

Case study on the growth and ecosystem of Vietnamese data journalism

Nguyen Minh Tri

Faculty of International Relations & Communications, Ho Chi Minh City University of Foreign Languages – Information Technology, Ho Chi Minh City, Vietnam

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ABSTRACT

Background: Data-driven journalism (DDJ) has become a significant part of today's news landscape, though its growth varies widely around the world. Most research has focused on Western countries, leaving us with a limited understanding of places like Vietnam. In Vietnam, state control and limited press freedom sit alongside stricter digital policies and more competitive markets, creating unique ways for DDJ to develop. **Purpose:** This study explores how data-driven journalism started and grew in Vietnam, highlighting what makes it special, the challenges it faces, and where it might head in the future. **Methods:** The study adopts a friendly, inclusive approach using a mixed-methods framework. It thoughtfully combines a systematic review of academic literature spanning 2003 to 2025 with a qualitative analysis of national digital transformation and media policy documents. Additionally, it features engaging case studies of well-known Vietnamese news organizations, offering comprehensive, relatable insight into the topic. **Results:** While laws support openness, accessing public data in Vietnam remains challenging. Digital journalism tends to focus more on storytelling with images rather than heavy data. However, positive steps are underway. Still, many reporters aren't familiar with coding, and oversight rules can make their work more difficult. We're seeing progress and hope for more improvements soon. **Conclusion:** The study shows that DDJ has become an important part of digital journalism in Vietnam. However, it still faces some limitations due to existing rules and institutions. **Implications:** This study enriches DDJ scholarship by moving beyond Western-centric methods and underscores the need for improved access to data. It also discusses the importance of professionals continuing to learn and the changing economics of digital media. The rise of Generative AI brings new problems that need flexible solutions.

Keywords: Data-driven journalism; digital-megastory; journalism education; national digital strategy; Vietnamese journalism

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Correspondence: Nguyen Minh Tri, Ho Chi Minh City University of Foreign Languages – Information Technology, 828 Su Van Hanh Street, Hoa Hung Ward, Ho Chi Minh City 72523, Vietnam. *Email:* trinm@hufilit.edu.vn

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INTRODUCTION

Today's media landscape reshapes how we see journalism, pulling data-driven methods into the core of reporting, this shift demands more than viewing numbers as tools that form a separate way of working altogether. One cannot grasp its full role without seeing it as an alternative narrative path. Seeing it only through traditional lenses misses what truly changes behind the scenes. In academic history, "after computers and the internet became more widespread in society, data journalism continued to develop in society" (Ar, 2024). The term data journalism, commonly called data-driven journalism, has been used since 2009 (Asprilla & Maharani, 2019). Data journalism as "a broad genre that can include three distinct journalistic approaches—computer-assisted reporting, data journalism (which also includes data visualization) and computational journalism" (Young et al., 2018). Especially, "computational Journalism is another area of study and practice closely related to data journalism" (Heravi & Lorenz, 2020).

Starting with numbers does not always mean losing the story, but data journalism keeps both (Stalph, 2018). Instead, facts get shaped through careful sorting, number work, and clear visuals to strengthen reporting (Hammond, 2017). One way to see it: raw figures become meaningful when guided by news sense. This form blends old-school storytelling with skills from computing, stats, and design. Not just charts replacing paragraphs, it reshapes how

truth gets shown. In other words, it is merging core press principles with digital methods. Numbers gain context and stories gain depth (Veglis & Bratsas, 2017). Beginning with raw numbers, journalists now blend traditional reporting with number-crunching abilities. Rooted in Paul Bradshaw's concept, "the study follows the Inverted Pyramid of Data Journalism structure" (Bradshaw, 2017). Only after gathering figures and tidying them up does meaning start to emerge. Once patterns show up, a deeper understanding grows through background work. Finally, sharing insights happens mainly through visuals and clear storytelling (Park et al., 2022).

Data-driven journalism can be categorized into four consecutive steps: finding data, interrogating data, visualizing data, and evaluating data (Baack, 2011; Fulda & Neubert, 2013; Imawan, 2018; Sanusi, 2018). Where conventional journalism leans heavily on personal interviews, data-driven reporting positions datasets themselves as witnesses—requiring scrutiny, validation, and critical questioning (Howard, 2014). Though methods differ, both approaches aim to uncover accuracy through structured inquiry.

What stands out about DDJ in today's media environment is its handling of vast flows of data (Howard, 2014). Because so much information circulates nowadays, reporting powered by datasets helps clarify intricate realities, like shifts in the economy, patterns in public health, or how budgets are used (Liu &

Panagiotakos, 2022; Olshannikova et al., 2015). Stories emerge from data when presented this way, often using moving images that encourage exploration without guidance (Segel & Heer, 2010). Engagement grows as passive viewers begin shaping how insights move through communities (Martin et al., 2024).

Looking closely at DDJ in Vietnam means using a theory that treats numbers not as fixed facts, but as shaped by social forces (Howard, 2014). Figures emerge from decisions made by people, shaped by hidden preferences and limits (Ariely & Norton, 2008). Because news operates under government expectations plus market demands, claims about unbiased numbers seem shaky at best (Gentzkow & Shapiro, 2008). Measurement may anchor these statistics, yet their selection reveals whose interests they serve (Scharpf, 1989).

Data access in Vietnam follows patterns shaped by government priorities around digitization, openness in bureaucracy, and control tied to safety concerns (Dang & Nguyen, 2025). Because of that, how data journalism works there ties closely to broader power structures shaping the economy (Hannaford, 2023). The numbers reporters use tend to mirror official views on what supports governance or growth (Kaufmann et al., 2007). Instead of operating freely, their work frequently balances two paths that one driven by digging into concealed facts, another focused on clarifying state-released figures through visuals to help people grasp decisions made at higher levels

(Howard, 2014).

Well into the twenty-first century, Vietnam's approach to digital communication shifted dramatically. Following its first major link to the World Wide Web back in 1997, steady momentum pushed Vietnam toward deep digital immersion (H. N. Nguyen, 2022). By the start of 2025, nearly 78.44 million people across Vietnam were online, about 79.1 percent of the population (Trieu et al., 2024). Because so many individuals now have consistent access, conditions are ripe for storytelling through rich visuals and data-driven reporting.

The drive for digital change in Vietnam began with a clear directive: Decision No. 749, issued in June 2020, set firm goals, one being that digital output should reach a fifth of national economic activity within five years (Duong, 2026), with ambitious targets for the digital economy to account for 20% of GDP by 2025 (Decision No. 749/QD-TTg Dated June 03, 2020 of the Vietnamese Prime Minister on Approving the National Digital Transformation Program through 2025, with Orientations toward 2030, 2020). Though initiated at the top, its effects ripple into many areas, including the media. Under this framework, Vietnam's communication authority stepped forward, naming journalistic innovation a key objective. Instead of waiting, outlets now face pressure to shift gears, integrating tools like artificial intelligence and large-scale data systems (Le & Pham, 2025). It is not just to evolve but to maintain control over public narratives.

However, change unfolds inside strict legal boundaries. Vietnam's media landscape shifts now, guided by the Master Plan shaping its network through 2025 (Decision No. 362/QĐ-TTg of the Vietnamese Prime Minister on Approving the National Press Development and Management Plan to 2025, 2019). The restructuring targets state-run media, clarifying distinctions between outlets - newspapers may cover political and broad public affairs, while magazines must stick to niche topics tied to their overseeing bodies (Decree No. 72/2013/ND-CP of July 15, 2013, on the management, provision, and use of internet services and online information, 2013). Because of these rules, the space for data journalism shifts which shapes not only who gets to publish findings but also how investigative work with numbers can be presented.

RESEARCH METHOD

This work uses a qualitative approach with several methods to examine how data journalism is understood and done in Vietnam's media setting. Instead of one fixed technique, it brings together a structured look at past research, a close reading of documents, and side-by-side examples from actual reporting projects. Through these layers, the project links abstract ideas to hands-on realities, showing both the broader forces at play and daily news practices. Evidence comes from varied materials whose overlapping points are carefully traced, always

keeping sight of local political, social, and organizational factors shaping the field.

The research focuses on data journalism as its primary object of inquiry, understood not only as a technical practice but also as a form of media production that was shaped by policy frameworks, educational systems, and organizational cultures. To operationalize this focus, the study defines three interconnected units of analysis, which are academic and grey literature on data journalism and digital transformation, legal and policy documents governing media and data use, and selected data-driven journalistic products. In addition, four Vietnamese news organizations are examined as empirical cases that names Nhan Dan (Tran & Thomson, 2008), VnExpress (Phan et al., 2011), Zing News (Znews) (Oanh & Kha, 2025), and VietnamPlus (Dinh-Hong, 2024). These cases were selected, through purposive sampling, to reflect diversity in ownership structures, editorial orientations, and levels of digital innovation. They provide a balanced representation of both state-affiliated and commercial media, enabling a more nuanced understanding of how data journalism evolves across different institutional settings.

Data collection was conducted in three complementary stages. At the first stage, we involved a systematic literature review designed to map the intellectual landscape of data journalism in Vietnam. Academic databases and institutional repositories, particularly those of Vietnam National University –

University of Social Sciences and Humanities (USSH) and the Academy of Journalism and Communication (AJC), were used to identify relevant materials. The search process was guided by a set of keywords in both English and Vietnamese, including “data journalism Vietnam” (báo chí dữ liệu Việt Nam), “digital journalism transformation Vietnam” (chuyển đổi số báo chí) (Thang & Trang, 2024), “data-driven reporting,” and “digital megastory” (Thi & Ibrahim, 2024). The scope from 2003 to 2025, we could follow developments from early digital journalism practices to more recent discussions involving “artificial intelligence and advanced data visualization” in Vietnam (Trang et al., 2024). In order to capture a comprehensive picture, the review includes both peer-reviewed publications and grey literature such as institutional reports and conference proceedings.

The second stage of data collection involves legal and policy frameworks, that affect the development of data journalism. Key documents are Government Decree 47/2020/ND-CP on the management and sharing of open data in Vietnam, and Decision 749/QĐ-TTg on the national digital transformation program issued by the Vietnamese Prime Minister, whose texts are analyzed not just for their formal provisions but also for their implications in shaping access to data, journalistic practices, and innovation in media production. In parallel, training curricula from AJC and USSH Hanoi are analyzed to understand how data journalism skills are being

institutionalized within journalism education. This step provides insight into the relationship between professional training and the practical demands faced by contemporary newsrooms.

The third stage involves a comparative case study of data-driven journalistic products produced by the four selected media organizations. Cases were chosen based on their relevance to data journalism, particularly the integration of data analysis, visualization, and interactive storytelling formats such as Megastory and multimedia features (Uyen et al., 2023). Through a lens that stretches beyond individual offerings, the study places emphasis on wider institutional and tech environments. Sourcing and validation of data draw scrutiny, followed by design choices shaping visuals inside storytelling frameworks. Interaction tools meant to involve users receive close inspection too. By drawing such comparisons, common traits emerge alongside unique strategies among varied media organizations.

Starting with how information gets collected, the research uses qualitative content analysis (Young et al., 2018) together with methods that compare cases. A structured approach emerged slowly to shape how material was reviewed, built around four aspects: where data comes from and how open it is, how visuals are designed, how stories unfold through narrative choices, and what tools draw people into engaging. Instead of a straight line, the method moves back and forth—details get labeled, grouped, then checked again across

different examples. From real-world cases, patterns took form only after matching them against earlier writings and official documents examined separately. By linking these layers, conclusions gain strength—not forced but discovered along the way. Looking at theory, rules made by institutions, and how reporters actually work shows where ideas align—and where they split apart.

Methodologically, the study is informed by established qualitative research traditions. The systematic literature review follows structured approaches to identifying and synthesizing existing knowledge, ensuring transparency and comprehensiveness in the selection of sources (Fink, 2020). The comparative case study design, particularly in its emphasis on analytical generalization across multiple cases rather than statistical representativeness (Yin, 2018). Meanwhile, the use of qualitative content analysis, which provide a systematic framework for coding and interpreting textual and visual data (Lyhne et al., 2025). By combining these methodological foundations, the research achieves a balance between rigor and flexibility, enabling a context-sensitive analysis of data journalism in Vietnam.

Thus, this methodological approach makes it possible to capture the complexity of data journalism as both a professional practice and a socio-technical phenomenon. By integrating insights from literature, policy, education, and newsroom production, the study offers a comprehensive account of how data journalism

operates, the challenges it encounters, and the directions in which it may develop within Vietnam's rapidly evolving media environment.

RESULTS AND DISCUSSION

Starting with accessible public records, reliable data reporting is built on a strong foundation. Over time, rules about access in Vietnam have grown more defined. At the core is Decree No. 47/2020/ND-CP, which shapes data exchange among government bodies. Though gradual, changes in policy clarity stand clear. This decree sets the terms for the movement of digital records between departments. While little attention was drawn, updates took steady effect. Defined plainly, open data now requires broad release by civil servants. From such rules, transparency grows—step by step. Under this regulation, physical printing is prohibited wherever data can be transmitted digitally across platforms. Thus, transferring figures by hand from printed versions must stop—on paper, appearances have shifted lately.

Later, Decision No. 749/QĐ-TTg was part of a broader shift toward digital systems across Vietnam. With the focus set beyond the current moment, it outlines clear directions through 2025. Under these plans, key data sources—such as those tracking citizens, property rights, registered enterprises, and financial activity—are expected to interconnect. From that point forward, access nationwide became standard practice. Still, plans often fail when put to the

Table 1 Comparative Open Data Rankings in Southeast Asia in 2024

| Country | Overall | Coverage | Openness |
|-------------------|---------|----------|----------|
| Singapore | 90.0 | 84.0 | 95.0 |
| Malaysia | 90.0 | 79.0 | 99.0 |
| Philippines | 74.0 | 69.0 | 79.0 |
| Indonesia | 74.0 | 71.0 | 76.0 |
| Thailand | 64.0 | 64.0 | 64.0 |
| Brunei Darussalam | 61.0 | 55.0 | 67.0 |
| Myanmar | 57.0 | 52.0 | 61.0 |
| Vietnam | 48.0 | 43.0 | 53.0 |
| Lao PDR | 46.0 | 39.0 | 52.0 |
| Cambodia | 42.0 | 40.0 | 43.0 |
| Timor-Leste | 41.0 | 47.0 | 35.0 |

Source: Open Data Watch, 2025

test in the real world—field journalists know this well. Despite the existence of data.gov.vn, international assessments highlight gaps that remain unaddressed. The Open Data Watch 2020 ranked the country 86th among 187 nations based on the amount of data available; yet its position dropped sharply to 122nd when measuring true accessibility (MST, 2021). However, according to Open Data Watch, Vietnam dropped in the ranking in 2024 (as seen in Table 1), while many ASEAN countries, such as Indonesia, Thailand, Malaysia, and the Philippines, rose in the ranking.

Though Vietnam excels at gathering information through solid systems, sharing that data openly and usefully lags. Much of what gets released online stays locked in forms computers cannot process, such as images or scans tucked into web pages (Liang, 2018). For this reason, working with public data usually means dealing with sluggish manual steps when

pulling figures. When digital pathways stay messy, gathering information by machine—or keeping it current—turns highly impractical. On top of technical hurdles, covering certain topics—say, exact property deeds or itemized budget flows—triggers legal complications tied to secrecy laws. Overlapping rules make clarity hard when handling politically delicate datasets.

Starting with visuals, Vietnamese newsrooms blend data into storytelling through expansive narratives known as Megastory or Longform formats. These pieces beautifully emphasize design, using numbers to shape both the look and the flow of the story, creating an engaging experience for readers. Not only do they embed numbers within stories, but these figures also shape the atmosphere itself. Early on, one sees analysis blending quietly with imagery. Rather than stand apart, graphs join the path a reader follows through content. What matters most shifts toward sensation, not solely

facts displayed. Though mirroring worldwide patterns, regional methods follow a separate course. Beyond written form, narratives emerge through visuals, audio, motion—guided silently by organized data beneath (Thi & Ibrahim, 2024).

A shift began quietly, then accelerated — Nhan Dan, once known for rigid orthodoxy, now pulses with digital energy (Nguyen & Tran, 2026). Under Le Quoc Minh's direction, stale perceptions dissolved into active experimentation. Not tradition alone, but reinvention drives its current rhythm. Old expectations fade where innovation takes root unexpectedly. Leadership changed courses without fanfare; outcomes emerged gradually online. What was fixed now adapts, shaped by choices distinct from past patterns (NDO, 2024b). A change like these opened doors to different kinds of storytelling while reaching people through new paths. Take the Dien Bien Phu Panorama Project, introduced in 2024, built to mark seven decades since the historic victory at Dien Bien Phu. Within that effort came something never seen before: a hybrid print-digital release by Nhan Dan, combining a regular newspaper with a sweeping four-page artwork showing the military campaign. Stretching more than three meters long, the piece measures exactly 3.21 meters in length (NDO, 2024a), it turns history into something you can hold yet still feel vast. Though paper-based, it pulls viewers in much as digital media might, blurring how we experience both formats.

QR codes were part of the initiative, linking printed pages to an exclusive augmented reality application through smartphone scans. While viewing the page, users saw moving images appear—historical footage spinning in space, life stories of troops floating beside portraits, key moments of the 56-day conflict unfolding like clockwork. Surprisingly, younger audiences began searching for physical editions, reversing the usual trend in which print is ignored by those under thirty. Distribution exceeded initial plans, demand prompted three reprintings, bringing the total to more than 300,000 copies. Behind its appeal lay a mix of narrative depth and responsive design which is one showing how classic publishing might evolve when guided by user behavior instead of being replaced (Vijay, 2025).

This effort signals a move toward storytelling that immerses, rather than informs. Historical records, like archived material, chronological sequences, and location-based facts, were reshaped into game-like formats and drawing people in through interaction. Not limited to one-off pieces, Nhan Dan embedded data into its ongoing structure via the Knowledge segment. Upright-format clips are thoughtfully placed alongside visual digests to enhance your understanding. By clearly explaining complex choices, we make things easier to grasp. This gentle approach ensures accuracy while keeping things simple and clear. The focus is on responsibility rather than rushing through information. Clear structure

helps reveal insights without overwhelming you. Facts stay at the heart of everything, shared straightforwardly. The overall experience feels subtly distinct, offering a fresh perspective (Ngo, 2025).

VnExpress, which leads the way in Vietnamese online news, eagerly shares data-driven stories that cater to urgent public interests. When the coronavirus outbreak emerged, a partnership with Kompa Group resulted in live-updating visual tools that beautifully mapped case numbers across different regions. Instead of dull static reports, these lively displays revealed how infections spread and recovery trends unfolded. Clarity became so important that readers could see changing patterns unfold, making the information more accessible and engaging. Information flowed without delay, meeting demand during uncertain times (Saigoneer, 2020). This push changed how Vietnam understood data. From that point onward, daily dashboard checks became common, familiarity with log scales, tinted area charts, and evolving patterns developed quietly over the weeks. Since data came straight from official health bodies worldwide, credibility held firm despite rising misinformation elsewhere. Where confusion had been widespread before, understanding began to take shape (MoH, 2021).

Beyond standard initiatives, the Data4Life competition, hosted by VnExpress, fuels interest in collaborative data investigation (VnExpress, 2024). Structured datasets, which

cover urban models, road accidents, and remote sensing visuals, are released intentionally, enabling builders to design responsive digital solutions. Instead of stating information plainly, the platform fosters spaces where reasoning skills develop naturally. Given how imagery resonates, a large share of narratives favors short videos together with graphical overviews. Extending past written reports, interaction evolves through faster, more transparent methods influenced by audience response. One month brought several updates by early 2025, VnExpress had published “51 short videos and 17 graphic-based stories” (Oanh & Kha, 2025). Given the rising reliance on mobile devices, these forms naturally matched audience habits. Attention increased, understanding grew clearer as images turned complex figures into simpler ideas, at the same time. Although certain platforms remained focused on written articles, this change helped a wider range of ages better understand the material.

Though launched as Zing News, the platform later emerged as Znews following a brief pause. Its initial character formed around the concept of Megastory, where layered images met minimal layouts to simplify dense topics. Visual strength, combined with thoughtful sequencing, defined how it presented material. Engagement grew, fueled by stories shaped through refined design and sustained focus.

Midway through 2023, trouble struck Zing News, its operations halted for three months alongside a penalty tied to something

called “news-ization”. What triggered this? The outlet had stepped outside its magazine-based permit, covering everyday current affairs instead (Freedom House, 2024). A single event reveals how deeply structure shapes what data journalists can do. Because economic, health, or criminal patterns demand careful handling, covering them requires more than curiosity. However, outlets registered only as magazines face penalties if they step too far into those domains. As a result, fear of consequences pushes many toward safer topics, vacation habits, box office numbers, skipping deeper scrutiny altogether.

Despite challenges, Zing News attracts younger audiences through narratives shaped by visual data (Hoang, 2020). Owing to an emphasis on clarity and precision in design, infographics come into focus rather than fading into the background. Through such differentiation, maintaining momentum occurs naturally despite rising market pressure.

From its beginning as an online branch of the Vietnam News Agency (VNA), VietnamPlus emerged within the national press system. Built upon classic journalism, the movement grew through fresh approaches to distribution, particularly as readers turned toward web spaces. Under early guidance by Le Quoc Minh, different styles began appearing, “Rap News” shaped briefs into spoken beats. When most stayed with routine production, immersive footage arrived there by 2017. Swift movement marked “its shift toward data-led

narratives, skipping delays to explore new paths in audience engagement across digital spaces” (CFI, 2018). What makes VietnamPlus special is not just about being original, but more about actively tackling misinformation head-on. Being part of the government structure allows it to draw on verified datasets, acting like a filter for misleading posts spreading online (VNA, 2020). Instead of merely reporting, it corrects using authoritative sources to challenge inaccuracies found across digital platforms. Over time, this correction process evolved into one of its core methods, shaping how it handles information flow. Accuracy remains central, trust grows when people receive details, they can rely on. A workforce trained in both storytelling and digital tools is essential for data journalism to last. Though many programs now try to modernize their courses, persistent flaws still block real progress.

Vietnam’s main hubs for journalism education—Hanoi’s Academy of Journalism and Communication and the multi-campus University of Social Sciences and Humanities—are revising their curricula. While based in Hanoi, the Academy rolled out new program guidelines set for 2024 implementation. Special tracks in Electronic Journalism and Television have been introduced there. Instead of traditional formats, courses now explore topics such as smartphone reporting. Content creation for digital platforms is also part of the shift. Convergent storytelling methods are also being integrated into coursework. Though separate

institutions, both schools reflect a broader movement toward modern media practices (AJC, 2025).

Additionally, USSH Hanoi now includes Data Journalism as a standalone course in its revised syllabus, designed to shape reporters who combine political insight with digital abilities (VNU Media, 2025). Through small-scale newsroom setups, learners gain hands-on experience in settings that mimic real-world media convergence (Dang, 2021). However, rigorous instruction in coding languages like Python, R, or SQL—and deeper methods such as statistical modeling—remains absent from core requirements. These competencies tend to appear only as optional modules or are briefly covered in general multimedia lessons. Consequently, while new professionals write effectively, many struggle to retrieve datasets independently or apply analytical techniques such as regression.

Even without a complete formal education, some organizations step in where schools fall short. The Vietnam Journalists Association runs skill-building activities, one focus being how artificial intelligence applies to reporting—over two thousand media workers took part just in the past year (VNS, 2025). Among practical workshops, daily tools emerge—programs adjusting text formats, transforming numbers into images, and verifying source accuracy. Meanwhile, joint efforts such as the Impact Media Fellowship link people across countries through shared tasks. Consider staff at Tuoi Tre

newspaper; working beside peers from India and Indonesia, they produced joint stories about environmental changes and agricultural methods using statistics and official documentation (SIF, 2023). When people exchange skills face-to-face like this, they pass along know-how that is not written down anywhere, especially methods for digging into datasets. Though schools have not caught up, such hands-on sharing fills gaps that textbooks still miss.

A shift has taken place in modern Vietnamese media: forms such as data-driven reports, extended narratives, and large-scale story packages now blend more closely. Though global research tends to frame data journalism around methods—gathering numbers, examining them, spotting trends—the local approach emphasizes how information looks once published. Visual impact matters most here, shaping public understanding through design instead of deep inquiry. Often, what gets labeled as data work relies on aesthetic depth—long vertical scrolls, layered interfaces, clickable features—to convey meaning. One model that stands out is the Megastory, built with sliding image effects, film-like photography, and integrated graphs, which sets the standard for online narrative craft. A fresh look at storytelling draws readers in more deeply, partly because it keeps them engaged longer on a page—key when income depends on such metrics. Where online focus shifts rapidly among countless options, the Megastory stands out by merging strong reporting with business needs.

However, form sometimes overtakes purpose in digital reporting. Though visuals now meet higher design expectations, clarity can still fall behind flair. Some data displays appear mainly to decorate rather than to demonstrate. Where imagery leads, substance occasionally lags. Studies point to graphics serving mood more than meaning. Elegance enters - depth retreats. Evidence risks being dressed up, then set aside (Houston, 2019). Though scraping data, spotting trends, or exposing concealed stories define investigative data reporting, such practices remain scarce. Rather than digging deep, most coverage builds on public records - figures disclosed by authorities and depicted through visuals (Merskin, 2019). While visual presentation improves across Vietnamese media, rigorous analysis lags. Progress hides an imbalance, while tools advance rapidly, techniques lag. What changes quickly is not matched by how we apply it. Methods fail to keep pace with new instruments developed over time. The speed of creation outstrips the refinement of use.

A fascinating trend is unfolding across Vietnam's data scene, that is the Open Data Paradox. Even with robust digital systems and widespread internet access, some gaps in data availability still exist. When you look closer, the main hurdle becomes clear: the way files are shared. Most government records are in PDF format, which isn't easy for machines to read. That's why journalists often have to manually re-enter data or tweak files before they can

start their work. When the focus shifts to setup, exploring patterns tends to take a backseat - interest is still there, but time slips away from analysis (Liang, 2018).

Even when information is available to everyone, its trustworthiness can sometimes change unexpectedly. Public documents often come with their own set of challenges—procedures can vary over time or between different places. As Kuang Keng (GIJN) pointed out, verifying figures requires more effort than simply analyzing them; it involves matching entries, resolving discrepancies, and fixing errors in files, which becomes part of the routine work (Liang, 2018). Although the government promises transparency with datasets, real progress is slow, which can make journalism a bit superficial and favor quick summaries over deep reviews. While promises are made, the results haven't quite caught up yet.

Different newsrooms develop at their own speed—some face challenges with training and tools. However, outlets like VnExpress, Nhan Dan, and VietnamPlus are making great efforts by creating small teams where reporters work closely with coders and visual artists, fostering collaboration and innovation. (Dang, 2021). Even with fewer people around, these small groups work as vibrant storytelling teams. They start to craft larger narratives—including retellings of history, modeled debates, and compelling visuals—that make complex ideas easier to understand. For example, exploring the Dien Bien Phu clash highlights this growth

beautifully. What these groups create goes beyond simple charts; a clear understanding comes when facts are carefully balanced and thoughtfully presented. Behind every explanation, skillful talent quietly shines through.

However, community journalism platforms still have room to grow. Budget cuts and staff shortages mean that hiring expert analysts isn't always possible. As a result, journalists often rely on accessible tools like Excel, along with public options like Flourish or Canva, to manage their insights effectively (Liang, 2018). Because of this, their work sometimes misses the depth seen in major national efforts. Over time, this difference can become clear, with one level being where elite editorial teams handle advanced online storytelling. Local reporting often depends on spoken accounts, concentrating on the story's details. Opportunities vary, influencing which voices get noticed and which experiences become popular. These imbalances greatly impact how understanding spreads within different groups.

It's interesting to see how the rules around media practice create special challenges, especially for magazines instead of daily newspapers. As Vietnam rolls out its updated media policies in 2025, magazines will need to navigate certain themes carefully, sticking to specific topics that are allowed. Newspapers, on the other hand, retain broader latitude in addressing public affairs. However, investigative work based on metrics often

combines demographic shifts, economic indicators, and medical trends with societal behaviors. Given their interdisciplinary nature, such pieces run counter to the confined subject boundaries imposed on magazine-labeled platforms. Among these are services such as Zing and Dien Dan Doanh Nghiep (Business Forum), whose structures are not aligned with the scope of topics they cover. Should information appear in areas outside permitted categories, consequences may occur - termed "news-ization". Underlying this penalty lies the assumption that periodicals function like conventional press channels. Enforcement tends to emerge where the lines between focused commentary and general reportage fade. From such instances emerges a movement favoring speed rather than thoroughness. Where information ends up matters more than its use. Attention usually follows once structural boundaries start to slip (Freedom House, 2024).

Such limits form a steady block against growth in self-led inquiry through information. While state-backed dailies roam across subjects without constraint, minor outlets face attention when approaching sensitive areas. From this framework, control shapes which stories get told and where fresh techniques take root. Progress may tilt unevenly, whether policies should hold still or leave autonomy undefined. Dominant groups might inherit an advantage unless conditions shift under current terms.

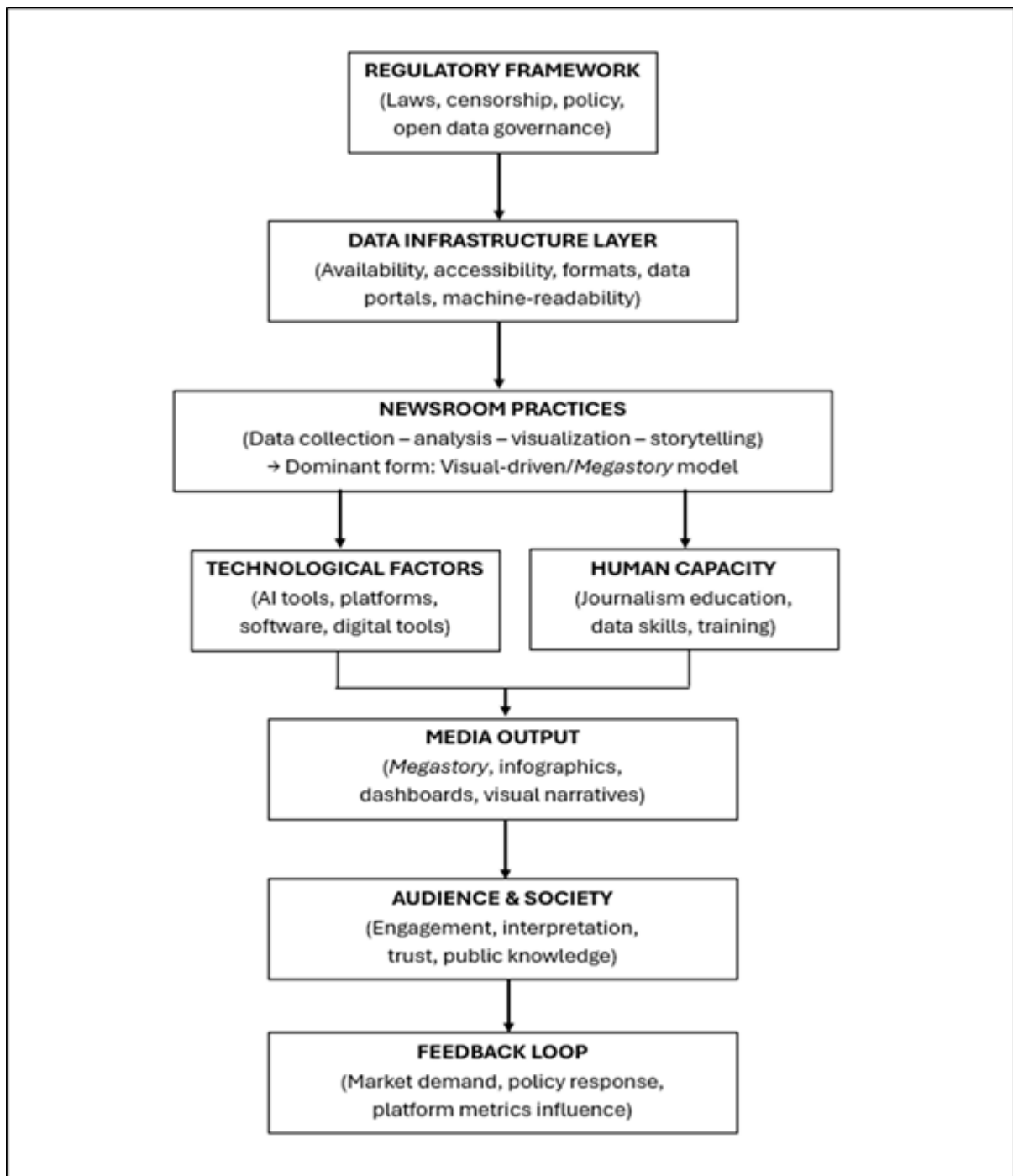
Nowadays, artificial intelligence is shaping routines faster than expected, so Le Quoc

Minh mentioned that reliance on Google for updates appears to fade in Vietnam. Rather than search results, responses emerge directly within AI interfaces. This moves possibly half the traffic to digital news outlets. With fewer access points, journalism's core mechanics are undergoing quiet transformation. Underlying shifts trace back to user behavior rewired by immediacy (VNS, 2025). One shift triggered a quiet reset in how online news finds its audience, nudging Vietnam's media toward new habits or gradual obscurity. A visible effect emerged, which is trust in artificial intelligence grew, though more for handling tangled data streams than for drafting articles. Where manual work once demanded long stretches of reviewing chaotic government files, automated tools now accelerate progress. Rather than laboring over each scanned sheet individually, journalists may assign detail-pulling to responsive software systems. Rapid conversion of unorganized texts into clean layouts makes timing more useful during breaking developments. Though modest in size, some groups now apply techniques formerly limited to richly backed operations. In silence, automated tools adjust the balance among editorial spaces.

The latest findings in the Reuters Institute Digital News Report 2025 highlight this transformation (Simon et al., 2025). Across regions, fact-seeking now defines how artificial intelligence is used daily. Rather than reading long analyses, many prefer concise replies - verified outputs delivered fast through

intelligent systems. Because of this trend, Vietnamese media organizations may reconsider what they produce: stories rooted in verified information, structured around public inquiries, and formatted so automated tools can easily access them. Clear focus, open processes, and trustworthy sources can help news providers remain relevant as digital changes speed up. Emphasizing transparency and reliability makes their role even more valuable to the audience.

As digital advertising revenues decrease, Vietnamese news organizations are exploring new ways to generate income amidst rapid technological changes. While giants like Facebook and Google continue to lead the ad market, local publishers are finding innovative solutions such as subscription models, controlled-entry systems, and services based on audience insights. For example, VietnamNet and Tuoi Tre are trying out payment options linked to verified stories backed by solid evidence. In these efforts, unique datasets, visualizations that reveal hidden patterns, and in-depth investigative reports are becoming valuable standalone offerings. Subtle new styles are emerging in select projects, like Nhan Dan's well-known coverage of the Dien Bien Phu celebration. Instead of relying solely on written stories, archived content now appears both physically and digitally. This approach opens up new earning opportunities—transforming data into tangible objects meant for keeping, sharing, or display. Timelines, detailed maps, and downloadable files are moving from



Source: Author,

Figure 1 The State-Mediated Data Journalism Ecosystem Model in Vietnam Context

optional extras to core parts of the content. When facts become items people can touch, revisit, or show publicly, it encourages deeper engagement. Slowly but surely, a new hybrid form of news is taking shape—one that serves as both documentation and memorabilia.

What comes next is less about systems and more about small changes in how stories are told in Vietnam, such as a growing focus on answers rather than just exposure. Some news outlets do not focus solely on problems; they also use analysis to suggest solutions, evaluate

the outcomes of governance, or highlight positive momentum. For example, Tuoi Tre's "Be Healthy" project investigated the emotional stress that both journalists and citizens faced. It transformed statistics into practical steps that help make life easier. Meanwhile, VietnamPlus uses trusted information to debunk false claims, helping to clear up confusion. In this way, metrics become more than just oversight tools; they start to foster collective strength and change how people view the purpose of inquiry.

Next steps rely on factors beyond equipment alone. Decisions within editorial spaces shape what happens, alongside the evolving availability of information and the transformation of audience confidence. Systems can process data more quickly, but human insight remains central to the conclusions drawn. Financial models shift—reader payments could support operations previously dependent on advertising revenue. Some news organizations now shape reports through impact, clarity, and one step beyond mere attention. A route opens where responsibility grows, integrity strengthens, and influence spreads further. However, others hold standards back trapped in old routines, delayed changes, and minimal learning opportunities. Results depend not only on tools, but also on their role within intent, method, and repeated routine. How things fit matter more than what exists.

Bringing together insights from regulatory analysis, newsroom practices, and case studies, this study identifies a structured pattern in how

data journalism operates in Vietnam. Rather than functioning as an isolated professional practice, it emerges as a system shaped by multiple interdependent factors, including state governance, data accessibility, technological infrastructure, and human capacity. These elements do not operate independently but interact dynamically to influence how data is collected, processed, and transformed into journalistic outputs.

As illustrated in Figure 1, the proposed model conceptualizes data journalism in Vietnam as a state-mediated ecosystem, in which journalistic practices are not autonomous but are shaped by the dynamic interacti

CONCLUSION

This study moves beyond a descriptive account of DDJ in Vietnam by conceptualizing it as a context-dependent ecosystem, shaped by the interaction of regulatory structures, technological infrastructures, newsroom practices, and educational institutions. Rather than following the investigative, data-centric paradigm dominant in Western scholarship, DDJ in Vietnam emerges as a hybrid model in which data functions primarily as a narrative and visual resource embedded within digital storytelling formats such as Megastory. From this perspective, the research proposes a "state-mediated data journalism ecosystem model", where data flows, journalistic practices, and innovation are simultaneously enabled and

constrained by institutional governance, market pressures, and platform logics.

The findings contribute theoretically by challenging the implicit universality of Western DDJ frameworks. In non-Western, state-influenced media systems like Vietnam, data journalism does not primarily operate as a watchdog mechanism but rather as a negotiated practice balancing transparency, legitimacy, and communication efficiency. This repositions DDJ within the broader discourse of the social construction of data, demonstrating that data is not merely an objective input but a politically and institutionally conditioned resource. The study therefore expands existing theory by introducing a context-sensitive understanding of DDJ, where epistemology, access, and representation are deeply embedded in governance structures. As a result, this study proposes a state-mediated data journalism ecosystem model (see Figure 1), offering a context-sensitive framework for understanding DDJ in non-Western media systems.

At a societal level, the research highlights a critical paradox: while digital transformation policies promote openness, structural barriers—such as inaccessible data formats, regulatory ambiguity, and skill gaps—limit the transformative potential of data journalism. Addressing this gap requires coordinated interventions. First, policymakers should prioritize machine-readable open data infrastructures and clearer legal frameworks that support journalistic inquiry without

ambiguity. Second, journalism education must shift from surface-level digital skills toward computational literacy and analytical capacity, integrating coding, statistics, and data ethics into core curricula. Third, media organizations should move beyond aesthetic data use and invest in analytical depth and investigative capacity, ensuring that data serves not only to illustrate but also to interrogate reality.

Looking forward, the integration of artificial intelligence presents both an opportunity and a risk. While AI can lower technical barriers and accelerate data processing, it also intensifies the need for verification, accountability, and methodological transparency. In this evolving environment, the value of journalism lies not in producing more content, but in producing trustworthy, evidence-based knowledge. Therefore, the future of DDJ in Vietnam depends on a fundamental shift: from data as decoration to data as a tool of inquiry, from visual storytelling to analytical reasoning, and from platform-driven engagement to public-oriented knowledge production.

In sum, this study contributes a new conceptual lens for understanding data journalism in non-Western contexts, offering both a theoretical model and practical directions. By situating DDJ within its socio-political ecosystem, it provides a foundation for future comparative research and a pathway for strengthening the role of journalism in supporting informed, data-literate societies.

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