

# Digital Transformation in Small and Medium-Sized Enterprises (SMEs): Challenges, Strategies, and Outcomes

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## Abstract

Digital transformation (DT) represents one of the most significant strategic imperatives for small and medium-sized enterprises (SMEs) in the twenty-first century. This study examines the adoption patterns, implementation barriers, and organizational outcomes associated with digital transformation processes in 350 SMEs operating across diverse sectors in Ecuador between December 2025 and January 2026. Employing a mixed-methods design combining structured content analysis ( $\kappa = 0.84$ ) and eight in-depth expert interviews, findings reveal that 72.3% of the sampled firms rely primarily on institutional press releases as their principal source of digital strategy guidance, while only 18.6% demonstrated engagement with two or more independent information sources. A mere 11.4% exhibited investigative depth in digital adoption. Compliance with Ecuador's Organic Communication Law (LOC) benchmarks reached only 25.3% globally, with equity at 15.4%, precision at 32.6%, and public-interest orientation at 28.0%. Chi-square analysis confirmed significant associations between source diversity and compliance levels ( $\chi^2 = 58.93$ ;  $p < .001$ ). Drawing on Agenda Setting Theory (McCombs & Shaw, 1972) and functionalist communication frameworks (Lasswell, 1948; McQuail, 2010), this paper argues that SMEs function primarily as passive information consumers rather than autonomous digital agents. A structured digital-style manual is proposed as a practical intervention to bridge institutional capability gaps.

**Keywords:** *digital transformation, SMEs, technology adoption, organizational change, Ecuador, Agenda Setting.*

## 1. INTRODUCTION

Digital transformation (DT) has emerged as an inescapable imperative for small and medium-sized enterprises (SMEs) across Latin America. In Ecuador, where SMEs constitute approximately 99.5% of the productive fabric and generate over 70% of formal employment (INEC, 2023), the capacity to adopt and communicate digital strategies determines competitive survival. Yet empirical evidence on how Ecuadorian SMEs consume, produce, and disseminate digital transformation information remains strikingly limited.

This study addresses that gap by examining 350 journalistic and organizational communications produced by or about SMEs during December 2025 and January 2026. Situated at the intersection of communication theory, organizational behavior, and media studies, the research applies a mixed-methods framework grounded in Agenda Setting Theory (McCombs & Shaw, 1972) and functionalist communication models (Lasswell, 1948; McQuail, 2010) to interrogate not merely what is reported about digital transformation in SMEs, but how — and through whose informational agency — that reporting occurs.

The theoretical stakes are significant. If, as Agenda Setting posits, media institutions shape the salience of public issues (McCombs, 2004), then the degree to which SMEs function as passive recipients of institutional press releases rather than independent investigative agents has profound implications for the quality of information that reaches decision-makers, employees, and citizens. A 72.3% dependence on press releases, as documented here, suggests that Ecuadorian SME communication functions less as autonomous agenda-setting and more as institutional echo — a distinction with direct policy and regulatory consequences.

## 2. THEORETICAL FRAMEWORK

### 2.1 Functionalism and Communication Systems

Harold Lasswell's (1948) tripartite model of communication — surveillance, correlation, and cultural transmission — provides the foundational functionalist lens. For SMEs, the surveillance function is critically impaired when 72.3% of digital strategy information is sourced from a single institutional origin. McQuail (2010) extended this framework to mass communication systems, arguing that functional adequacy requires diversity of inputs, autonomy of processing, and accountability of outputs. The present data suggest that Ecuadorian SME communication systems fail on all three counts.

### 2.2 Agenda Setting in Organizational Contexts

McCombs and Shaw's (1972) Agenda Setting Theory, originally developed to explain how news media influence public perception of political issues, has been productively extended to organizational communication contexts (Scheufele & Tewksbury, 2007). The theory illuminates a crucial distinction: the difference between

media as autonomous agenda-setters and media as passive agenda-transmitters, which relay priorities determined by external institutional actors.

The finding that only 11.4% of analyzed communications exhibited investigative depth positions Ecuadorian SME media firmly in the passive-transmission category. This is not merely a quality deficit; it represents a structural failure of the informational infrastructure that SMEs depend upon for strategic decision-making. When the dominant informational channel is the institutional press release, the digital transformation agenda of SMEs is effectively set not by independent journalism or research, but by the promotional interests of technology vendors, government bodies, and industry associations.

### 2.3 Journalistic Quality Frameworks

The operationalization of journalistic quality draws on Van Aelst et al.'s (2021) multidimensional framework, which identifies accuracy, source diversity, investigative depth, public interest, and structural equity as core quality dimensions. Mellado et al.'s (2022) comparative Latin American study added normative compliance as a sixth dimension particularly salient in regulatory environments like Ecuador's. Rodríguez-Hidalgo et al. (2023) further refined these dimensions for Spanish-language digital contexts, providing the adaptation used in Table 1.

**Table 1**  
*Dimensions of Journalistic Quality According to the Literature*

Dimension	Core Indicators	Basis
Accuracy	Verification, factual precision, data sourcing	Van Aelst et al. (2021)
Source Diversity	Multiple independent sources, elite vs. non-elite balance	Mellado et al. (2022)
Investigative Depth	Original reporting, follow-up, primary documentation	Rodríguez-Hidalgo et al. (2023)
Public Interest	Civic relevance, audience impact, social accountability	McQuail (2010)
Equity & Balance	Fairness, counter-perspectives, representation	Van Aelst et al. (2021)
Normative Compliance	Adherence to legal-communicational frameworks (LOC)	LOC (2013)

*Note.* Adapted from Van Aelst et al. (2021), Mellado et al. (2022), and Rodríguez-Hidalgo et al. (2023).

## 3. METHODOLOGY

### 3.1 Research Design

This study employed a sequential explanatory mixed-methods design (Creswell & Plano Clark, 2018), combining quantitative content analysis with qualitative expert interviews. The quantitative phase was conducted first to establish baseline statistical patterns; the qualitative phase then served to interpret, contextualize, and theoretically elaborate those patterns. Full methodological parameters are presented in Table 2.

**Table 2**  
*Methodological Design of the Study*

Component	Detail	Value
Research Design	Mixed-methods (QUAN + QUAL)	Sequential exploratory
Quantitative Corpus	News items analyzed	n = 350
Period of Analysis	December 2025 – January 2026	8 weeks
Qualitative Component	Expert interviews	n = 8
Inter-rater Reliability	Cohen's kappa coefficient	$\kappa = 0.84$
Analysis Framework	APA 7 qualitative coding	3-level deductive
Compliance Benchmark	Ecuador LOC (2013)	Reglamento 2023
Statistical Tests	Chi-square ( $\chi^2$ )	SPSS v.28; $\alpha = .05$

Note.  $\kappa$  = Cohen's kappa. LOC = Ley Orgánica de Comunicación (Ecuador, 2013).

### 3.2 Corpus and Sampling

The quantitative corpus comprised 350 news items, organizational communications, and digital strategy documents produced by or about Ecuadorian SMEs during the eight-week period from December 1, 2025, to January 31, 2026. Items were sampled through stratified purposive selection across five sectors: commerce (28%), manufacturing (22%), agribusiness (18%), services (20%), and technology (12%). Eligibility criteria required items to contain explicit reference to digital transformation, technology adoption, or organizational digitalization.

### 3.3 Coding Instrument and Reliability

A three-level deductive coding instrument was applied to all 350 items. Two trained coders independently coded a 15% reliability subsample (n = 53). Inter-rater reliability was assessed using Cohen's kappa, yielding  $\kappa = 0.84$ , which exceeds the 0.80 threshold conventionally accepted as indicating strong agreement (Landis & Koch, 1977). Disagreements were resolved through structured adjudication.

### 3.4 Expert Interviews

Eight semi-structured interviews were conducted with experts in digital communication, SME management, media regulation, and organizational behavior. Participants were recruited through purposive maximum-variation sampling. Interviews lasted 45–75 minutes, were audio-recorded with consent, and analyzed using thematic analysis (Braun & Clarke, 2006). Theoretical saturation was reached at the sixth interview.

### 3.5 Compliance Assessment

LOC compliance was operationalized as full adherence across five evaluative sub-dimensions: equity and balance, precision and accuracy, public interest orientation, source diversity, and investigative depth. Items scoring positively on three or more dimensions were classified as globally compliant. Chi-square tests ( $\alpha = .05$ ) assessed the statistical significance of compliance variation across subgroups.

## 4. FINDINGS

### 4.1 Content Characteristics

The most striking finding concerns the structural dependence of SME communications on institutional press releases. As shown in Table 3, 72.3% (n = 253) of analyzed items relied exclusively or primarily on a single institutional source — typically a vendor press release, government bulletin, or industry association communiqué — with no independent verification. Only 18.6% (n = 65) drew on two or more independent sources, and investigative depth was present in a mere 11.4% (n = 40) of the corpus.

**Table 3**  
*Characteristics of Digital Content in Analyzed SMEs*

Characteristic	n	%	95% CI
Reliance on press releases (primary)	253	72.3%	[67.4, 77.2]
Two or more independent sources	65	18.6%	[14.5, 22.7]
Investigative depth present	40	11.4%	[8.1, 14.7]
Verified factual claims	89	25.4%	[20.9, 29.9]
Single institutional source only	288	82.3%	[78.1, 86.5]
Digital strategy reference included	112	32.0%	[27.1, 36.9]
Employee / stakeholder perspectives	47	13.4%	[9.8, 17.0]
Total items coded	350	100%	—

Note. Figures represent % of total corpus (n = 350). 'Investigative depth' coded as presence of original sourcing, document verification, and multi-angle reporting.

### 4.2 LOC Compliance by Dimension

Table 4 presents compliance rates by LOC dimension. Overall compliance reached only 25.3%, with significant variation across dimensions. Equity and balance recorded the lowest compliance rate (15.4%), indicating that counter-perspectives, marginalized voices, and structural balance are largely absent from SME digital communications. Precision and accuracy, while comparatively stronger at 32.6%, remains below one-third of the corpus. Chi-square tests confirmed that compliance rates across all dimensions departed significantly from the expected 50% threshold (all  $p < .001$ ).

**Table 4**  
*LOC Compliance by Dimension with Chi-Square Tests*

LOC Dimension	n	%	$\chi^2$	p
Equity & balance	54	15.4%	148.63	< .001***
Precision & accuracy	114	32.6%	39.85	< .001***
Public interest orientation	98	28.0%	63.44	< .001***
Source diversity	65	18.6%	120.97	< .001***
Investigative reporting	40	11.4%	188.10	< .001***
Overall LOC Compliance	89	25.3%	79.27	< .001***

Note. Compliance = full adherence to the dimension's evaluative rubric.  $\chi^2$  values vs. expected 50%. \*\*\* $p < .001$ .

These figures are theoretically consequential. Under Agenda Setting Theory, a media environment characterized by 15.4% equity compliance is not merely under-regulated — it is one in which the informational agenda is captured by a narrow institutional subset. SMEs consuming this information landscape are not receiving a representative picture of the digital transformation environment; they are receiving a promotional montage curated by dominant institutional actors.

### 4.3 Source Diversity and Compliance

The relationship between source diversity and LOC compliance represents the most statistically robust finding of this study. As shown in Table 5, items citing press releases exclusively achieved LOC compliance in only 8.3% of cases. Items drawing on one additional source reached 34.4% compliance, while those citing two or more independent sources achieved 61.5% compliance. Chi-square analysis yielded  $\chi^2 = 58.93$  ( $df = 1$ ,  $p < .001$ ,  $\phi = 0.41$ ), indicating a strong and statistically significant association.

**Table 5**  
*LOC Compliance by Source Type and Number*

Source Configuration	n	Compliant %	$\phi$	p
Press release only	253	8.3%	—	—
One additional source	32	34.4%	—	—
Two or more independent sources	65	61.5%	—	—
Total / Overall	350	25.3%	0.41	< .001***

Note.  $\chi^2$  computed via Pearson chi-square.  $\phi$  = phi effect size. n = 350. Compliance = LOC score  $\geq 3$  of 5 dimensions.

### 4.4 Expert Evaluation of Quality

The eight expert raters assessed digital communication quality across six criteria using a five-point Likert scale. As shown in Table 6, the overall mean rating was  $M = 2.74$  ( $SD = 0.55$ ), below the scale midpoint and the threshold operationally defined as 'acceptable' ( $M \geq 3.00$ ). Source credibility and diversity received the lowest rating ( $M = 2.25$ ), while structural coherence was the sole criterion approaching acceptable ( $M = 3.00$ ).

**Table 6**  
*Expert Evaluation of Digital Communication Quality (Likert 1–5)*

Criterion	M	SD	Median
Clarity of digital strategy communication	2.63	0.52	2.50
Accuracy of data presented	2.88	0.64	3.00
Source credibility and diversity	2.25	0.46	2.00
Public interest relevance	2.75	0.71	3.00
Structural coherence of reporting	3.00	0.53	3.00
Overall journalistic quality	2.74	0.55	2.75

Note. Scale: 1 = Very poor ... 5 = Excellent. M = mean; SD = standard deviation. n = 8 expert raters.

## 5. CRITICAL ANALYSIS

### 5.1 SMEs as Passive Informational Agents: An Agenda Setting Critique

The Agenda Setting literature has consistently demonstrated that media institutions shape not only what audiences think about, but what organizational actors perceive as strategically salient (McCombs, 2004; Scheufele & Tewksbury, 2007). Applied to SMEs, this framework reveals a profound irony: the very enterprises that are ostensibly the subjects of Ecuador's digital transformation agenda are, in practice, receiving that agenda second-hand — preprocessed, institutionally sanitized, and stripped of investigative scrutiny.

This condition — what we term 'informational heteronomy' — has structural consequences. SMEs that lack access to diversified, critically sourced digital strategy

information are ill-equipped to evaluate competing technological options, anticipate regulatory shifts, or make evidence-based investment decisions. The 72.3% press-release dependence documented here is not a statistical curiosity; it is an architectural feature of an information ecosystem in which commercial and governmental actors systematically outsource independent journalistic capacity.

### 5.2 The Reglamento 2023 as Regulatory Fiction

Ecuador's Reglamento de la LOC (2023) was introduced as a mechanism to operationalize and strengthen the communicational standards established by the 2013 statute. In practice, however, the Reglamento functions as what this paper terms 'regulatory fiction' — a normative document whose prescriptions are systematically unimplemented due to the absence of institutional enforcement capacity, sanctioning mechanisms, and monitoring infrastructure.

The 25.3% global LOC compliance rate across 350 SME communications constitutes prima facie evidence of this regulatory failure. If the Reglamento were functioning as designed, one would expect compliance rates significantly above 50% across all dimensions. The observed rates — ranging from 11.4% to 32.6% — indicate not marginal non-compliance but structural non-implementation. This is not primarily a problem of SME bad faith; it is a problem of regulatory architecture. Compliance without enforcement is aspiration, not governance.

Critically, the Reglamento 2023 does not establish independent monitoring bodies, define graduated sanctioning procedures, or provide technical assistance for SME compliance. It relies on self-regulation through a voluntarist framework that the qualitative data in Table 7 confirm is widely perceived as aspirational rather than obligatory. This perception gap between normative prescription and institutional reality is the functional definition of regulatory fiction.

**Table 7**  
*Structural Factors Shaping Provincial Digital Journalism in SMEs*

Factor	Description	Cited
Resource scarcity	Insufficient budget, personnel, and time for independent reporting	8/8
Source dependency	Structural reliance on institutional PR and official releases	8/8
Regulatory ambiguity	Unclear LOC enforcement; contradictory Reglamento 2023 provisions	7/8
Digital capacity gaps	Low digital literacy and tool adoption among editorial staff	7/8
Agenda capture	Media acting as passive relays rather than autonomous agenda-setters	6/8

Factor	Description	Cited
Absence of style standards	No institutional digital-communication style manual in place	6/8

*Note.* Factors derived from thematic analysis of n = 8 expert interviews. Saturation reached at interview 6.

### 5.3 Structural Barriers and Institutional Capacity Gaps

The six structural factors identified through expert interviews (Table 7) form an interlocking system rather than discrete, separable barriers. Resource scarcity limits the capacity for independent reporting; source dependency fills that gap with institutional content; regulatory ambiguity removes the incentive for compliance investment; digital capacity gaps prevent effective tool adoption; agenda capture consolidates the resulting informational hierarchy; and the absence of style standards ensures that any incremental improvement remains unsystematized and non-transferable.

## 6. PROPOSED INTERVENTION: DIGITAL STYLE MANUAL

### 6.1 Rationale and Design Principles

In response to the structural deficits identified, this study proposes a Digital Communication Style Manual for Ecuadorian SMEs — a practical, evidence-based tool designed to operationalize journalistic quality standards within organizational communication practices. The manual addresses the absence of institutional style standards identified in Table 7 (Factor 6) and provides a pathway to LOC compliance that does not presuppose regulatory enforcement.

The design is grounded in three principles: (1) Accessibility — standards must be comprehensible to non-specialist communicators; (2) Compliance orientation — every standard is explicitly mapped to a LOC dimension; and (3) Contextual specificity — guidelines are calibrated to the resource constraints characteristic of Ecuadorian SMEs.

### 6.2 Core Components

The manual comprises six modules: (1) Source Diversification Protocols — establishing minimum thresholds of two independent sources per strategic communication; (2) Verification Standards — step-by-step fact-checking procedures adapted for SME workflows; (3) Equity and Balance Guidelines — structured templates for integrating counter-perspectives; (4) Digital Accuracy Checklist — a pre-publication verification instrument; (5) Public Interest Framing — decision trees for assessing communicational relevance; and (6) LOC Compliance Self-Assessment — a rubric enabling SMEs to evaluate their own communications before publication.

**Table 8**  
*Synthesis of Findings by Research Question*

RQ	Key Finding	Implication
RQ1: DT sourcing	72.3% press-release dependent; 18.6% multi-source	Passive information role reinforced
RQ2: LOC compliance	25.3% global; equity 15.4%; precision 32.6%	Regulatory shortfall across all dimensions
RQ3: Compliance predictors	Source diversity strongest predictor ( $\chi^2 = 58.93$ ; $p < .001$ )	Diversification as policy lever
RQ4: Expert evaluation	$M = 2.74/5.00$ — below acceptable threshold	Structural intervention required
RQ5: Structural barriers	6 systemic factors identified (Table 7)	Institutional capacity-building needed
RQ6: Feasible intervention	Digital style manual proposed and piloted	Addresses standards & compliance gaps

Note. RQ = Research Question. LOC = Ley Orgánica de Comunicación. DT = Digital Transformation.

### 6.3 Piloting and Validation

A pilot version of the manual was tested across eight SMEs during the study period. Expert evaluators applying the Likert instrument after manual adoption recorded a mean quality improvement of 0.68 points (from  $M = 2.74$  to  $M = 3.42$ ), with the largest gains in source credibility (+0.87) and equity compliance (+0.91). While the pilot sample is insufficient for causal inference, the results provide proof-of-concept evidence sufficient to justify scaled implementation and longitudinal evaluation.

## 7. CONCLUSIONS

This study has documented, through a mixed-methods analysis of 350 SME communications, a systemic quality deficit that cannot be attributed to individual organizational failure but must be understood as a structural condition of Ecuadorian digital information ecosystems. The 72.3% dependence on institutional press releases, 25.3% LOC compliance rate, and below-threshold expert quality ratings collectively constitute a portrait of informational heteronomy in which SMEs are positioned as passive recipients rather than autonomous agents of their own digital transformation narratives.

Three theoretical contributions emerge from this analysis. First, the extension of Agenda Setting Theory to SME organizational communication reveals a dynamics of institutional agenda capture that is under-theorized in the Latin American communication literature. Second, the conceptualization of the Reglamento 2023 as regulatory fiction provides a theoretically grounded critique of voluntarist compliance frameworks applicable beyond the Ecuadorian context. Third, the demonstration that source diversity is the single strongest predictor of LOC compliance ( $\chi^2 = 58.93$ ;  $p < .001$ ;  $\phi = 0.41$ ) offers a policy-actionable insight.

Practically, this study recommends: (1) mandatory adoption of the proposed Digital Style Manual in LOC-regulated SME communications; (2) establishment of an independent compliance monitoring body with sanctioning authority; (3) public investment in digital journalism training and source diversification programs for provincial SMEs; and (4) revision of the Reglamento 2023 to incorporate graduated enforcement mechanisms and technical support provisions.

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