5% among online media journalists and 56.4% of television journalists. The difference in this case is seen in the number of journalists who declared neutrality towards this variable, which is 7.2% higher in television than in online media. The mood of journalists asked about the help that this technology provides for their newsrooms is the same regardless of the type of media. Meanwhile, of the respondents' perception of their competence in AI, journalists in online media feel more prepared to use this technology than those in television, although the difference is small. This can also be explained by the fact that many more journalists in online media (39.6%) have received training on this technology in their newsrooms than those in television (only 4.8%). Also, unlike television journalists, journalists in online media

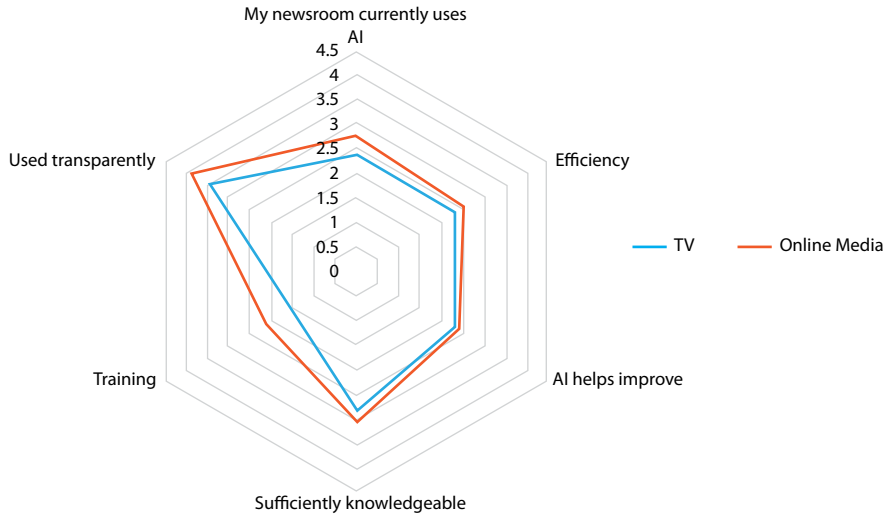


Figure 1:
Mean of respondents' answers on attitudes to AI integration in newsrooms, by media type
Source: Compiled by the authors.

approve to a greater extent of the use of this technology in a transparent manner for the public, making it clear what the role of these tools has been in the creation of media content.

Overall, the findings (see Figure 1 below), even from their mean point of view, favour use of AI (TV, M = 2.36, Online Media, M = 2.72), increased efficiency (TV, M = 2.34, OM, M = 2.5), assistance at work (TV, M = 2.32, OM = 2.4), competence (TV, M = 2.94, OM, M = 3.13), training for this technology (TV, M = 1.73, OM, M = 2.17) and transparent use of this technology by the editorial staff (TV, M = 3.5, OM, M = 3.89) more in online media than in television, although the responses are often below or close to the neutral response. These findings lead to confirmation of the first hypothesis of this paper: Media type has an impact on the attitude journalists have toward the integration of AI into newsrooms.

In answer to RQ1, the results show a division regarding the actual use of this technology: 49.7% disagree that this technology is currently used, 26.4% were neutral towards this statement and 23.7% agreed. More than half of the respondents (53.3%) disagreed that AI has increased the efficiency of work in newsrooms and 55% disagreed that this technology has increased the accuracy of reporting in their newsrooms. Moreover, the majority of respondents (74%) stated that they have not received any training on this technology in their newsrooms. The respondents are even more divided over their feelings of competence in using this technology, with 36.6% agreeing, while 30.8% disagree. Also, more journalists agree that using this technology is easy (39.6%), compared to those who disagreed (27.8%). The need for transparent use by disclosing the role of AI tools in content creation received the greatest approval from journalists in this context, with 61.3% choosing the options agreeing with this statement, while only 19.4% were against and 19.4% were neutral. Regarding divisions by country, the data shows that journalists in North Macedonia have a more positive approach, excluding the need for transparent use of this technology by the media,

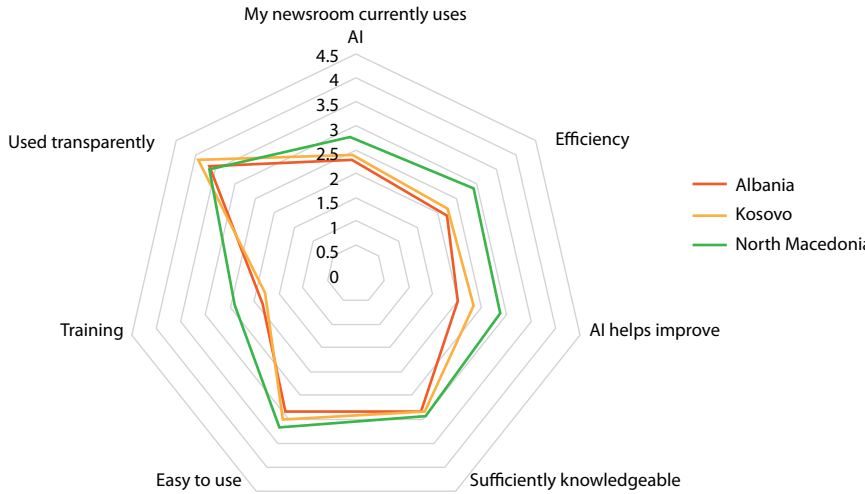


Figure 2:
Mean of responses from journalists in three Western Balkan countries on perception of AI integration in newsrooms
Source: Compiled by the authors.

while respondents in Kosovo and Albania share similar opinions regarding most of the statements testing the perception of this technology by journalists from different media. The mean (shown in Figure 2) regarding the current use of this technology by newsrooms (Albania (ALB), M = 2.41, Kosovo (KOS), M = 2.48, North Macedonia [MKD], M = 2.87), increased efficiency (ALB, M = 2.29, KOS, M = 2.28, MKD, M = 2.93), assistance in work (ALB, M = 2.08, KOS, M = 2.39, MKD, M = 2.96), competence (ALB, M = 3.05, KOS, M = 2.95, MKD, M = 3.11), ease of use (ALB, M = 2.96, KOS, M = 3.18, MKD, M = 3.29), training for this technology (ALB, M = 1.82, KOS, M = 1.81, MKD, M = 2.36), and the transparent use of this technology by the editorial staff (ALB, M = 3.6, KOS, M = 3.83 , MKD, M = 3.6).

Meanwhile, to see how the conditions of the UTAUT theory are distributed according to journalists' perceptions of the integration of AI in newsrooms (RQ2), results (see Table 1) were generated in the areas of PE, EE, and FC. Regarding PE, the average results show that the mean is negative regarding the increase in efficiency in Kosovo and Albania (ALB, M = 2.29, KOS, M = 2.28), while the average (mean) of the respondents from North Macedonia (MKD, M = 2.93) was almost neutral. Journalists from Kosovo and Albania are similar in terms of disagreeing that AI tools are improving accuracy in reporting (ALB, M = 2.08, KOS, M = 2.39), and if we compare the results in percentages, in both countries above 50% of journalists think that AI tools are not useful in improving accuracy in reporting. However, the average for journalists from North Macedonia show tendencies to neutrality (MKD, M = 2.96). Meanwhile, the trend to neutral or being neutral is dominant in responses of journalists from all three countries when it comes to AI as a tool to help identifying new information from data or materials (ALB, M = 2.8, KOS, M = 3.38, MKD, M = 3.47), as

well as help in audience engagement (ALB, M = 2.81, KOS, M = 2.88, MKD, M = 3.16). Regarding the tasks for which AI is used in newsrooms, the trend is the same in Kosovo and North Macedonia, where journalists said they most often use AI to generate headlines (37.5% in each country) and verifying information (KOS = 36.2%; MKD = 31.1%). In Albania, however, the main uses of AI differ: journalists primarily use it to generate summaries (29.5%) or to create multimedia content (images or videos) (27.5%).

Effort expectancy (EE) measurements emphasise that journalists in Albania and Kosovo are strongly divided into two groups, those who agree that AI is easy to use (ALB: 38.2%; KOS: 43.8%), and also believe that they have sufficient knowledge about this technology (ALB: 39.2%; KOS: 37.5%), and the rest who are in the group of sceptics or critics. In North Macedonia, neutrality is prominent amongst journalists, with over 50% for both statements. From the perspective of tendencies, the mean shows a neutral trend in all three Western Balkan countries regarding the statement about ease of use (ALB, M = 2.96, KOS, M = 3.18, MKD, M = 3.29) and also about sufficient knowledge for use (ALB, M = 3.05, KOS, M = 2.95, MKD, M = 3.11).

The findings indicate that, in the majority of cases, journalists across the three countries have not received adequate training in the use of AI (ALB: M = 1.82; KOS: M = 1.81; MKD: M = 2.36). In contrast, they express even stronger agreement on the importance of having appropriate guidelines (ALB: M = 3.87; KOS: M = 4.31; MKD: M = 4.11) and ensuring transparent application of AI tools in media content (ALB: M = 3.60; KOS: M = 3.83; MKD: M = 3.60).

Statistical analysis of the variables assessing the three UTAUT components revealed that journalists generally display a rejecting attitude toward the role of PE for AI integration within newsrooms. In contrast, their attitudes toward EE and FC were neutral, leaning slightly toward acceptance. These patterns are reflected in the mean, median, standard deviation, and skewness values for each of the three country groups.

Table 1:
Results of the computed variables

	Mean	Median	Std. Dev.	Skewness
PE	2.703	2.7500	0.88031	0.113
EE	3.063	3.0000	1.02583	–0.354
FC	3.226	3.3333	0.90272	–0.477

Source: Compiled by the authors.

This paper's third research question explores journalists' experiences in terms of perceived risks associated with the integration of AI in newsrooms, based on age, gender and personal experience. Most journalists do not see AI as a threat to jobs, with the 44–65 age group showing tendencies slightly above neutrality towards this judgment (18–24 years old, M = 3.00, 25–34 years old, M = 2.75, 35–44 years old, M = 2.76, 44–65 years old, M = 3.25). The result shows that journalists agree that this technology creates ethical dilemmas in the newsroom. Although only slightly above a neutral response, this suggests that younger journalists agree more that this technology causes ethical dilemmas (18–24 years old,

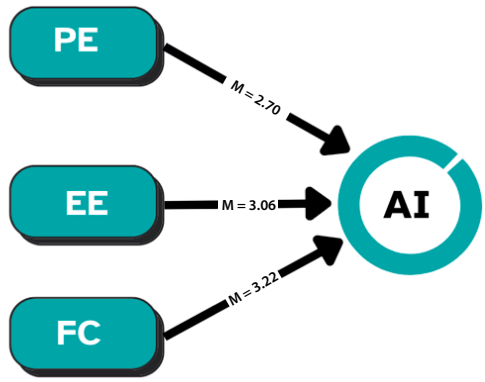


Figure 3:
Mean of UTAUT application elements in integrating AI in newsrooms in the Western Balkans
Source: Compiled by the authors.

M = 3.70, 25–34 years old, M = 3.53, 35–44 years old, M = 3.58, 44–65 years old, M = 3.56). As for the inclusion of bias in newsrooms, the older the journalist is in age, the more they believe this (18–24 years old, M = 3.19, 25–34 years old, M = 3.29, 35–44 years old, M = 3.44, 44–65 years old, M = 3.75).

Despite the differences in responses, gender does not seem to be a determining factor when respondents are asked about the integration of AI in journalism. Based on gender, female journalists (32.1%) are more likely to see AI as a threat to jobs than male journalists (26.7%), although the mean of respondents of both genders falls closer to neutral responses (F, M = 2.94, M, M = 2.75). Regarding the creation of ethical dilemmas by AI, a small difference in responses is observed, as the mean in this situation has slight tendencies to agreement with this statement by both female and male journalists (F, M = 3.52, M, M = 3.58). Even in the statement that this technology creates bias in media content, the gender difference is small, although the average for the responses is only slightly above the neutral response, it is noticeable that more male journalists agree with this statement than female journalists (F, M = 3.27, M, M = 3.32). A similar attitude is also found when journalists were asked if they agree or disagree that this technology reduces the need for critical media judgment (F, M = 2.78, M, M = 2.77). A gender difference in response is observed in the agreement regarding the finding that AI will reduce the need for young journalists, with more female journalists (44.4%) agreeing with this than male journalists (35.6%), although the average of responses in both cases easily exceeds the neutral response (F, M = 3.21, M, M = 3.03).

Another factor measured in journalists' attitudes towards AI integration is work experience. The expressed trend is that journalists with more experience show more disagreement that AI poses a risk to journalists' jobs, than those with less experience, which correlates with previous findings on age as an influencing factor in AI integration (0–1 year of experience, M = 2.92, 1–5 years of experience, M = 2.92, 6–10 years of experience, M = 2.83, 11–20 years of experience, M = 2.71, more than 20 years of experience, M = 2.67).

There are tiny differences over whether this technology can create bias in the news, however, more experienced journalists again show greater agreement (0–1E, M = 3, 1–5E, M = 3.32, 6–10E, M = 3.24, 11–20E, M = 3.38, 20+ E, M = 3.37). Different results are seen regarding the creation of ethical dilemmas by AI, as journalists with less experience have a tendency to agree more with this statement (0–1E, M = 3.62, 1–5E, M = 3.62, 6–10E, M = 3.6, 11–20E, M = 3.58, 20+ E, M = 3.27).

Experience is not a significant factor in journalists' responses about AI reducing the need for critical editorial judgment, because there is a very small difference between groups (0–1 E, M = 2.77, 1–5E, M = 2.9, 6–10E, M = 2.66, 11–20E, M = 2.6, 20+ E, M = 2.97). Interestingly, mid-career journalists (6–20 years of experience) are more inclined to believe that AI technology will decrease the need for new journalists (6–10E, M = 3.17, 11–20E, M = 3.31), with group means above the neutral threshold, unlike the entry-level (0–1E: M = 2.62, –5E, M = 3.04) and very senior (20+E: M = 2.93) groups, which hover at neutral and below neutral.

Discussion and conclusions

This study examined the current integration of artificial intelligence in journalism across three Western Balkan countries: Albania, Kosovo, and North Macedonia. The data shows that, unlike the newsrooms of other European countries – where most have moved beyond the level of experimentation and are implementing AI strategically (European Broadcasting Union, 2025) – in the Western Balkans, at least in these three countries, these dynamics are still in their initial stages, with no clear development and investment strategy in this direction. This is clearly reflected in the attitudes of journalists regarding the structural aspects of the media in which they work, which often lack professional guidelines, journalist training, or adequate technical and technological investment. In this regard, it is noted that fear and resistance to maintaining editorial autonomy and technological influence (Marconi, 2020) dominate the media spectrum of these countries.

When analysed from a cross-country perspective, North Macedonia appears to be somewhat more positive about AI integration and desires progress in this direction, despite journalist attitudes being at neutral levels and far from the European standard. Kosovo follows closely behind with Albania ranking last in this list. Previous studies have shown that in the Albanian case, resistance to the use of AI in editorial processes, among many other factors, is also related to the institutional culture that has been established. This culture seems to be based on the perception of the human factor as irreplaceable in verifying information collected by AI, especially when it comes to new information and the maintaining journalistic standards (Çipuri et al., 2025a).

In response to the hypothesis, it appears that television journalists are more hesitant about the use and integration of AI in the newsroom (17.6%) when compared to those in online media (37.1%). The attention that television or newspapers journalists pay to the credibility of the message, to professional standards and to human judgement is perceived as increased caution on their part regarding the use of new technologies in the newsroom (Çipuri et al., 2025b). In television, radio or newspapers, the filtering of bias and editorial

responsibility is achieved through adherence to professional norms (Amigo & Porlezza, 2025). Researchers evaluate the journalist as a guarantor and professional authority who maintains human control over the editorial process (Molla & Ahsan, 2025).

In contrast to what has happened in developed Western countries, the data related to AI integration reconfirms the findings of previous studies in the region (Gërguri, 2025; Çipuri et al., 2025a). Journalists emphasise a lack of training, investment or any clear editorial policies regarding the use of AI as reasons for not utilising it, thus hindering the development of newsrooms in alignment with the digital age. The lack of confidence in the accuracy and efficiency of AI-supported work remains a major concern for more than half of the journalists in these countries.

The assessments of journalists' perception on AI integration across the three countries indicate predominantly negative perceptions for PE, while EE and FC remain largely neutral. Upon data analysis, it is noted that the negative results for PE and EE do not indicate technology rejection, but rather stem from the lack of organisational conditions necessary to effectively implement AI. Consequently, these negative perceptions result from a lack of real experience in utilising these technologies (Venkatesh et al., 2003; Venkatesh, 2022).

On the other hand, the tendency towards neutrality, especially for FC, helps to explain the results for the first two indicators (EE and PE). This can be seen not as a refusal by journalists to use AI, but as a transitional phase, which is accompanied by their uncertainty about their editorial and professional responsibility. It is only natural that the lack of conditions results in a low perception of performance and limited use of professional practice. The characteristics of a transitional phase appear in the data, one in which journalists renegotiate professional authority with AI (Møller et al., 2025). This indicates that tension still exists between technological efficiency and professional authority. In fact, these are characteristic features of media systems in transition, where journalists' relationship with technological innovations is more influenced by institutional stability than by the desire to use or access them.

Data shows that differences in age and experience do not directly indicate whether journalists accept AI, but they do help in clarifying how and why they perceive it as a problematic issue. Younger journalists tend to be more sensitive to ethical dilemmas and professional uncertainties, while more experienced journalists focus on bias and editorial control. This can be explained by the approach of Lewis et al. (2019), who view AI as reshaping the human–machine relationship and professional roles, or as a form of renegotiation of professional authority, as Møller et al. (2025) see it. Gender differences, on the other hand, do not have a significant impact on journalists' perception of AI. Based on this data, we estimate that the integration of AI in newsrooms in the Western Balkan countries is influenced more by organisational and institutional factors than by the individual characteristics of journalists.

After analysing the data and results discussed above, our assessment is that this study contributes to the literature in the field in at least three ways. First, it serves as an important reference in understanding the difference between the integration of AI in television and online newsrooms, particularly in a region like the Western Balkans, where research on this topic has been lacking, or superficial. Second, the UTAUT model, commonly used in technology-related studies, was applied in this study within the context of journalism and the dynamics surrounding it in this era of artificial intelligence. This approach allowed for the

analysis of AI integration in newsrooms not only from a technological standpoint but also with regard to organisational conditions and professional perceptions within newsrooms. Furthermore, the study goes beyond interpreting journalists' attitudes as resistance to AI integration and instead frames them within organisational and professional uncertainties accompanying technological change, emphasising the journalist's role as a guarantor of credibility and professional culture within media in this region.

On the other hand, the study should be read within rational limits. First, it relies on data collected in only three Western Balkan countries, leaving out other countries and creating difficulties in generalising the results for the entire region. In this context, our suggestion is that the results be read in the context of transitional media systems. Second, the study focuses on individual journalists and editors, rather than on the managerial and ownership structures, because they constitute the frontline professional response to AI-related change and are the primary focus of UTAUT-based theorising about technology acceptance. However, these perceptions are inevitably shaped by decisions made at more senior managerial and proprietary levels, which determine which AI tools are approved, funded, or prohibited in the first place, and which our data cannot directly capture. Future research should complement journalist-level surveys such as this one with organisational-level analysis of managerial and ownership decision-making. Third, while the quantitative method can provide perceptions of the population, it cannot really measure the phenomenon. Furthermore, AI is developing very rapidly, and its integration into newsrooms is still in the early stages. The dynamics that characterise this field mean that the situation could change rapidly over short periods of time. Finally, comparative analysis on the level of AI integration in television and online media does not provide complete data on the divisions within each of these groups. The approach to AI integration between public and private televisions, or large and small portals, may differ from each other.

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