

Waldemar Rydzak

<https://orcid.org/0000-0001-5771-933X>
Poznań University of Economics and Business
waldemar.rydzak@ue.poznan.pl

Małgorzata Magdalena Hybka

<https://orcid.org/0000-0002-3524-3489>
Poznań University of Economics and Business
malgorzata.hybka@ue.poznan.pl

Jacek Trębecki

<https://orcid.org/0000-0001-9775-173X>
Poznań University of Economics and Business
j.trebecki@ue.poznan.pl

Małgorzata Tadeusz-Ciesielczyk

<https://orcid.org/0000-0001-8488-578X>
Adam Mickiewicz University Poznań
m.tadeusz-ciesielczyk@amu.edu

Agnieszka Marzęda

<https://orcid.org/0000-0003-2607-4123>
University of Warsaw
a.marzeda@uw.edu.pl
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Municipal Social Media Governance: Organizational Anchoring, Competency Profiles, and Artificial Intelligence Capability

ABSTRACT

Social media have become a routine component of communication in Polish municipalities, yet research has focused more often on platform presence than on the organisational conditions under which this communication is managed. This article examines municipal social media governance, with particular attention to organisational anchoring, operational capacity, formalisation, measurement maturity, response practices in challenging situations, and declared readiness to use AI-based tools. The study is based on a nationwide CAWI survey conducted in the fourth quarter of 2023 among 1,793 municipalities, representing 72.4% of the population. Most respondents (86.1%) reported using social media, with Facebook clearly dominating; therefore, the detailed analyses were conducted within the Facebook module (N = 1,465). Three composite indicators were applied: the Operational Capacity Index (OCI), the Formalization Index (FI), and the Measurement Maturity Index (MMI). The results show that models of organisational anchoring are associated with differences in OCI, FI, and MMI. Regression models controlled for municipality type and

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demographic-financial characteristics. Formalisation is associated with a greater likelihood of performance measurement, while measurement, rather than the mere existence of a communication strategy, co-occurs with more frequent proactive moderation practices. In communication on high-stakes community issues, dialogic objectives are the strongest predictor of including Facebook among preferred communication channels, while image-building objectives are also positively associated with this outcome. Perceived Facebook effectiveness is associated with both communicative objectives and governance maturity. Declared readiness to use AI is associated with measurement maturity, formalisation, and support from municipal authorities, whereas actual AI use is associated primarily with measurement maturity and leadership support. Operational capacity does not emerge as an independent predictor of AI-related outcomes. The findings suggest that municipal social media management is best understood as a governance issue rather than merely a matter of platform presence.

KEYWORDS: social media governance, local government, municipalities, Facebook, public management, formalization, artificial intelligence

STRESZCZENIE

Zarządzanie mediami społecznościowymi w gminach: zakotwiczenie organizacyjne, profile kompetencyjne oraz zdolności w zakresie sztucznej inteligencji

Media społecznościowe stały się rutynowym elementem komunikacji w polskich gminach, jednak dotychczasowe badania częściej koncentrowały się na samej obecności na platformach niż na uwarunkowaniach organizacyjnych, w których komunikacja ta jest zarządzana. Niniejszy artykuł analizuje zarządzanie mediami społecznościowymi w gminach, ze szczególnym uwzględnieniem zakotwiczenia organizacyjnego, zdolności operacyjnych, poziomu formalizacji, dojrzałości pomiarowej, praktyk reagowania w sytuacjach trudnych oraz deklarowanej gotowości do wykorzystania narzędzi opartych na sztucznej inteligencji. Badanie opiera się na ogólnopolskim sondażu CAWI przeprowadzonym w czwartym kwartale 2023 roku wśród 1 793 gmin, co stanowi 72,4% populacji. Większość respondentów (86,1%) zadeklarowała korzystanie z mediów społecznościowych, przy czym wyraźnie dominował Facebook; dlatego szczegółowe analizy przeprowadzono w ramach modułu dotyczącego Facebooka (N = 1,465). Zastosowano trzy syntetyczne wskaźniki: Indeks Zdolności Operacyjnej (OCI), Indeks Formalizacji (FI) oraz Indeks Dojrzałości Pomiarowej (MMI). Wyniki wskazują, że modele zakotwiczenia organizacyjnego wiążą się z różnicami w poziomie OCI, FI i MMI. Modele regresji kontrolowano pod względem typu gminy oraz charakterystyk demograficzno-finansowych. Wyższy poziom formalizacji jest powiązany z większym prawdopodobieństwem prowadzenia pomiarów, natomiast pomiar, a nie samo

istnienie strategii komunikacji, współwystępuje z częstszym stosowaniem proaktywnych praktyk moderacyjnych. W komunikacji dotyczącej kwestii o wysokiej wadze społecznej cele dialogiczne są najsilniejszym predyktorem uwzględniania Facebooka jako preferowanego kanału komunikacji, natomiast cele wizerunkowe są również dodatnio powiązane z tym wynikiem. Postrzegana skuteczność Facebooka wiąże się zarówno z celami komunikacyjnymi, jak i z dojrzałością zarządzania. Deklarowana gotowość do wykorzystania sztucznej inteligencji jest związana z dojrzałością pomiarową, poziomem formalizacji oraz wsparciem ze strony władz samorządowych, podczas gdy faktyczne wykorzystanie AI wiąże się przede wszystkim z dojrzałością pomiarową i wsparciem kierownictwa. Zdolność operacyjna nie wyłania się jako niezależny predyktor wyników związanych z AI. Uzyskane wyniki sugerują, że zarządzanie mediami społecznościowymi w gminach należy postrzegać przede wszystkim jako problem zarządczy (*governance*), a nie jedynie kwestię obecności na platformach.

KEYWORDS: zarządzanie mediami społecznościowymi, samorząd lokalny, gminy, Facebook, zarządzanie publiczne, formalizacja, sztuczna inteligencja

1. Introduction

The rapid development of information and communication technologies, initiated by the Web 2.0 revolution, has fundamentally reshaped the relationship between public institutions and citizens. Social media have become not only channels for disseminating information but also an infrastructure of everyday interactions where citizens' expectations regarding transparency, responsiveness, and the quality of communication are continuously articulated and in a publicly visible manner. From the perspective of local government, presence on social media is often described as an element of administrative modernisation; at the same time, it entails managerial decisions concerning the allocation of responsibilities, the provision of resources, the definition of communication objectives and performance measures, as well as the development of procedures for responding to challenging situations and discursive risks (Millard, 2023; Sfetcu, 2024; Stone, 2025).

The scale of this phenomenon indicates that this is no longer an incidental feature of municipal communication channels, but rather a durable component of local government operations. In the study forming the empirical basis of this article, 86.1% of municipalities that answered this question reported the use of social media, with Facebook clearly dominating as the platform used by the vast majority of active municipalities. This pattern is consistent with broader findings showing that Facebook remains the principal social media channel used by municipalities in public communication (Bonsón et al., 2012; Bonsón et al., 2015; Sobaci, 2016).

At the same time, mere presence on social media does not determine the maturity of their management. Of greater analytical importance is whether municipalities develop these practices in a planned and organised manner, supported by adequate resources, strategic planning, and performance measurement, or whether they rely primarily on reactive practices, dependent on ad hoc staffing and limited organisational capacities. Although the literature on social media in public administration and local government has documented such issues as publishing activity, content characteristics, and determinants of audience engagement, the organisational “backstage” of this presence remains less explored. This includes the institutional location of responsibility, the competency profiles of those responsible for channel management, the degree of formalisation, and the existence of systematic, data-informed organisational learning (Bertot et al., 2010; Bonsón et al., 2015; Criado & Villodre, 2022; Wang & Medaglia, 2017).

In the Polish context, these issues are particularly salient. Resource constraints, especially in smaller municipalities, may contribute to the persistence of a model in which digital communication is treated as an additional responsibility often at the expense of standardisation, analytics, and risk management. Under such conditions, communication is more likely to remain intuitive than strategically and systematically managed. This observation provides the point of departure for conceptualising municipal social media management as a governance issue rather than merely as a question of platform presence.

Accordingly, this article examines how organisational anchoring, operational capacity, formalisation, and measurement practices relate to the ways in which municipalities manage their social media presence. Attention is also devoted to the growing role of artificial intelligence-based tools in municipal communication. Rather than treating AI as an isolated technological trend, the article considers whether declared readiness to use such tools is associated with broader patterns of managerial maturity, including formalisation, measurement, and organisational support (Hybka et al., 2024; Rydzak, 2023).

The contribution of this article lies in shifting attention from the question of whether municipalities use social media to how this use is organised and governed in practice. Given the declarative and cross-sectional nature of the dataset, the article does not seek to assess the actual effectiveness of municipal social media communication on social media platforms directly. Instead, it identifies patterns of association within the organisational dimension of municipal social media governance and interprets them in the light of the existing literature on public sector communication, institutionalisation, and digital maturity (Criado & Villodre, 2022; Stone et al., 2024).

2. Literature Review and Theoretical Framework

2.1. Social Media in Local Government: Between Transparency, Participation, and Emerging Risks

The use of social media by public institutions is most commonly justified by their potential to strengthen transparency, accountability, and citizen participation. From the perspective of e-government, social media may support a culture of transparency by reducing the costs of information dissemination, facilitating access to public information, and enabling rapid responses to citizens' informational needs (Bertot et al., 2010). At the same time, these effects do not arise automatically from the adoption of digital tools. Their practical significance depends on the institution's organisational capacity to sustain communication activities, including content creation, monitoring public reactions, responding to inquiries, and managing interactions under conditions of heightened public attention and conflict.

The literature also shows that social media expose public institutions to new forms of risk. These include foreign information manipulation and interference, conflict escalation, discursive polarisation, violations of deliberative norms, and organisational demands associated with content moderation (Bauschke & Jäckle, 2023; Chan & Yi, 2024; OECD, 2024). Consequently, some institutions may limit the dialogic character of their social media presence and prioritise informational or promotional communication which is perceived as easier to control. This tension is particularly evident at the local level, where the interactions between institutions and residents are especially intensive, while organisational capacity often remain limited.

Although previous research has documented such issues as publishing activity, content characteristics, and audience engagement, the organisational “backstage” of municipal social media communication remains less explored (Sobaci, 2016; Raposo et al., 2024). Relatively little is known about how responsibility for social media is institutionally anchored, how competencies are distributed, how far governance is formalised, and whether municipalities develop routines of measurement and organisational learning.

2.2. Institutionalisation of Social Media Management in Public Administration

In studies of social media in the public sector, the perspective of institutionalisation has gained increasing prominence. Institutionalisation is understood as a transition from ad hoc and fragmented activities towards practices embedded within organisational structures and supported by formal rules, routines, and

leadership. From this perspective, the key question is not simply whether public institutions are present on social media platforms, but whether social media have been integrated into organisational management: whether responsibility is clearly allocated, whether formal procedures exist, and whether communication is supported by organisational leadership (Criado & Villodre, 2022).

This perspective is closely linked to the notion of organisational maturity. In the context of social media governance, maturity may be understood as a configuration of practices that includes the formalisation of objectives, the allocation of responsibility, the existence of strategy, the use of performance measurement, and the development of data-informed learning processes. This understanding is consistent with broader public management frameworks, in which communication is viewed not as an isolated activity but as a managerial function requiring the coordination of time, resources, responsibilities, and organisational change (Mickoleit, 2014; Wang & Medaglia, 2017).

2.3. Organisational Anchoring of Social Media Management

From a governance perspective, one of the central dimensions of social media management is organisational anchoring, understood as the institutional allocation of responsibility for communication and the associated decision-making and accountability structures. The literature describes a range of arrangements, from concentrating responsibility within promotion or public relations units, through decentralised and hybrid models, to outsourcing and ad hoc solutions. Public-sector guidelines and management-oriented studies consistently emphasise that even a basic social media strategy requires clearly defined roles and responsibilities in order to avoid inconsistency, discontinuity, and excessive dependence on individual actors (Mergel, 2012a, 2012b, 2013; Sobaci, 2016).

Research on European local governments indicates that governance arrangements may be associated both with the level of activity and with the character of communication on social media platforms. Studies of municipal Facebook practices suggest that the way profiles are managed may relate to differences in audience engagement, content types, and media formats, which in turn highlights the significance of competencies and work organisation on the administrative side (Bonsón et al., 2012; Bonsón et al., 2015; López Alonso & Moreno López, 2019).

In the Polish context, this perspective is complemented by scholarship that highlights tensions between bureaucratic logic and the logic of digital platforms, as well as the need to embed communication within a broader model of local government management (Guzowski, 2015; Szczuka, 2023). Organisational anchoring should therefore not be understood merely as a structural

feature. It also defines the municipality's capacity to coordinate communication, respond to difficult situations, and maintain minimum standards of transparency and accountability.

2.4. Professionalisation of Resources and Competencies

The professionalisation of social media management involves not only the formal embedding of communication functions within the organisational structure, but also the provision of resources and the development of competencies. In practical terms, this includes the number of people involved, the amount of working time allocated to communication tasks, and the competencies required for content production, moderation, and analysis.

Polish scholarship emphasises that work in social media requires both media-related and organisational competencies, ranging from content and format design to understanding engagement mechanisms and responding to crises and online hate (Kaczmarek-Śliwińska, 2011, 2014, 2016). From a managerial perspective, assigning social media tasks as an “additional duty” without training and analytical support may reinforce intuitive rather than data-informed practices.

International literature increasingly frames social media management in public institutions as a form of trust work. Qualitative studies of municipal channels suggest that individuals managing profiles often function as trust intermediaries and points of institutional access, combining publishing activity with the maintenance of relationships and credibility (Lovari & Materassi, 2021). In this perspective, professionalisation is not reducible to posting frequency; rather, it refers to the organisation's capacity to sustain interaction quality, message coherence, and accountability under conditions of public pressure.

2.5. Strategy, Measurement, and Organisational Learning

Management-oriented approaches emphasise that organisational maturity in social media depends on a cyclical process of planning, implementation, measurement, and adjustment. Strategy plays an integrative role in this process: it helps structure objectives, identify audiences, define moderation rules, select formats, and designate communication channels for sensitive issues. In contrast, the absence of a strategy encourages reactive decision-making and weakens the basis for systematic evaluation.

Empirical studies of European local governments show that content types and media formats affect levels of citizen engagement, reinforcing

the importance of analytics and ongoing testing of communication solutions (Bonsón et al., 2015). At the same time, even institutions that declare dialogic objectives may restrict interaction when dealing with conflict-prone topics. For this reason, it is analytically important to examine together the declared objectives of social media presence, preferred channels for high-stakes community issues, and actual response and moderation practices.

Measurement and evaluation are also increasingly discussed from the perspective of frontline public sector employees. Research in this field suggests that mature communication management requires not only collecting metrics but also interpreting them in relation to public goals and organisational learning (Stone et al., 2024). In the public sector, however, measurement often competes with limited resources and multiple task pressures, which may favour minimal monitoring practices at the expense of deeper evaluation.

2.6. AI and Automation as an Element of Governance

Artificial intelligence, including generative and analytical tools, is increasingly considered a potential support for social media management. Such tools may facilitate content production and adaptation, assist in discourse monitoring, support crisis detection, and enable more advanced forms of analysis. At the same time, the implementation of AI in public institutions requires appropriate governance conditions, including competencies, procedures, quality control, and awareness of legal and reputational risks.

In the Polish context, the issue of municipal readiness to use AI in social media-based communication has already been addressed in earlier research, which linked AI adoption capacity to the level of professionalisation of social media practices, including staff training and the presence of outcome measurement (Hybka et al., 2024). From this perspective, AI can be treated not simply as a technological trend, but as a potential indicator of the broader maturity of communication management. This justifies examining whether declared readiness to adopt AI is associated with resource deficits, support from municipal authorities, and prior measurement and evaluation practices.

2.7. Research Gap and Research Logic

The literature reviewed above leads to three conclusions that justify the research logic adopted in this article. First, social media have become a stable component of municipal communication infrastructure, but their contribution to transparency and participation depends on organisational capacities rather than on technology alone (Bertot et al., 2010). Second, existing studies

of local governments highlight the importance of profile management practices, content choices, competencies, and analytics for shaping communication outcomes (Bonsón et al., 2015; López Alonso & Moreno López, 2019). Third, the institutionalisation perspective suggests that the transition from ad hoc activity to more standardised and routinised management remains a central issue in the public sector, while the AI dimension further underlines the role of measurement maturity and organisational support (Criado & Villodre, 2022; Hybka et al., 2024).

Against this background, the article addresses social media management in municipalities as a governance problem and examines it through four interrelated research questions: the organisational anchoring of responsibility, the relationship between formalisation and measurement, the role of declared communication objectives in the management of high-stakes community issues, and the conditions associated with declared readiness to adopt AI-supported tools.

3. Data and Methods

3.1. Research Design, Research Questions, and Data Collection

The empirical basis of the article is a nationwide quantitative study conducted in the fourth quarter of 2023 using the CAWI technique (Computer-Assisted Web Interviewing), addressed to all municipalities in Poland. Invitations to participate in the study were sent to the official e-mail addresses of municipal offices, and the questionnaire was completed by individuals described as being the most knowledgeable about social media issues in a given unit. This approach was intended to increase the accuracy of information regarding organisational arrangements, resources, and channel management practices.

The analysis is structured around four research questions:

- RQ1: Which models of organisational anchoring of social media management dominate in municipalities, and how are they related to professionalisation, understood in terms of staffing resources, team size, and strategy formalisation?
- RQ2: Is the existence of a strategy, and its age, associated with (a) outcome measurement, (b) the use of analytics, and (c) response practices in challenging situations?
- RQ3: How do the declared objectives of social media presence (informational, dialogic, and image-building) correspond to preferred communication channels for high-stakes community issues and with assessments of Facebook's effects?

RQ4: Is readiness to use AI associated with governance maturity, support from municipal authorities, and operational capacity?

The article focuses on the governance of municipal social media management rather than on direct observation of communication outcomes on digital platforms. Accordingly, the empirical material is used to identify organisational patterns and statistically observable relationships within the declarative dataset.

3.2. Sample, Population Coverage, and Respondent Structure

The study yielded $N = 1,793$ completed questionnaires, corresponding to 72.4% of the total population of municipalities in Poland ($N = 2,477$). This level of coverage substantially reduces the risk of selection bias and provides a strong empirical basis for describing social media management practices in Polish municipalities.

Regarding respondent roles, the survey was completed primarily by general administration staff, municipal secretaries, and employees of units responsible for communication, such as promotion or press offices. This is important given the subject of the study, which concerns the internal organisation of social media management and therefore relies on respondents occupying positions that provide insight into municipal communication routines and responsibilities.

3.3. Measurement Instrument and Thematic Scope

The questionnaire comprised several thematic blocks covering the use of social media and Facebook, objectives of platform presence, organisational arrangements, formal rules and strategies, outcome measurement, response practices in challenging situations, and readiness to use AI-based tools. The instrument was designed to capture both the presence of social media channels and the organisational conditions under which they are managed.

For the purposes of this article, the following modules are of particular importance: (1) resources and organisational anchoring, including the unit responsible for social media and Facebook, direct subordination to municipal authorities, the number of persons involved, and the allocation of working time expressed in full-time equivalents (FTE); (2) measurement and analytics, including declarations regarding whether the municipality evaluates or measures the outcomes of its social media or Facebook activities and which indicators are used; (3) rules of interaction, including the existence of formal rules governing interaction and the year of their introduction; (4) support from

municipal authorities for the use of social media; and (5) the current or planned use of AI-based tools in communication activities.

Given the strong dominance of Facebook in municipal communication practices, analyses concerning Facebook objectives, perceived Facebook effects, channel preferences for high-stakes issues, interaction rules, and Facebook-specific management practices are conducted within the Facebook module. Variables describing broader social media governance, such as measurement, training, support from municipal authorities, organisational anchoring, staffing, and FTE allocation, are analysed for municipalities declaring social media use, with the relevant analytical base reported separately in each table.

3.4. Variables, Operationalisation, and Synthetic Indicators

The empirical analysis is based on variables describing five interrelated areas: (1) the organisational anchoring of social media management, (2) staffing and time resources allocated to communication, (3) the formalisation and maturity of management processes, (4) measurement and analytics practices, and (5) readiness to use artificial intelligence tools. The scope and content of the questionnaire make it possible to analyse both individual variables and broader synthetic indicators describing the quality of management.

Regarding organisational anchoring, the key variable identifies which unit or function within the municipal office is responsible for managing social media. The responses reflect a range of arrangements, including promotion offices, press offices, dedicated units, externally provided management, ad hoc arrangements, and cases without a permanent assignment. This governance dimension is central to RQ1, as it makes it possible to compare responsibility models and relate them to organisational capacity and communication practices.

The second pillar of operationalisation concerns resources, understood as the municipality's capacity to sustain the continuity and quality of its social media activities. Resources are captured using two complementary measures: the number of people involved in managing social media and the amount of work devoted to these activities, expressed in full-time equivalents. This combination makes it possible to distinguish between formally multi-person arrangements with low time allocation and more concentrated arrangements supported by a larger FTE commitment. The resource dimension is relevant to both RQ1 and RQ4.

The third area concerns formalisation, understood as the existence of stable rules and standards for communication on social media. In the study, formalisation is measured primarily through the existence of written strategies and

formal rules of interaction, supplemented, where possible, by information on the age of these documents. This allows formalisation to be treated not only as a binary feature, but also as an indicator of the degree of consolidation of communication practices. This dimension is central to RQ2.

The fourth area concerns measurement and analytics, understood as a basic mechanism of organisational learning. Measurement is operationalised both as the declaration that a municipality evaluates or measures the outcomes of its social media activity and as the scope of such measurement, captured by the number of indicators used. These include, for example, reach, reactions, comments, shares, and follower counts. This dimension is relevant to RQ2 and RQ4, since it reflects the extent to which communication is linked to evaluation and organisational learning.

The fifth area concerns readiness to use artificial intelligence in social media management. This variable includes both current use of AI-based tools and declarations concerning future implementation. In analyses related to RQ4, AI readiness is treated as an outcome variable embedded in a broader organisational context.

To capture the multidimensional character of social media governance more systematically, three synthetic indices were constructed. The Measurement Maturity Index (MMI) combines information on whether a municipality conducts any evaluation or measurement of social media activity with the intensity of measurement, understood as the number of indicators used. The Formalization Index (FI) reflects the degree of institutionalisation of communication rules by considering the existence of formal rules of interaction and, where available, the age of these rules; the presence of a strategy is also included as an element of planned and standardised communication. The Operational Capacity Index (OCI) synthesises organisational and competency-related resources required for the stable management of social media. It is based on the number of people involved, the full-time equivalent allocation, and the presence of competency development practices. The competency component was operationalised as *training any*, coded as 1 when the municipality provided either formal training or informal learning through “learning by doing,” and 0 otherwise.

The three indices were calculated for municipalities using Facebook (N = 1,465), since questions concerning strategy and rules of interaction were addressed exclusively to this group. Consequently, the FI is not defined for municipalities using other social media platforms without Facebook (N = 79). Throughout the article, individual variables and synthetic indices are used in a complementary manner: single variables describe specific organisational arrangements, whereas indices make it possible to identify broader patterns of association. The analytical base differs depending on the scope of the variable. Facebook-specific variables are analysed within the Facebook module, whereas broader social media governance variables are analysed among municipalities declaring social media use.

Regression models use complete cases for the variables included in each specification; therefore, model N may be lower than the descriptive base.

For analyses related to RQ3, the declared objectives of municipal Facebook activity were grouped into three functional categories based on responses from municipalities using Facebook. The most frequently declared objectives included disseminating important information, strengthening ties with citizens, building the image of a modern municipality, and promoting the municipality beyond its borders. These objectives were aggregated into three binary variables: informational objectives, including dissemination of important information, increasing transparency, and reaching specific groups of residents; dialogic objectives, including intensifying interaction and strengthening ties with citizens; and image-building objectives, including building the image of a modern municipality and external promotion. Each variable was coded as 1 if the respondent selected at least one objective belonging to the category and 0 otherwise. For regression analyses in RQ3 and RQ4, municipality type and demographic-financial characteristics were included as control variables. Municipality type was treated as a categorical variable, with urban municipalities serving as the reference category. Demographic-financial characteristics included population size, total revenue per capita, the share of own revenues in total revenues, debt, the age structure of the population, and unemployment.

The analytical strategy combines descriptive statistics with comparative and regression-based analyses corresponding to the four research questions. Given the declarative and cross-sectional nature of the dataset, the results are interpreted as representing patterns of association within the observed organisational field. They do not provide a basis for strong causal claims regarding the actual effectiveness of municipal communication on social media platforms.

4. Results

4.1. Scope of Social Media Use

Out of the 2,477 municipalities in Poland to which invitations to participate in the study were sent, 1,793 local government units provided valid responses to the question on social media use, representing 72.4% of the population. The use of social media was declared by 1,544 municipalities (86.1%) (Table 1). Among municipalities present on social media, configurations based on Facebook clearly dominate: 760 municipalities (49.2%) use Facebook only, 705 (45.7%) combine Facebook with other social media platforms, and 79 (5.1%) use other social media platforms without Facebook (Table 3). Given this pattern and the logic of the questionnaire, Facebook-specific analyses are conducted within the Facebook module ($N = 1,465$), whereas broader governance variables are

analysed among municipalities declaring social media use, with the analytical base reported separately in the relevant tables.

These results confirm that Facebook occupies a central place in municipal social media communication. At the same time, the key analytical issue is not platform presence as such, but the way in which this presence is organised, formalised, and managed within municipal structures.

4.2. RQ1: Organisational Anchoring and the Professionalisation of Management (OCI, FI, MMI)

The model of organisational anchoring significantly differentiates the level of professionalisation measured by the three synthetic indices (Table 14). The Kruskal–Wallis test indicates statistically significant differences for all three measures:

- OCI: $H(6) = 76.40, p < .001, \epsilon^2 = 0.052, N = 1,358$
- MMI: $H(6) = 90.44, p < .001, \epsilon^2 = 0.058, N = 1,465$
- FI: $H(6) = 42.22, p < .001, \epsilon^2 = 0.025, N = 1,465$

These results indicate that the institutional location of responsibility for social media is associated with differences in operational capacity, formalisation, and measurement maturity. The pattern is most visible for the MMI and OCI, while the effect for the FI is weaker, though still statistically significant. In substantive terms, this suggests that organisational anchoring is not a neutral structural feature. Rather, it co-occurs with broader differences in how municipalities allocate resources, formalise communication practices, and develop evaluative routines.

At the same time, the effect sizes remain moderate or modest. This is important for interpretation: the results support the conclusion that organisational anchoring is associated with professionalisation, but they do not justify treating organisational anchoring alone as a sufficient explanation of broader management maturity. Professionalisation appears instead as a multidimensional configuration in which responsibility models coexist with differences in staffing, formalisation, and measurement practices.

4.3. RQ2: Formalisation, Measurement Procedures, and Responses in Challenging Situations

4.3.1. Formalisation and Outcome Measurement

Measurement of social media activity is significantly associated with the level of formalisation. The relationship between the FI and measurement is statistically significant: $\chi^2(2) = 49.41, p < .001, V = 0.184, N = 1,465$. In addition,

the mere presence of a strategy is also associated with measurement, although more weakly: $\chi^2(1) = 15.95, p < .001, V = 0.104, N = 1,465$.

Within the Facebook module, 447 municipalities (30.5%) declare conducting measurement. In the group using other social media platforms without Facebook, this share is much lower and amounts to 5 municipalities (6.3%) (Table 9). The reported set of indicators used in practice, including reach, reactions, comments, and shares, coherently forms the basis of the MMI index (Table 10).

Taken together, these findings suggest that formalisation is associated with a greater likelihood of measurement. At the same time, the difference in effect size between the FI and strategy alone indicates that more developed formalisation matters more than the mere existence of a strategic document.

4.3.2. Measurement and Response Practices (Moderation/Proactivity)

Questions concerning municipal actions in challenging situations were asked only to respondents who had experienced discussions violating norms of civil behaviour or involving hate speech on their Facebook profiles ($N = 1,123$). Within this group, measurement is associated with more frequent use of proactive solutions, defined here as blocking users and/or preventive moderation of comments before publication (Table 7): $\chi^2(1) = 10.79, p = .001, V = 0.098, N = 1,123$.

Proactive practices are declared by 30.8% of municipalities conducting measurement, compared with 21.8% of municipalities not conducting measurement. By contrast, the mere presence of a strategy does not significantly differentiate proactive moderation practices: $\chi^2(1) = 0.67, p = .412, V = 0.025, N = 1,123$.

This pattern suggests that the link between formalisation and proactivity operates less through strategy alone and more through a broader configuration of managerial and evaluative maturity. In other words, municipalities conducting measurement appear more likely to report proactive moderation practices than those relying solely on the existence of strategic documents.

4.4. RQ3: Objectives of Facebook Presence, Channel Choice for High-Stakes Community Issues, and the Assessment of Facebook's Effects

4.4.1. Objectives and the Use of Facebook for High- Stakes Community Issues

Variables concerning preferences for communication channels for high-stakes community issues were operationalised restrictively. The dependent variable

takes the value 1 if Facebook is preferred, either in a mixed configuration or as the dominant channel, in at least two out of three issue areas: property tax rates, local fees and charges, and expenditure cuts in the event of a budgetary crisis (Table 5).

The logistic regression model indicates that dialogic objectives are the strongest predictor of including Facebook among preferred channels for high-stakes community issues (Table 20). Image-building objectives are also positively associated with this outcome. This means that the willingness to use Facebook for difficult topics should not be interpreted solely as a function of relational openness. It is also linked to an active concern with how the municipality is publicly perceived. At the same time, FI, OCI, and MMI do not reach statistical significance in this model (Table 20). This suggests that, in the specific context of high-stakes community issues, channel choice is linked more strongly to the communicative role assigned to Facebook than to formalisation, operational capacity, or measurement maturity alone.

4.4.2. Assessment of the Effects of Facebook Use

The assessment of Facebook's effects was operationalised as the mean of five scale items, with high internal consistency retained in the scale. Regression analyses were conducted on cases with available OCI data ($N = 1,356$). Descriptive assessments of Facebook's effects are presented in Table 8, while regression results are reported in Table 20. The linear regression model shows that higher assessments of Facebook's effects are positively associated with dialogic objectives, image-building objectives, FI, OCI, and MMI (Table 20). The model explains approximately 15.4% of the variance in perceived Facebook effectiveness ($R^2 = 0.154$). These results suggest that more positive evaluations of Facebook are associated not only with declared communication goals, but also with more mature organisational arrangements. Dialogic and image-building objectives are both positively related to perceived Facebook effectiveness. At the same time, FI, OCI, and MMI are also significant, indicating that perceived effectiveness is connected with formalisation, operational capacity, and measurement maturity. The findings should be interpreted cautiously, since the model is based on declarative assessments rather than direct performance indicators. Within this framework, however, they suggest that municipalities with more formalised and measurement-oriented practices are also more likely to perceive Facebook as a useful communication channel (Table 8).

4.5. RQ4: Readiness to Use AI as a Function of Governance and Operational Maturity

The final research question concerned the relationship between governance maturity and the declared readiness to use AI-based tools in municipal social media management. Two dependent variables were analysed: AI readiness, defined as current AI use or declared plans to use AI-based tools, and actual AI use, defined as the current use of AI tools in communication activities. According to Table 17, within the Facebook module ($N = 1,465$), 21.9% of municipalities declare readiness to use AI, understood as either current use or plans for future use, while 7.2% report the actual use of AI tools. This indicates that AI remains at an early stage of adoption in municipal social media management. For this reason, AI readiness and actual AI use were analysed separately.

4.5.1. Readiness Model (Use versus Plans)

In the logistic regression model for AI readiness ($N = 1,356$), the results are as follows:

- MMI: OR = 1.28, 95% CI [1.19; 1.38], $p < .001$
- FI: OR = 1.35, 95% CI [1.00; 1.82], $p = .049$
- Support from municipal authorities: OR = 1.26, 95% CI [1.04; 1.52], $p = .016$
- OCI: OR = 1.02, 95% CI [0.95; 1.09], $p = .602$

These results indicate that declared readiness to use AI is associated with measurement maturity, formalisation, and support from municipal authorities. The OCI does not reach statistical significance in this model. This suggests that declared readiness to use AI is less closely related to staffing and training resources than to the existence of managerial support and evaluative routines.

4.5.2. Actual Use Model (AI_actual)

In the model for actual AI use ($N = 1,356$), the following variables are statistically significant:

- MMI: OR = 1.19, 95% CI [1.07; 1.33], $p < .001$
- FI: OR = 1.42, 95% CI [1.03; 2.15], $p = .099$
- Support from municipal authorities: OR = 1.38, 95% CI [1.01; 1.87], $p = .040$
- OCI: OR = 1.05, 95% CI [0.95; 1.16], $p = .342$

As in the readiness model, actual AI use is associated most clearly with measurement maturity and support from municipal authorities. Formalisation

shows only a borderline association. OCI does not reach statistical significance, which suggests that operational capacity does not emerge as an independent predictor within the model. Overall, the results related to RQ4 indicate that AI-related outcomes are more strongly associated with measurement routines, formalisation, and organisational support than with operational capacity alone. Within the declarative dataset, AI appears less as a simple response to staff shortages and more as a component of broader managerial development.

5. Discussion

5.1. From Social Media Presence to Governance and Professionalisation

The findings confirm that social media have become a routine communication channel for Polish municipalities, with Facebook remaining the central platform both as a stand-alone channel and as a component of broader multi-platform configurations (Tables 1–3). This pattern is consistent with earlier findings in the literature on local government communication, where Facebook is regularly described as the primary platform for interaction with residents and the most important point of reference in studies of municipal social media use (Bonsón et al., 2012, 2015, 2017; Wimberger, 2024, p. 17).

At the same time, the empirical results presented in this article make it possible to shift the analytical focus from the question of whether municipalities are present on social media to how this presence is organised—that is, to the issue of governance: the allocation of responsibility, the securing of resources, the regulation of interactions, learning through measurement, and the management of discursive risk. In this sense, a key contribution of the study lies in showing that municipal social media communication practices are embedded in broader organisational configurations rather than being reducible to platform use alone. This perspective is consistent with broader approaches to public management and institutional communication, in which the quality of communication depends primarily on organisational and processual “backstage” factors rather than on publishing activity alone (Bertot et al., 2010; Millard, 2023; Wang & Medaglia, 2017).

The results suggest that municipal communication practices do not emerge randomly. Rather, they appear as organisational configurations combining responsibility models, resource allocation, formalisation, measurement maturity, and declared readiness to adopt AI-based tools (Tables 9–17). This does not imply a deterministic model of development. It does, however, indicate that municipal social media communication is better understood as a structured organisational practice than as an informal extension of routine administrative activity.

5.2. Organisational Anchoring and Professionalisation (RQ1)

The analysis related to RQ1 indicates that the organisational location of responsibility for social media is associated with differences in operational capacity, formalisation, and measurement maturity (Tables 14–16). This relationship should not be reduced to a simple ranking of organisational units. A more adequate interpretation is configurational: some anchoring models tend to co-occur more often with higher levels of organisational capacity and more developed management routines than others.

The results reported in Table 14, together with the distributions of staffing and full-time equivalent allocations presented in Tables 15 and 16, support the view that institutional embedding matters in social media governance. When responsibility is more clearly located within the municipal structure, it may be easier to sustain continuity, transfer knowledge, standardise activities, and develop at least minimal evaluative routines. Conversely, when responsibility is dispersed or weakly anchored, social media activity may be more vulnerable to ad hoc decision-making and less likely to generate stable organisational learning. Such an interpretation is consistent with the literature stressing that effective public-sector communication depends not only on technological adoption, but also on institutional support and routinisation (Bertot et al., 2010; Criado & Villodre, 2022).

At the same time, the effect sizes observed in the analysis remain moderate or modest (Table 14). This is important, because it suggests that organisational anchoring is an important part of the picture, but not a sufficient explanation of managerial maturity. Professionalisation appears instead as a multidimensional process in which structural responsibility coexists with staffing, training, formalisation, and measurement practices. In this sense, the differences captured by OCI, MMI, and FI should be read as evidence of co-occurring organisational configurations rather than as proof that organisational anchoring alone determines the quality of municipal social media management (Tables 14–16).

5.3. Formalisation, Measurement, and Response Practices (RQ2)

The results related to RQ2 provide a more differentiated picture of formalisation. On the one hand, formalisation, especially when captured by the broader FI index, is associated with a greater likelihood of conducting measurement (Tables 9, 10, and 18–19). This is consistent with management-oriented approaches, in which structured communication is expected to be accompanied by some form of evaluation and monitoring (Stone et al., 2024). Municipalities

with more formalised arrangements appear more likely to connect communication practice with at least basic measurement routines.

On the other hand, the findings suggest that not all forms of formalisation operate in the same way. The mere existence of a strategy is associated with measurement, but this relationship is weaker than in the case of the FI, which combines strategy with rules of interaction and, where possible, document age (Tables 18–19). Moreover, the presence of a strategy does not significantly differentiate proactive moderation practices in challenging situations (Table 7). This distinction is analytically important. It suggests that strategy may have a declarative or orientation-setting role, whereas more operationally relevant practices may depend on a broader configuration that includes formal rules, routines, and measurement maturity.

The association between measurement and more frequent use of proactive moderation practices also deserves attention (Tables 6–10). Within the declarative dataset, municipalities that report conducting measurement are more likely to declare preventive or interventionist actions in challenging situations than those not conducting such measurement (Table 7). This does not demonstrate that measurement causes proactivity. It does, however, support the interpretation that evaluative routines may co-occur with greater organisational readiness to manage interactional risk. In this sense, measurement appears not only as a reporting practice, but also as a possible component of managerial preparedness in digital communication. From the perspective of public relations and crisis communication in the digital environment, such a mechanism is consistent with the logic of early warning and escalation management, in which monitoring—even at a basic level—strengthens the capacity for faster response and more standardised action (Adamus-Matuszyńska et al., 2023; Rydzak, 2016a, 2016b, 2023).

5.4. RQ3: Dialogic and Image-Building Objectives in the Use of Facebook for High-Stakes Community Issues

RQ3 concerns one of the more demanding areas of public communication. On the one hand, municipalities declare dialogic and relational objectives for their social media presence (Table 4). On the other, when dealing with sensitive and potentially conflict-prone issues, they may prefer communication channels perceived as more controllable (Table 5). These two levels are not necessarily contradictory. They may reflect a rational attempt to balance openness with risk management.

A key question, however, is what differentiates municipalities that systematically include Facebook among the preferred channels for high-stakes community issues (Table 5). The model adopted in this article shows that the primary predictor is a dialogic orientation: municipalities that place stronger emphasis

on interaction and relationship-building are more likely to include Facebook in communication about high-stakes issues (Tables 4 and 5). Image-building objectives are also positively associated with this outcome. This means that communicating difficult issues through Facebook should not be interpreted solely as a function of relational openness. It is also linked to an active concern with how the municipality is publicly perceived. A more plausible explanation is therefore that municipalities more willing to use Facebook for high-stakes issues combine dialogic orientation with a broader readiness to manage visibility and public image in a more open communication environment.

At the same time, the broader governance indicators do not emerge as independent predictors in this specific model (Tables 5, 14–16, and 18–19). This suggests that the decision to include Facebook in communication on sensitive issues is associated more with the declared role of social media in municipal communication than with governance maturity as measured by the OCI, FI, and MMI. In interpretive terms, this points to a distinction between communicative orientation and broader organisational maturity. Both matter for municipal communication, but they may matter in different ways and at different stages of the communicative process.

The second part of RQ3 concerns the assessment of Facebook's effects. Here, more positive evaluations are associated not only with dialogic and image-building objectives, but also with the FI, MMI, and OCI (Tables 4, 8–10, 15–16, and 18–19). This suggests that perceived Facebook effectiveness is not explained by communicative objectives alone. It is also associated with the institutional maturity of social media management: formalisation, operational capacity, and measurement maturity. Since these are declarative assessments, the results should not be read as proof of objective effectiveness. They do, however, indicate that more mature communication arrangements are associated with more favourable internal assessments of Facebook's value. In this sense, RQ3 connects with RQ1 and RQ2: Facebook tends to be evaluated more positively where communication is more formalised, more systematically measured, and organisationally better supported.

5.5. RQ4: AI as an Extension of Governance Maturity rather than a "Magic Solution" to Resource Shortages

The results related to RQ4 suggest that readiness to use AI in municipal social media management is more strongly associated with governance maturity than with resource shortages alone (Tables 17 and 21). In the readiness model, measurement maturity, formalisation, and support from municipal authorities are positively associated with AI readiness. In the model predicting actual AI use, the pattern is more selective: actual use is associated primarily with measurement

maturity and support from municipal authorities, while formalisation shows only a borderline association. Operational capacity does not emerge as an independent predictor in either model.

This pattern is important because it complicates a common assumption that AI is primarily adopted where staffing shortages are strongest. In the present study, declared AI readiness appears more closely related to the presence of evaluative routines, formalised communication arrangements, and leadership support than to resource constraints as such (Tables 9–10, 13, 17, and 18–19). This suggests that municipalities may be more likely to consider AI where communication is already embedded in a broader managerial framework. In this sense, AI appears less as an emergency substitute for limited human resources and more as an extension of existing governance maturity.

The role of support from municipal authorities is also meaningful (Table 13). Within the declarative dataset, leadership support is associated both with AI readiness and with actual AI use (Table 21). This may indicate that technological experimentation in municipal communication depends not only on technical or organisational capacity, but also on symbolic and managerial legitimisation. Such an interpretation fits broader discussions of AI and digital transformation in public communication, where the adoption of new tools depends on organisational acceptance, decision legitimacy, and the ability to embed technology within established processes (Hybka et al., 2024; Rydzak, 2023).

At the same time, the weaker role of OCI suggests that staffing and competency-related resources may facilitate implementation without independently explaining either AI readiness or actual AI use (Tables 11, 12, 15, and 16). A plausible interpretation is that resources matter as part of the organisational environment, but that AI-related capabilities are more directly associated with measurement routines, formalisation, and institutional support.

5.6. A Broader Interpretation of the Findings

Taken together, the results support an interpretation in which municipal social media management is best understood as a multidimensional organisational practice. Organisational anchoring is associated with operational capacity, formalisation, and measurement maturity (Tables 14–16); formalisation is associated with measurement (Tables 9–10 and 18–19); measurement co-occurs with more proactive moderation (Tables 6–7); and AI readiness is linked primarily to measurement maturity, formalisation, and support from municipal authorities, while actual AI use is associated mainly with measurement maturity and leadership support (Tables 17 and 21). These relationships should not be interpreted as a linear causal chain. However, they do suggest that different dimensions of professionalisation tend to cluster together.

This broader pattern is consistent with the institutionalisation perspective in the literature. Social media management appears less like an isolated communication task and more like a field in which responsibility, routines, support, evaluation, and technological readiness are gradually combined into more stable organisational arrangements. From this point of view, the article contributes to research on digital public communication by showing that the managerial “backstage” of social media use deserves analytical attention.

6. Study Limitations and Directions for Future Research

The study should be interpreted in light of several methodological boundaries inherent in its design. First, the article is based on a declarative perspective, that is, on responses provided by individuals responsible for social media activities in municipalities. This makes the dataset well suited to analysing organisational arrangements, formalisation, measurement practices, and declared readiness for innovation, while at the same time limiting direct insight into platform-level communication performance.

Second, some analytical blocks apply specifically to municipalities using Facebook. This reflects the clear empirical dominance of Facebook in the surveyed population and justifies the use of the Facebook module in more detailed analyses. At the same time, it means that the conclusions should be treated primarily as referring to Facebook-centred municipal social media governance rather than to all possible multi-platform configurations.

Third, the synthetic indices used in the article (OCI, FI, and MMI) are analytically useful tools for capturing broader dimensions of social media governance, but they remain simplified representations of more complex organisational realities. They should therefore be understood as instruments of comparative analysis rather than exhaustive measures of all aspects of communication management.

Fourth, the AI-related variables capture declared readiness and actual use at a relatively early stage of diffusion. This makes it possible to identify organisational correlates of AI readiness and use, but it does not allow for a detailed assessment of specific tools, workflows, quality of implementation, or the effects of AI on communication outcomes.

Finally, the study has a cross-sectional character. For this reason, the reported relationships are interpreted as patterns of association within the observed organisational field, not as definitive evidence of causal mechanisms.

These limitations do not diminish the value of the study’s main contribution, which lies in examining the organisational “backstage” of municipal social media management on an unusually broad empirical basis. At the same time, they indicate productive directions for future research, especially research

linking survey-based evidence with observational approaches, including content analysis, platform-level interaction data, analyses of internal communication procedures, and longitudinal studies of AI implementation in local government communication. Such extensions could further strengthen our understanding of how governance arrangements relate to observable communication practices.

7. Conclusions

This article shows that municipal social media management in Poland is best understood as a governance issue rather than merely as a question of online presence. The scale of social media use is high, and Facebook remains the central communication channel in the surveyed municipalities (Tables 1–3). At the same time, the main differences between municipalities emerge not at the level of platform adoption itself, but in the organisational arrangements through which social media activity is embedded, supported, formalised, and measured, and linked to strategic communication objectives.

First, the findings indicate that models of organisational anchoring are associated with differences in operational capacity, formalisation, and measurement maturity (Tables 14–16). This suggests that the institutional location of responsibility for social media is not a neutral structural feature. Rather, it tends to co-occur with broader differences in the organisation of communication work. At the same time, the results do not justify a deterministic interpretation: organisational anchoring should be seen as one important dimension of professionalisation, not as its sole source.

Second, the results suggest that formalisation is associated with measurement, but that a strategy alone is not a sufficient condition for more process-oriented management of challenging situations (Tables 7, 9, 10, and 18–19). Municipalities declaring measurement are more likely to report proactive moderation practices, whereas the mere presence of a strategy does not differentiate such behaviour in a statistically significant way. This points to the importance of evaluative routines and operationalised management practices rather than formal documents alone.

Third, in communication on high-stakes community issues, the strongest predictor is dialogic orientation, although image-building orientation is also positively associated with the inclusion of Facebook among preferred channels (Tables 4 and 5). Municipalities declaring stronger dialogic objectives are more likely to include Facebook among the preferred channels for discussing more demanding public issues. This suggests that declared communicative objectives may matter more in this context than the broader governance maturity captured by the OCI, FI, and MMI.

Fourth, readiness to use AI-based tools appears more strongly associated with governance maturity and organisational support than with resource deficits alone (Tables 17 and 21). AI readiness is associated with measurement maturity, formalisation, and support from municipal authorities, whereas actual AI use is associated primarily with measurement maturity and leadership support. Within the declarative dataset used in this study, AI therefore appears less as a simple response to staffing shortages and more as an element of broader managerial development.

Taken together, the results support the interpretation that municipal social media management is a multidimensional organisational practice in which responsibility, resources, formalisation, measurement, and readiness for innovation tend to cluster together. Because the study is based on declarative and cross-sectional data, these findings should be read as patterns of association rather than as definitive evidence of causal relationships or platform-level communication effectiveness. Even so, the study contributes to the literature by demonstrating that the organisational “backstage” of municipal social media use constitutes an important field of inquiry.

From a practical perspective, the findings suggest that municipalities may benefit less from simply expanding their social media presence and more from strengthening the managerial foundations of that presence: clear allocation of responsibility, minimum resource stability, formal rules of interaction, leadership support, and basic measurement routines. These elements do not guarantee communication effectiveness in themselves, but they appear closely related to more mature and more structured forms of municipal social media governance.

Table 1. Municipalities using social media

	Responses	Percentage
We use social media platforms	1,544	86.1
We do not use social media platforms	249	13.9
Total	1,793	100.0

Table 2. Social media platforms used by municipalities

	Responses	
	N	Percentage
Facebook	1,465	94.9%
YouTube	698	45.2%
Instagram	365	23.6%
Twitter	72	4.7%
Other social media platforms	71	4.6%
TikTok	70	4.5%
LinkedIn	25	1.6%
WhatsApp	29	1.9%
Pinterest	5	0.3%
Snapchat	3	0.2%
Vimeo	3	0.2%

Table 3. Use of Facebook and other social media platforms by municipalities

	Responses	
	N	Percentage
Facebook only	760	49.2%
Facebook and other	705	45.7%
Other social media platforms without Facebook	79	5.1%
Total	1,544	100.0%

Table 4. Objectives of municipal Facebook use

	Responses	
	N	Percentage
N = 1,465		
More effective dissemination of important information	1357	92.6%
Intensifying interaction and strengthening ties with citizens	819	55.9%
Building the image of a modern municipality among citizens	635	43.3%
More effective communication with young people	512	34.9%
Promotion beyond the municipality	476	32.5%
Increasing transparency	272	18.6%
More effective reaching communication with older people	64	4.4%
Other objectives	31	2.1%
More effective communication with people from educationally disadvantaged backgrounds	13	0.9%

Table 5. Assessment of Facebook and other communication channels as preferred platforms for discussing selected topics with citizens

	Neither Facebook nor face-to-face meetings		Mainly during face-to-face meetings		Via Facebook as well as face-to-face meetings		Mainly by Facebook	
N = 1,465	N	%	N	%	N	%	N	%
Climate change adaptation measures (e.g. more green areas, coping with heatwaves and heavy rainfall)	88	6.0%	525	35.8%	781	53.3%	71	4.8%
Planning public transport services	155	10.6%	625	42.7%	647	44.2%	38	2.6%
Organisation of childcare	197	13.4%	650	44.4%	580	39.6%	38	2.6%
Participatory (civic) budget	99	6.8%	452	30.9%	812	55.4%	102	7.0%
Property tax rates	452	30.9%	689	47.0%	307	21.0%	17	1.2%
Local fees and charges	444	30.3%	701	47.8%	302	20.6%	18	1.2%
Expenditure cuts in the event of a budgetary crisis	479	32.7%	673	45.9%	294	20.1%	19	1.3%
Organisation of cultural events (e.g. cultural summer programmes or Christmas markets)	29	2.0%	135	9.2%	770	52.6%	531	36.2%
Design of playgrounds, sports facilities, and recreational areas	138	9.4%	471	32.2%	772	52.7%	84	5.7%
Local public services for young people	76	5.2%	255	17.4%	806	55.0%	328	22.4%

Table 6. Municipalities reporting discussions exceeding norms of civil behaviour or involving hate speech

	Responses	
	N = 1,465	Percentage
This has never happened	342	23.3
About once a year	240	16.4
Several times a year	559	38.2
About once a month	153	10.4
About once a week	102	7.0
Several times a week	69	4.7
Total	1,465	100.0

Table 7. Municipal responses to challenging situations on Facebook

N = 1,123	Yes		No	
	% within row		% within row	
Drawing attention to inappropriate behaviour	645	57.4%	478	42.6%
Removing inappropriate comments	452	40.2%	671	59.8%
Ignoring such behaviour	306	27.2%	817	72.8%
Blocking users	219	19.5%	904	80.5%
Preventive moderation of comments before publication	80	7.1%	1043	92.9%

Table 8. Perceived effects of municipal Facebook use

	Mean	Standard deviation
Through our municipality’s use of Facebook, the work of the municipal council becomes more transparent to residents	3.63	0.965
Through our municipality’s use of Facebook, the work of the mayor (city mayor/mayor/village head) becomes more transparent to residents	4.26	0.762
Through our municipality’s use of Facebook, the municipality learns more about citizens’ preferences	3.87	0.825
Through our municipality’s use of Facebook, trust between the municipality and citizens is strengthened	3.74	0.774
Through our municipality’s use of Facebook, more citizens engage in public discourse	3.84	0.826
Using Facebook in communication with citizens is an asset for our municipality	3.67	1.031

Table 9. Evaluation and measurement of municipal social media activities

N = 1,544	Responses	
	N	Percentage
Yes	452	29.3%
No	1092	70.7%
Total	1544	100.0%

Table 10. Methods used by municipalities to measure social media activity

N = 449	Responses	
	N	Percentage
Number of likes	396	88.2%
Reach	374	83.3%
Number of shares	339	75.5%
Number of comments	264	58.8%
Number of followers	204	45.4%
Reaching specific target groups	82	18.3%

Table 11. Formal training provided for staff responsible for municipal social media communication

N = 1,544	Responses	
	N	Percentage
Some	428	27.7%
None	1,116	72.3%
Total	1,544	100.0%

Table 12. Informal training for staff responsible for municipal social media communication (“learning by doing”)

N = 1,544	Responses	
	N	Percentage
Some	437	28.3%
None	1,107	71.7%
Total	1,544	100.0%

Table 13. Assessment of the statement: “municipal authorities support the use of social media”

N = 1,531	Responses	
	N	Percentage
Strongly disagree	21	1.4%
Disagree	32	2.1%
Neither agree nor disagree	307	20.1%
Agree	842	55.0%
Strongly agree	329	21.5%
Total	1531	100.0%

Table 14. Unit responsible for municipal social media

N = 1,531	Responses	
	N	Percentage
Municipal promotion office	757	49.4%
Other	398	26.0%
No permanent assignment	200	13.1%
The mayor (city mayor/mayor/village head) personally manages social media	65	4.2%
Press office	43	2.8%
Separate organisational unit responsible exclusively for social media	38	2.5%
External company	30	2.0%
Total	1531	100.0%

Table 15. Number of persons responsible (partially or fully) for social media communication

N = 1,530	Responses	
	N	Percentage
0.0	50	3.3%
1.0	581	38.0%
2.0	497	32.5%
3.0	235	15.4%
4.0	86	5.6%
5.0	45	2.9%
6.0	20	1.3%
7.0	8	0.5%
8.0	4	0.3%
9.0	1	0.1%
10.0	2	0.1%
11.0	1	0.1%
Total	1530	100.0%

Table 16. Number of employees responsible for social media in municipalities, expressed in full-time equivalents (FTEs)

N = 1,479	Responses	
	N	Percentage
0-0.24	434	29.3%
0.25-0.49	157	10.6%
0.5-0.99	138	9.3%
1.0-1.99	405	27.4%
2.0-2.99	169	11.4%
3.0-3.99	92	6.2%
4.0-4.99	38	2.6%
5.0-5.99	20	1.4%
6.0-10.0	20	1.4%
>10	6	0.4%
Total	1479	100.0%

Table 17. Use of AI in municipal social media activities

N = 1,480	Responses	
	N	Percentage
None	1158	78.2%
None, but we plan to use AI in the future	216	14.6%
Some, for generating own content and analysing external content	39	2.6%
Some, exclusively for analysing external content	1	0.1%
Some, exclusively for generating own content	66	4.5%
Total	1480	100.0%

Table 18. Formalisation of municipal social media activities: strategy and rules of interaction (Facebook Module; N = 1,465)

Formalisation indicator	Category	N (%)
Written social media strategy	Yes	162 (11.1%)
	No	1,303 (88.9%)
Official rules of interaction	Yes	114 (7.8%)
	No	1,351 (92.2%)
Formalisation categories (strategy / rules)	No formalisation	1,210 (82.6%)
	Strategy only	141 (9.6%)
	Rules only	93 (6.3%)
	Strategy and rules	21 (1.4%)

Methodological note: The Facebook module includes municipalities that declare having an official Facebook page. *Strategy* is operationalised as a binary variable (yes/no). *Rules of interaction* are operationalised as a binary variable (yes/no). The *formalisation categories* represents combinations of the strategy and rules variables.

Table 19. Age of the strategy and rules of interaction documents (among municipalities possessing them)

Document	Document age (years)	N (%) among those possessing the document
Written strategy (N = 162)	0–1 year	21 (13.0%)
	2–3 years	16 (9.9%)
	≥4 years	34 (21.0%)
	No data / do not know	91 (56.2%)
Rules of interaction (N = 114)	0–1 year	34 (29.8%)
	2–3 years	35 (30.7%)
	≥4 years	25 (21.9%)
	No data / do not know	20 (17.5%)

Document age was calculated as *the difference between 2023 and the year of document adoption* (0–1 years = documents adopted in 2022–2023; 2–3 years = 2020–2021; ≥4 years = 2019 or earlier).

Table 20. Regression models for RQ3: high-stakes community issues and perceived Facebook effectiveness

Predictor	High-stakes issues OR	95% CI	p	Facebook effects b	95% CI	p
Dialogic objective	1.91	1.43–2.57	< .001	0.209	0.142–0.277	< .001
Image-building objective	1.41	1.05–1.91	.024	0.099	0.030–0.168	.005
FI	1.28	0.95–1.73	.106	0.123	0.047–0.199	.002
OCI	1.02	0.96–1.09	.533	0.030	0.013–0.046	< .001
MMI	1.01	0.93–1.09	.865	0.073	0.054–0.092	< .001
N	1356			1356		
R ²	–			0.154		

Notes: The first model is a binary logistic regression predicting whether Facebook is included among preferred channels for at least two out of three high-stakes community issues. The second model is a linear regression predicting perceived Facebook effectiveness. Both models control for municipality type and demographic-financial characteristics: population size, total revenue per capita, share of own revenues in total revenues, debt, age structure, and unemployment. OR = odds ratio; b = unstandardised coefficient; CI = 95% confidence interval.

Table 21. Logistic regression models for RQ4: AI readiness and actual AI use

Predictor	AI readiness OR	95% CI	p	Actual AI use OR	95% CI	p
MMI	1.28	1.19–1.38	< .001	1.19	1.07–1.33	.001
FI	1.35	1.00–1.82	.049	1.42	0.94–2.15	.099
Support from municipal authorities	1.26	1.04–1.52	.016	1.38	1.01–1.87	.040
OCI	1.02	0.95–1.09	.602	1.05	0.95–1.16	.342
N	1356			1356		

Notes: Both models are binary logistic regressions. AI readiness is defined as current AI use or declared plans to use AI-based tools. Actual AI use is defined as current use of AI tools. Both models control for municipality type and demographic-financial characteristics: population size, total revenue per capita, share of own revenues in total revenues, debt, age structure, and unemployment. OR = odds ratio; CI = 95% confidence interval.

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Author Contributions

Waldemar Rydzak: Conceptualization, theoretical framework, methodology, investigation, data collection, data curation, formal analysis, interpretation of results, writing—original draft, writing—review and editing.

Małgorzata Magdalena Hybka: Conceptualization, theoretical framework, methodology, investigation, data collection, interpretation of results, writing—original draft, writing—review and editing.

Jacek Trębecki: Conceptualization, theoretical framework, methodology, investigation, data collection, data curation, writing—review and editing.

Małgorzata Tadeusz-Ciesielczyk: Literature review, writing—review and editing.

Agnieszka Marzęda: Literature review, writing—review and editing.

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Waldemar Rydzak, PhD, is an Associate Professor at the Poznań University of Economics and Business, specializing in strategic communication and public relations. His research focuses on crisis communication, corporate reputation, and the role of information in contemporary economies. He is the author and editor of several monographs and numerous peer-reviewed publications, including articles in international journals with impact factors. His work covers both theoretical and empirical aspects of communication, digital transformation, and information management. He has contributed to international research collaborations, including the European Communication Monitor. His research integrates academic inquiry with applied perspectives on communication management.

Małgorzata Magdalena Hybka, PhD, is an Associate Professor at the Poznań University of Economics and Business, specializing in public finance. She obtained her habilitation degree in Finance in 2011 and has since developed an extensive academic and administrative profile. She has served as Head of the Department of Public Finance and currently leads the Postgraduate Studies in Taxation and Tax Advising. She was a co-initiator and the first coordinator of the English-language Bachelor's and Master's programmes in Finance at PUEB. Her research interests include comparative taxation, international finance, behavioural economics, and political economy. Her work combines academic research with engagement in curriculum development and higher education management.

Jacek Trębecki, PhD, is a Lecturer and researcher at the Poznań University of Economics and Business, Department of Information Economics. He is the author of numerous scientific publications and a member of several international research teams. His research interests focus on the behavioural aspects of communication, including internal communication, social media, the effects of AI, and local government communication. He combines academic work with applied research and collaboration with public institutions. His work addresses contemporary challenges in communication management. He is actively involved in interdisciplinary research initiatives.

Małgorzata Tadeusz-Ciesielczyk, PhD, is an Assistant Professor, researcher, and practitioner specializing in behavioural science, communication, and public speaking. Her work focuses on the application of behavioural insights to security, communication effectiveness, and professional interactions. She leads interdisciplinary initiatives integrating research, training, and advisory activities, including collaboration with international institutions. Her expertise covers nonverbal communication, stress management, and behavioural analysis in high-stakes environments. She actively develops educational programs and delivers training for business and public sector professionals. Her work bridges academic research with practical applications in communication, leadership, and personal branding.

Agnieszka Marzęda, PhD, is a Lecturer at the University of Warsaw specializing in social communication and public relations, with a background in marketing and PR. She has over 20 years of experience in the publishing industry, including serving as a Publishing Director. Her research and professional interests focus on digital marketing, self-publishing, and the use of new technologies in business. Her work spans communication strategy, marketing, and e-commerce. She combines academic teaching with practical implementation and collaboration with industry partners. She is also engaged in supporting emerging talent and innovation in the publishing sector.