



Public relations in the AI ecosystem: Structural invisibility and critical challenges

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ABSTRACT

Artificial Intelligence (AI) has become the central organizational infrastructure of contemporary communication, reconfiguring the forms of visibility, legitimacy, and power within the ecosystem. This article examines how Public Relations (PR) are structurally decentered in this environment because of a process of structural invisibility that disconnects their discursive recognition from their effective access to resources, investment, and capacity for influence. Drawing on critical frameworks from political economy, the theory of symbolic capital and agonistic approaches in PR, the study argues that infrastructures privilege logics of automation, scalability and quantification that collide with the relational, contextual and ethical nature of professional practice. We analyze a global sample of 4774 organizations linked to AI using a two-stage comparative statistical framework and sectoral profiling to measure structural asymmetries. The results show that PR start-ups associated with AI occupy a systematically peripheral position: lower capitalization, fewer investors, more irregular financial trajectories, and higher labor dependency ratios. Paradoxically, this structural deficit coexists with a relatively high symbolic visibility, particularly in media coverage, a pattern that reveals the gap between symbolic capital and economic capital that defines their marginalization in the AI ecosystem. The article concludes that this invisibilization is not accidental, but rather the product of platformization, financialization and epistemic exclusion logics that determine who can influence the design of AI. It is proposed that PR should respond not by accelerating an uncritical integration, but by adopting strategies of slow implementation, regulatory participation, and the articulation of coalitions with equally marginalized actors in order to contest the values that structure the communicative future.

1. Introduction

The accelerated advance of Artificial Intelligence (AI) is reconfiguring infrastructures, business models and power hierarchies in communication industries. In the so-called platform society,¹ algorithmic systems have become the dominant organizational logic of social, economic and cultural mediation (Srnicek, 2017; van Dijck et al., 2018). In this context, advertising and marketing have managed to position themselves as strategic sectors of the data economy, aligning their business models with capital-intensive, scalable logics that are highly attractive for investment in AI technologies (Srnicek, 2017). Public

Relations (PR), however, seem to occupy a much more ambiguous position: discursively presented as key to digital transformation, but structurally sidelined from the spaces where investment priorities are determined, infrastructures are built, and the boundaries of 'innovation' in communication are defined.

This work starts with the hypothesis that this misalignment cannot be understood only as a lag in technological adoption, but as a phenomenon of structural invisibility.² Although the profession claims a key role in building trust, managing reputation and mediating dialogue between actors (Kent & Taylor, 2002), its value is perceived as relational, long-term and inherently difficult to quantify (Buhmann &

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¹ An infrastructural reconfiguration in which algorithmic systems have become the dominant organizational logic of social, economic and communicative life (Srnicek, 2017; van Dijck et al., 2018).

² A form of exclusion that operates not by denying the field's discursive relevance, but by systematically disconnecting that legitimacy from access to the material resources needed to shape the direction of change (Bourne, 2019; Logan and Waymer, 2024).

Likely, 2018; Edwards, 2018). Under conditions of communicative capitalism and financialization, where investment is directed towards models that are automatable, scalable and easily measurable (Birch, 2017; Fuchs, 2020; Kenney & Zysman, 2019), this relational configuration places PR at a disadvantage compared to sectors whose contribution fits better with the imperatives of data extraction and algorithmic optimization. The consequence is a growing gap between symbolic capital,³ the discursive recognition of its relevance, and economic capital, the effective access to resources and decision-making power (Bourdieu, 1986; Crawford, 2021; Ihlen, 2005; Ihlen, 2007).

On this basis, the article proposes a critical reading grounded in political economy and symbolic capital to conceptualize the position of PR in the AI ecosystem as a form of structural invisibility. This perspective is articulated with the critical and agonistic turn in PR theory, which questions functionalist visions of dialogue and focuses on the tensions between normative aspirations (i.e., public service, communicative justice) and power structures that subordinate the field to corporate, technocratic and colonial logics (Dutta & Pal, 2011; Holtzhausen, 2000; Weaver et al., 2006). From this standpoint, the question is not simply how to integrate PR into AI. It is what prevents PR from participating on equal terms in defining its infrastructures and regulatory frameworks.

To address these questions empirically, the article combines this critical framework with a quantitative analysis of the global ecosystem of AI start-ups in communication. The study uses Crunchbase⁴ data to map and compare the structural position of advertising, marketing and PR organizations connected to AI. It examines indicators such as capitalization, funding dynamics, media visibility, operational efficiency and ecosystem context. Through comparative quantitative analysis, we identify specific patterns that structurally differentiate PR start-ups from those in advertising and marketing. The aim is not only to describe these asymmetries. It is also to translate concepts such as capital-intensive versus labor-intensive models, symbolic capital versus economic capital, and structural invisibility into observable variables. This makes it possible to assess whether the marginalization of PR in the algorithmic ecosystem is merely a theoretical intuition or an empirically demonstrable reality.

The article makes three main contributions. The first is theoretical: it proposes a framework that brings together critical political economy, the theory of symbolic capital and the agonistic turn in PR. This framework conceptualizes the structural invisibility of the field in AI as a problem of communicative justice rather than mere 'resistance to change'. The second is empirical and methodological: we offer a large-scale comparative mapping of PR's position within the global AI ecosystem, utilizing population-level data to establish objective sectoral benchmarks in capital and visibility, showing how resources, visibility and opportunities are differentially distributed. The third is normative and professional: it suggests that PR can be reimagined not as a lagging actor that must rush to adapt to the dominant logic of AI, but as a potentially contestatory agent. Through strategies of slow implementation, coalitions and regulatory claims, PR can intervene critically in shaping more democratic, equitable and relational communicative futures. Thus, PR's marginality in AI is read as structural invisibility, not just "slow adoption", leading to two research questions:

³ Symbolic capital is any form of capital (economic, social, cultural, etc.) as it is perceived and recognized through socially shared categories of meaning. It operates through (mis)recognition rather than explicit calculation, and depends on the habitus - socially formed ways of seeing and judging - as the cognitive mechanism that allows certain resources to be taken as legitimate authority, prestige or merit rather than as 'capital' in a narrow economic sense (Bourdieu, 1986).

⁴ A commercial database and online platform that collects and organizes information about companies, especially start-ups, investors, funding rounds, acquisitions and industry trends.

RQ1. : How are AI-related PR start-ups positioned, in terms of capital structure, funding dynamics and media visibility, compared with Advertising and Sales & Marketing?

RQ2. : How do these sectoral profiles support or challenge the idea of PR's structural invisibility in the AI ecosystem?

2. Critical theoretical framework

This section develops the critical theoretical framework that underpins our analysis of AI start-ups in communication industries. We first situate PR within broader processes of platformization and algorithmic power and then draw on critical political economy to characterize how AI reshapes the structural organization of media and communication sectors. Building on this, we introduce the notion of structural invisibility and revisit debates on symbolic capital to explain why some communicative functions become central in discourse yet remain marginal in material terms. We then examine how AI, automation and datafication reconfigure communicational labor, before engaging with critical PR scholarship and debates on communicative justice to foreground questions of inequality, exclusion and power. Finally, we trace the shift from dialogic functionalism towards an agonistic critique. Thus, synthesize these strands into a coherent lens that informs our research objectives and the operationalization of sectoral profiles in the empirical sections that follow.

2.1. PR in the face of platformization and algorithmic power

The contemporary communication landscape has undergone a fundamental transformation driven by the so-called platform-based society. This change constitutes a structural realignment of power relations within and between communication industries. It has profound implications for how professional fields position themselves, compete for resources and claim legitimacy in an increasingly technocentric ecosystem.

PR, historically positioned as a strategic intermediary between organizations and publics, now operate within this platformized environment. In it, the rules of engagement, the distribution of symbolic capital and the channels of influence are increasingly mediated by infrastructures (Deuze & Beckett, 2022). PR have always worked in tension with structures that concentrate economic power. This conditions their professional legitimacy and limits their agency in relation to dominant actors and interests. As Edwards' (2018) discursive, political-economic and ethical analyses show, the profession navigates structural dependencies, inequalities in access to resources and normative expectations that are difficult to meet. The emergence of AI as a new technological infrastructure and investment field only amplifies these tensions. It widens power gaps and reinforces the influence of those who already control the material and symbolic means of communication.

Technological intermediaries actively shape the conditions of possibility for communication (Gillespie, 2010). Platforms curate visibility, distribute attention algorithmically and embed economic models that privilege certain forms of communicative labor over others (Bucher, 2018). Although this body of work was originally developed to explain within-platform visibility (why some posts circulate more widely than others on Twitter or YouTube), the same logic operates across sectors: algorithmic infrastructures define which communicative work is measurable, scalable and integrable into data pipelines, and therefore which sectors appear to investors as "AI-ready". The sectoral hierarchy between advertising, marketing and PR that we examine empirically is, in significant part, an institutional outcome of this platform-shaped legibility (Srnicek, 2017; vanDijck et al., 2018).

While advertising and marketing have rapidly adopted AI, from programmatic buying to predictive segmentation and automated content, public relations shows a more uneven trajectory, marked by optimism and professional uncertainty (Bourne, 2019; Galloway & Swiatek,

2018). This relative displacement from AI-driven communicational innovation reflects broader structural dynamics of capitalism. Empirical evidence indicates that AI can enhance efficiency, content production, personalization, and data-driven decision-making in PR (Yue et al., 2024). However, these benefits depend on organizational capacity and therefore remain concentrated in well-resourced contexts, leaving unresolved questions about PR's structural position within AI investment ecosystems.

A large-scale survey conducted by Zerfass et al., 2020 reinforces this uneven picture: most communication professionals report limited knowledge of AI, and only a small minority make regular use of AI-enabled tools. Their study shows that adoption is strongly conditioned by organizational resources, leadership support and role seniority, which helps explain why PR (i.e., typically operating with fewer technological and infrastructural capacity) struggles to appropriate AI at the same pace as advertising and marketing. Perceptions of AI as transformative coexist with uncertainty, skill gaps and a lack of strategic readiness, further revealing a structural, rather than merely behavioral, constraint on PR's technological uptake. As Fuchs (2020) notes, technological evolution does not distribute opportunities evenly across sectors; it concentrates resources and visibility in those fields that are more closely aligned with logic of accumulation and dominant interests.

2.2. Critical political economy of the communication industries

Understanding the structural position of PR in the AI ecosystem requires drawing on critical political economy frameworks that foreground issues of capital, power, and inequality. From a political economy perspective, production, distribution and consumption of resources are understood as outcomes of social relations, above all relations of power (Mosco, 2009). In line with Bourdieusian approaches, PR can be conceptualized as a fielded practice in which organizations compete for position by accumulating and converting different forms of capital (i.e., economic, cultural, social and symbolic) in communication fields (Ihlen, 2007). In the context of AI-driven innovation, these resources include not only technological capabilities but also financial capital, investor attention, and organizational legitimacy.

The critical political economy tradition insists that markets are structured fields shaped by historical accumulations of power, institutionalized hierarchies, and systemic inequities (Garnham, 1990; Wasko et al., 2011). Advertising has long been positioned at the commercial core of media systems. Its direct measurability and integration into consumer capitalism have historically made it attractive for investment (McChesney, 2013). The rise of digital advertising and programmatic technologies has intensified this dynamic, as platform companies such as Google and Meta have built trillion-dollar valuations on advertising-driven business models (Zuboff, 2019).

Marketing occupies a position more distributed than advertising but no less infrastructural to the data economy. Whereas advertising consolidates around a few programmatic intermediaries monetizing attention at scale, marketing brings together CRM, lead generation, marketing automation, customer-data platforms (CDPs), attribution and lifetime-value modelling: a heterogeneous set of activities progressively rebuilt as software stacks designed for algorithmic optimization (Wedel & Kannan, 2016). Suites such as HubSpot, Marketo and Salesforce Marketing Cloud, and AI-personalization layers integrated by major enterprise SaaS vendors (Adobe Sensei, Salesforce Einstein), have turned formerly relational sales activities into scalable data-extraction pipelines that feed the predictive and segmentation capabilities AI is expected to scale (Davenport et al., 2020). Both sectors therefore sit closer to the commercial and infrastructural core of AI-driven communication systems than PR (advertising via attention monetization, marketing via long-tail behavioural-data extraction), fitting cleanly within the investor logics of scalability and accumulation that platform capitalism rewards (Smicek, 2017).

PR, by contrast, has occupied a more ambiguous economic position. Their value propositions (e.g., reputation management, stakeholder engagement) are often understood as relational, long term and difficult to quantify in terms of direct return on investment (Edwards, 2018). Although public relations scholars and practitioners have spent decades developing frameworks, metrics and models to demonstrate measurable impact (Buhmann and Likely, 2018; Lindenmann, 2003; Paine, 2007), the field still struggles with the persistent perception that its contribution is intangible (Matilla & Marca, 2012). This difficulty in translating relational value into direct returns continues to shape how PR is assessed within corporate budgets and strategic decision-making processes.

In the context of communicative capitalism, industries that cannot demonstrate clear mechanisms for capital accumulation face structural marginalization (Fuchs, 2020). This reflects deeper logic of financialization, in which investment decisions are driven by expectations of scalability, exit strategies and quantifiable growth trajectories (Birch, 2017; Kenney & Zysman, 2019). The traditional emphasis of PR on relationship-building and dialogue does not easily map onto these investor logics.

Drawing on Bourdieu's (1986) view that economic and symbolic capital are mutually reinforcing, sectors with weaker initial economic positions confront cumulative hurdles to becoming central in emerging technological fields. At the same time, the political economy of AI displays extreme concentration: a small group of corporations control the fundamental computing and data infrastructures on which most applications are built (Crawford, 2021). This infrastructural dominance consolidates the historical centrality of the advertising sector within the data economy, while relegating PR to a more peripheral role within the AI ecosystem. However, this study will show that in AI ecosystems the link between symbolic and economic capital is not always straightforwardly reinforcing: discursive visibility may persist even where material convertibility is blocked, a tension the analysis below empirically interrogates.

A critical political economic perspective insists that questions of capital and industrial structure are inseparable from questions of communicative power and democratic accountability (Wasko et al., 2011). If PR is systematically excluded from the development and governance of AI-driven communication infrastructures, this has consequences not only for the profession but also for the wider public sphere. It raises questions about which voices are amplified and which interests are served when algorithmic systems are designed primarily to meet the imperatives of advertising and marketing (Eubanks, 2018; Noble, 2018).

2.3. Structural invisibility and symbolic capital

The integration of AI into the field of PR requires a critical perspective that understands AI as a system embedded in relations of power, inequality and epistemic struggle (Bourne, 2019). This approach, which builds on the critical turn in the field (Holtzhausen, 2000; McKie & Munshi, 2007; Moloney, 2006), assumes that technological processes are never neutral. They strengthen existing power hierarchies and alter the symbolic position of actors within the communication ecosystem.

Bourdieu's (1986) notion of symbolic capital is particularly useful for understanding the paradoxical position of PR in the AI ecosystem. Symbolic capital refers to the recognition, prestige, and legitimacy that an actor accumulates within a given social field. However, its effectiveness depends on its convertibility into other forms of capital, particularly economic capital. When this convertibility is blocked - when symbolic recognition does not translate into material resources - forms of structural marginalization emerge that are even more insidious because they are so difficult to see.

Fraser (1995) conceptualizes a parallel dynamic in her critique of "recognition without redistribution", where symbolic inclusion serves to legitimize rather than challenge material inequalities, a pattern that may help explain how PR can be discursively celebrated while

remaining economically marginalized. In line with this perspective, Ihlen (2005) shows that what PR typically describes as 'relationship management' can also be understood as the mobilization of social capital: networks, alliances and relational assets that help organizations seek advantageous positions in fields. Yet, crucially, these forms of social capital remain subject to the same structural constraints as symbolic capital: they only gain real power when they can be converted into economic resources or institutional influence.

PR embody this paradox. Although recent studies highlight their relevance for digital transformation and discursively acknowledge the need to integrate AI into the profession (Gregory et al., 2023; Radwan et al., 2025), this recognition does not translate into an equivalent structural position. The investment, capitalization capacity and organizational infrastructure required to participate effectively in the development of algorithmic technologies remain more limited. As Ihlen (2007) notes, the value of PR is inseparable from how organizations are positioned within fields structured by unequal distributions of capital, which helps explain why recognition does not necessarily translate into material influence.

Collister (2015) reinforces this dynamic by showing that algorithmic communication reshapes visibility, legitimacy, and power within communication fields. His concept of 'algorithmic public relations' emphasizes that algorithms act as material actors that filter, rank, and organize meaning in ways that privilege certain voices over others. From this perspective, PR's marginal position in AI development also restricts its agency within algorithmically mediated environments, where relevance and visibility are increasingly determined by opaque computational logics rather than by human communicators.

This dissonance constitutes what we term structural invisibility. PR organizations may be seen and mentioned in the AI ecosystem, yet they remain structurally invisible in the spaces where investment decisions are made, technological infrastructures are built, and standards of innovation are defined (Bourne, 2019). This phenomenon is part of a series of turning points that have transformed the discipline: accelerated digitalization, the rise of algorithmic technologies and the shift towards automated impact metrics (Radwan et al., 2025). These changes have strained the boundaries of the field. They have generated disputes over which practices are considered legitimate and which forms of knowledge are relegated as insufficiently innovative (Bourne, 2019; Swiatek et al., 2024).

As Bourne (2019) argues, the dominant discourse on AI in communication is deeply shaped by neoliberal logics that privilege efficiency, the reduction of labor costs and the quantification of results. PR, insofar as they are defined in terms of relationship-building, reputation management and the facilitation of understanding - functions that are inherently relational and resistant to algorithmic standardization - are structurally misaligned with these expectations.

Logan & Waymer (2024) deepen this critique from an intersectional perspective, showing how the marginalization of PR in the AI ecosystem is intertwined with other forms of exclusion based on race, gender, and geography. Discourses on innovation in algorithmic communication tend to reproduce epistemic biases that devalue forms of knowledge associated with relationality, care and deliberation - areas where PR have historically built their professional identity.

In contrast to positions such as Gregory et al. (2023), who identify the adoption of AI in PR as slow but argue that the profession should accelerate its incorporation in order to maintain strategic relevance and assume ethical governance functions, Christensen and Andersson (2025) advocate a 'slow implementation' of emerging technologies in PR. They propose a reflexive, deliberative and ethical approach, in which practitioners not only implement but also co-design innovative processes. This framework makes it possible to think of PR not as a lagging field, but as a potentially disruptive actor capable of intervening critically in the design of change.

2.4. AI, Automation and the Reconfiguration of Communicative Work

AI technologies do not affect all labor sectors uniformly. They operate selectively, depending on the structural characteristics of each professional field (Diakopoulos, 2019; Frey & Osborne, 2017). In the field of strategic communication, this selectivity is evident in the growing divergence between capital-intensive and labor-intensive business models.

Digital advertising represents the archetype of the capital-intensive model. Platforms such as Google Ads and programmatic advertising systems rely on algorithms that automate the purchase of ad space, segment audiences in real time and personalize content at massive scale (Zuboff, 2019). Once the infrastructure has been developed, the marginal cost of processing additional transactions is marginally zero. This economic structure makes algorithmic advertising firms highly attractive to venture capital investors (Srnicsek, 2017).

AI-based marketing follows a partially similar logic, though with a greater diversity of models. CRM platforms, predictive analytics tools and marketing automation systems combine scalable technological components with services that require human intervention (Radwan et al., 2025). However, the dominant trend points towards the standardization of processes and the conversion of tacit knowledge into algorithms (Christensen & Andersson, 2025).

PR, by contrast, operates predominantly under labor-intensive models. The core activities of the field, building relationships with stakeholders, managing crises, crafting strategic narratives, depend on human skills such as empathy, contextual judgment and the capacity to navigate ambiguous and politically complex situations (Edwards, 2018). Although AI tools support media monitoring and sentiment analysis, and experimental evidence shows AI-generated content can outperform human work in specific tactical metrics (Huang & Zhou, 2025), these technologies primarily augment rather than replace the relational and strategic core of PR practice (Galloway & Swiatek, 2018; Yue et al., 2024). Practitioners perceive AI as having greater impact on the profession as a whole than on their own work (Zerfass et al., 2020), a pattern we interpret as indicating that context-dependent tasks may be less susceptible to algorithmic substitution.

We acknowledge that AI can deliver measurable benefits at the level of individual practices, improving efficiency in media monitoring, content generation, and audience analytics (Huang & Zhou, 2025; Yue et al., 2024). However, firm-level outcomes must be distinguished from ecosystem-level structures. Successful AI integration by some organizations does not negate the structural inequalities we document, and may reflect organizations already positioned with resources to experiment (Zerfass et al., 2020). For practitioners in under-resourced contexts, the Global South, or community-based settings, barriers to accessing and critically evaluating AI remain formidable (Dutta & Pal, 2011), while even within well-resourced Western contexts, racial and social biases embedded in AI create challenges that PR must confront (Logan & Waymer, 2024).

Moreover, tactical AI adoption does not translate into strategic influence over how AI systems are designed or governed, the level at which structural invisibility operates (Bourne, 2019; Collister, 2015). The challenge is not to reject AI but to contest the terms of its development, ensuring relational, ethical, and democratic values are embedded in its design (Christensen and Andersson, 2025; Edwards, 2018).

This structural difference has direct consequences for capitalization. Investors evaluate start-ups not only by their growth potential, but also by their capacity to scale without proportional increases in operating costs. PR firms, which depend fundamentally on highly qualified human labor, face structural limits to scalability that place them at a competitive disadvantage within innovation ecosystems dominated by financialization logics (Fuchs, 2020). Gregory and Half (2020) remind us that technological hegemony profoundly conditions organizational agency, helping explain why PR's labor-intensive profile struggles to gain

structural traction.

Bourne (2019) argues that this dynamic is not merely economic but deeply ideological. The uncritical enthusiasm for automation in communication - what she calls 'AI cheerleading' - reflects a neoliberal view of labor that celebrates the reduction of workforce dependence as a sign of efficiency. PR, by defending the centrality of human judgment, are thus positioned discursively as an obstacle to technological progress.

This tension intensifies when the ethical and democratic implications are taken into account. As Logan & Waymer (2024) point out, AI systems in communication are not technically neutral: they embed biases, reproduce inequalities and can be used to manipulate or exclude marginalized voices. In its critical strand, PR has historically claimed a commitment to transparency, dialogue and accountability (McKie and Munshi, 2007; Moloney, 2006). However, if the field lacks structural position within the AI ecosystem, its capacity to exercise a critical function or to act as an ethical counterweight is severely limited. Swiatek et al. (2024) illustrate this limitation clearly in their analysis of humanoid AI at press conferences. Without meaningful input from PR professionals, these systems may generate responses that seem polished yet lack the contextual awareness and ethical judgment required to handle complex communicative situations.

2.5. Critical PR and communicative justice

The critical tradition in PR argues that the field requires a perspective that situates professional practice within broader structures of power, inequality and struggles over communicative justice (Holtzhausen, 2000; McKie & Munshi, 2007; Moloney, 2006). Pieczka (2019) traces how public relations theory has long negotiated tensions between its normative claims to democratic relevance and its managerial, stakeholder-oriented frameworks, revealing how the field's aspirations to social authority are shaped and constrained by broader political and communicative structure.

Edwards (2016) argues that PR plays, or should play, a crucial role within the deliberative systems that underpin contemporary democracies. However, this deliberative function requires specific structural conditions: sufficient autonomy to function as legitimate mediators, resources to sustain complex dialogic processes and institutional recognition. The structural marginalization of PR in the AI ecosystem threatens precisely these conditions.

If PR organizations lack the capital needed to develop their own technological capacities, they are pushed into positions of dependence on external providers of algorithmic tools. This technological dependence shapes which types of communicative interactions are possible and which values are implicitly embedded in communication architectures (Kent & Taylor, 2002).

PR's limited influence in algorithmic governance has direct implications for social justice. AI communication systems reproduce racial and structural biases (Logan & Waymer, 2024), and without participation from professionals trained in communication ethics, these technologies amplify inequalities under the appearance of neutrality. Emerging regulatory frameworks such as the EU AI Act (European Commission, 2021) create openings for inclusive governance, but realizing them requires multi-stakeholder arrangements that distribute decision-making power more equitably (Flyverbom et al., 2017).

PR can function as an agent of social change when the field is positioned critically in relation to established power structures (Motion & Leitch, 2009). However, this transformative potential depends crucially on the field's ability to participate in the spaces where the rules of the game are defined - spaces that are increasingly technological.

The position of PR in the AI ecosystem does not stem from a simple technical lag. It reflects a structural incompatibility between the field's ethical, dialogic, and relational values and the technocratic logics that privilege what is automatable and quantifiable (Bourne, 2019; Logan & Waymer, 2024; Swiatek et al., 2024). This exclusion operates as a form of epistemic invisibility that marginalizes the field in innovation

processes.

2.6. From Functionalist Dialogue to Agonistic Critique

The field of PR has undergone epistemological shifts that have reconfigured its theoretical foundations. The 'dialogic turn' initiated by Kent and Taylor (2002) proposed that the central function of PR should be the facilitation of genuine dialogic relationships between organizations and publics, based on reciprocity, transparency and mutual commitment.

However, the dialogic turn has been criticized from more radical theoretical positions. Ihlen and Verhoeven (2012) argue that much of the dialogue literature in PR remains anchored in functionalist assumptions that presuppose the possibility of rational consensus. These perspectives underestimate the depth of conflicts of interest, power asymmetries and structural contradictions that characterize relationships between capitalist organizations and their various publics.

The agonistic perspective, aligned with Mouffe (2005), starts from a fundamentally different premise. Conflict is not a pathology to be overcome through rational dialogue, but a constitutive condition of the political that must be recognized and institutionally channeled (Holtzhausen, 2000; Weaver et al., 2006). In this view, the role of PR is not to facilitate consensus but to manage dissent productively. Operationalizing this approach requires methodologies that center the voices of marginalized actors and workers in technology design processes, following principles of participatory and justice-oriented co-design (Costanza-Chock, 2020).

Davidson (2016) argues that both deliberative and dialogic models place unrealistic expectations on practitioners, particularly where powerful actors have little incentive to embrace symmetry. He suggests that an agonistic lens offers a more realistic basis for understanding how PR can support counter-hegemonic and marginalized groups. Building on this, Davidson's continuum of expansive and neutralizing strategies adds an additional layer for understanding PR's position (Davidson, 2025). Neutralizing strategies reflect the efficiency-driven logics of the AI ecosystem, while expansive strategies align with democratic and agonistic values by legitimizing contestation and enabling coalition-building with marginalized publics.

This theoretical reorientation has direct implications for how we understand the position of PR in the AI ecosystem. At this point, Ramsey's (2016) central question becomes unavoidable: is consensus actually attainable, or is ongoing contestation simply inherent to it? From a functionalist dialogic perspective, the solution to the field's marginalization would be to promote more dialogue between public relations professionals and technological actors. From an agonistic perspective, however, this expectation is naïve. It ignores the fact that the exclusion of PR is the result of power structures and capital accumulation logics that benefit some actors at the expense of others.

The discipline of PR rhetorically claims functions of mediation and consensus-building but structurally operates from subordinate positions relative to more powerful actors (Stoker, 2020). The field's oscillation between public-service rhetoric and propaganda-oriented practices, as shown by Weaver et al. (2006), reveals persistent structural tensions around nature and purpose of PR in capitalist democratic societies.

The agonistic framework offers a productive conceptual path. Rather than aspiring to the harmonious integration of PR into the AI ecosystem, the field could position itself as an explicitly contestatory actor. This would involve: (1) recognizing the structural incompatibility between the values of critical PR and the dominant logics of AI development; (2) politicizing exclusion as an issue of communicative justice; (3) building coalitions with other marginalized actors; (4) developing technological alternatives designed from different values; and (5) pressing for regulatory frameworks that require multi-stakeholder participation.

Integrating the expansive-neutralizing continuum proposed by Davidson helps clarify why PR's long-standing reliance on neutralizing strategies has contributed to its marginalization, while a shift toward

expansive approaches would strengthen the field's capacity to challenge hegemonic technological agendas and advance communicative justice in AI governance.

Instead of seeking uncritical integration into logics of accelerated innovation, Christensen and Andersson (2025) propose that PR reclaims slowness, deliberation, and reflexivity as legitimate epistemic and ethical values. This 'slowness' is not passivity but a form of active resistance: a refusal to accept that the only probable future for communication is one designed by and for actors who prioritize efficiency over justice, automation over relationality and scalability over democratic accountability.

This theoretical framework has articulated a critical political economy perspective that conceptualizes the empirical gap as a problem of structural invisibility: PR may be discursively recognized as relevant to digital transformation, but this symbolic visibility does not necessarily translate into access to resources, investment capacity or institutional position within innovation ecosystems. We argue that this paradox is not accidental. It reflects: (1) logics of platformization that fundamentally reconfigure power relations in communication industries (van Dijk et al., 2018; Gillespie, 2010); (2) sectoral hierarchies shaped by processes of financialization that privilege capital-intensive, scalable models over labor-intensive and relational fields (Fuchs, 2020; Mosco, 2009); (3) dynamics of epistemic exclusion that devalue non-instrumental forms of communicative knowledge (Bourne, 2019; Logan and Waymer, 2024); and (4) unresolved theoretical tensions between dialogic aspirations and structural realities of subordinated practice (Ihlen & Verhoeven, 2012; Stoker, 2020).

2.7. Research objectives

However, these theoretical propositions require systematic empirical grounding. To make visible the structural invisibility of PR in the AI ecosystem, it is necessary to document quantitatively the asymmetries in capital, investment, and organizational resources that the theoretical framework conceptualizes. Only through empirical evidence can the field articulate well-founded claims for structural reconfiguration and challenge narratives that naturalize the marginalization of PR as the inevitable result of market forces or resistance to change.

To address the research questions formulated in the Introduction (RQ1–RQ2), this section translates the theoretical concepts developed above —symbolic versus economic capital (Bourdieu, 1986), capital-intensive versus labor-intensive models and structural invisibility — into observable and measurable variables: funding volumes, number of investors, media coverage, organizational efficiency ratios and capitalization speed. By systematically documenting how these variables are differentially distributed across PR, advertising and marketing in the context of AI-related start-ups, the empirical analysis that follows provides the factual basis needed to support, or challenge, theoretical hypotheses about structural marginalization, sectoral hierarchies and power asymmetries in the algorithmic communication ecosystem.

3. Method

To address these research objectives, the study draws on a global dataset of AI-related communication start-ups and apply quantitative modelling techniques to map and compare the structural position of PR, advertising, and marketing organizations.

3.1. Research design and data source

This study adopts an observational design that takes advantage of naturally occurring variation in the AI start-up ecosystem. Rather than relying on hypothetical scenarios or expert evaluations, we work with real organizations that have attempted to position themselves in AI-related markets. Each observation in the dataset corresponds to an

actual company that has sought funding, built a team, and claimed a place within the broader communication and technology field.

The empirical analysis draws on Crunchbase. We extracted all organizations tagged as operating in artificial-intelligence-related activities between 1995 and 2024 and then restricted the sample to those whose primary industry classification fell into one of three communication-related sectors: Sales and Marketing, Advertising and PR. Organizations without a clear primary sector in these three categories or with inconsistent classifications were excluded.

The final dataset comprises 4774 AI-related organizations. For each company, we combined firm-level information (e.g., founding year, funding history, number of employees, media presence) with country-level indicators describing human development and environmental pressures. Time-dependent variables (e.g., organizational age or time since last funding) were calculated using 1 January 2024 as the reference date.

The resulting distribution across sectors is imbalanced: advertising ($n = 1347$) and marketing ($n = 3329$) firms dominate the sample, while PR-oriented organizations ($n = 98$) constitute a much smaller subset. This empirical asymmetry mirrors the theoretical concern of the article — PR's structural invisibility in AI, a pattern that itself becomes a key finding in the study.

Our sample follows a nested classification reflecting Crunchbase's industry categories. Sales and Marketing (S1) is the broadest category. Within it, Pure Sales and Marketing (S11) comprises organizations classified strictly within Sales and Marketing, excluding Advertising or PR designations. The Advertising ecosystem (S12) encompasses organizations engaged in advertising or public relations activities. The Advertising ecosystem subdivides further. Pure Advertising (S121) includes organizations with Advertising tags but no PR classification. Public Relations (S122) represents PR firms nested within both the Advertising ecosystem and broader Sales and Marketing hierarchy. This nested structure motivates a two-stage comparison. We first compare the Advertising ecosystem (S12: Ad+PR) with Pure Sales and Marketing (S11) to establish how advertising-oriented firms differ from the broader marketing landscape. We then compare PR (S122) with Pure Advertising (S121) to isolate what distinguishes public relations firms within their closest sectoral context.

3.2. Variables

To characterize how organizations are positioned within the AI ecosystem, we organized the explanatory variables into five conceptual clusters:

- **Visibility.** This cluster captures how organizations are in communicative and symbolic terms. It includes the number of founders (i.e., a proxy for the size and visibility of the founding team), organizational age⁵ in years (i.e., tenure), an index⁶ of web presence across major platforms (e.g., LinkedIn, Facebook/Meta and Twitter/X), and the number of indexed news articles, press releases and media mentions associated with each firm.
- **Investment.** Investment variables reflect the depth and breadth of financial backing. We use standard Crunchbase fields describing overall funding status recoded as an ordinal stage (i.e., 1 = Seed, 2 = Early Stage Venture, 3 = Late Stage Venture, 4 = Private Equity, 5 = MandA, 6 = IPO), the number of lead investors, and the total number of investors. To capture financing structure and capital concentration, we compute the share of funding raised via equity instruments,⁷

⁵ The ceiling of the time between 1 January 2024 and the founding date divided by 365.25 (with negative values set to zero).

⁶ It is calculated as the absence or presence of non-missing official accounts across any of the three platforms (0 = no presence, 1 = present on all three).

⁷ It is the total equity funding in USD divided by total funding in USD.

and the average investment per investor,⁸ which approximates typical ticket size and concentration of capital.

- **Financial dynamics.** This cluster focuses on revenue and funding trajectories over time: estimated revenue band as an ordinal category; this field is a Crunchbase-provided range-based estimate (i.e., rather than audited or self-reported revenue) and is therefore treated as an approximate ordinal proxy. It also includes total funding raised (USD), number of funding rounds, and the time since the last funding event, computed as the ceiling of the time between 1 January 2024 and the last funding date divided by 365.25. We also included derived indicators that captures the shape of funding trajectories, such as a funding efficiency ratio (i.e., average capital per round, computed as total funding in USD divided by the number of funding rounds) and funding velocity (i.e., total funding divided by organizational age). Together, they allow us to distinguish, for example, between firms with rapid early capitalization and those with slower or more fragmented trajectories.
- **Operational efficiency.** To approximate internal resources, we rely on Crunchbase ranges for the number of employees and derive an employee-to-funding ratio that relates human capital to financial capital. Because Crunchbase reports employee headcount as categorical size bands, we encode an ordinal employee-band index (1 = 1–10, 2 = 11–50, ..., 7 = 1001–5000) to proxy organizational scale. Dividing this index by total funding (USD) yields an employee-to-funding ratio measuring human-capital intensity: higher values indicate labor-intensive configurations (more employees per unit of capital), lower values indicate capital-intensive, scalable configurations. We acknowledge that this step imposes quasi-interval spacing on what is, in origin, an ordinal size band, with wider bins at the top of the distribution (e.g., 1001–5000) than at the bottom; the rank-based tests used below (Mann-Whitney U, Cliff's δ) are invariant to this rescaling. Firms with zero or missing total funding are excluded pairwise from this ratio (and from the funding-velocity and funding-efficiency variables) to avoid division by zero, so the ratio describes only organizations with a disclosed funding history.
- **Ecosystem context.** Finally, we situate each firm within its broader institutional and environmental context. Using the country of headquarters, we merge in indicators from the 2023 UN Human Development Reports, including HDI rank and category, the continuous Human Development Index, the planetary-pressure-adjusted HDI (i.e., PHDI), and measures of carbon emissions and material footprint (i.e., both in levels and normalized indices). These variables allow us to examine whether PR, advertising and marketing AI start-ups are similarly distributed across development and sustainability contexts, or whether structural inequalities extend to the geographies in which these firms emerge.

A detailed codebook describing all variables, coding decisions and data sources is in the dataset.

3.3. Data preprocessing

We screened all variables for missingness and data quality, removing fields with more than 1000 missing observations from pure Sales and Marketing companies. Several financial and count variables (total funding, number of investors, number of articles, funding efficiency ratios) display heavy right-skew typical of entrepreneurial data. Because the inferential tests used in this study (Mann-Whitney U and Cliff's δ) are rank-based and therefore invariant to monotonic transformations, no distributional correction was required for the statistical comparisons. Where box-plot visualizations of raw funding amounts would be dominated by extreme values (e.g., firms raising \$800 M+), we applied a log (1 + x) scale to the plotting axis to make distributional differences

visible (see Fig. 4).

3.4. Analytical strategy

Our analytical strategy combines descriptive visualization with two-stage comparative statistical analysis across the complete population of AI-related communication start-ups indexed in Crunchbase. Because the dataset constitutes the Crunchbase-indexed population of AI-related communication start-ups rather than a random sample, Mann-Whitney U tests and Cliff's δ effect sizes are used as descriptive aids that characterize distributional differences between sectors within this indexed population, not as inferential procedures generalizing to the broader, unobserved universe of AI-related communication organizations. We adopt staged comparisons rather than multivariate modeling because our goal is transparent description of sectoral positioning, not causal inference.

We characterize each sector's discursive positioning through word clouds generated from self-reported industry tags, capturing the technologies, markets, and capabilities firms emphasize to potential investors.

We quantify sectoral differences using Mann-Whitney U tests and Cliff's δ effect sizes with 95% confidence intervals, providing standardized effect magnitude measures and characterizing distributional overlap. Cliff's δ ranges from -1 to $+1$; we interpret $|\delta| < 0.15$ as negligible, 0.15 – 0.33 as small, 0.33 – 0.47 as medium, and > 0.47 as large. We report medians and 95% bootstrap confidence intervals within five conceptual clusters (visibility, investment, financial dynamics, operational efficiency, ecosystem context). All analyses were conducted in Python using *scipy.stats*, *pandas*, and *NumPy*.

4. Results

AI-related communication organizations occupy distinct structural positions. PR firms represent only 2.1% of the Crunchbase-indexed population ($n = 98$), compared to 28.2% for Advertising ($n = 1347$) and 69.7% for Sales and Marketing ($n = 3329$), as Fig. 1 depicts.

4.1. Sectoral landscape

The word clouds in Fig. 2 reveal distinct discursive territories. Advertising firms emphasize programmatic technologies, data analytics, and automated optimization—capabilities aligned with scalable, capital-intensive models. Sales and Marketing firms cluster around customer relationship management, lead generation, and conversion metrics. PR firms foreground communication, media relations, and brand-related terminology, reflecting orientation toward relational and reputational functions.

PR's numerical scarcity (2.1%) provides the first empirical manifestation of structural invisibility: PR is not only undercapitalized but numerically marginal in the data infrastructures through which AI investment becomes visible. The question is whether this marginality accompanies systematic differences in resource allocation.

4.2. Advertising Ecosystem vs. Pure Sales and Marketing

Table 1 presents Mann-Whitney U tests and Cliff's δ effect sizes comparing Ad + PR firms ($n = 1445$) with pure Sales & Marketing firms ($n = 3329$).

Effect sizes are uniformly small, indicating substantial distributional overlap. Nevertheless, the advertising ecosystem shows modestly higher tenure (median 8 vs. 7 years; $\delta = 0.08$) and greater media coverage (median 5 vs. 4 articles; $\delta = 0.09$).

Investment patterns show more pronounced differences. Ad + PR firms display higher average investment per investor (median \$990 K vs. \$646 K; $\delta = 0.11$), more advanced funding statuses ($\delta = 0.10$), and longer intervals since last funding (median 5 vs. 3 years; $\delta = 0.17$ —the

⁸ As the total funding in USD divided by the number of investors.

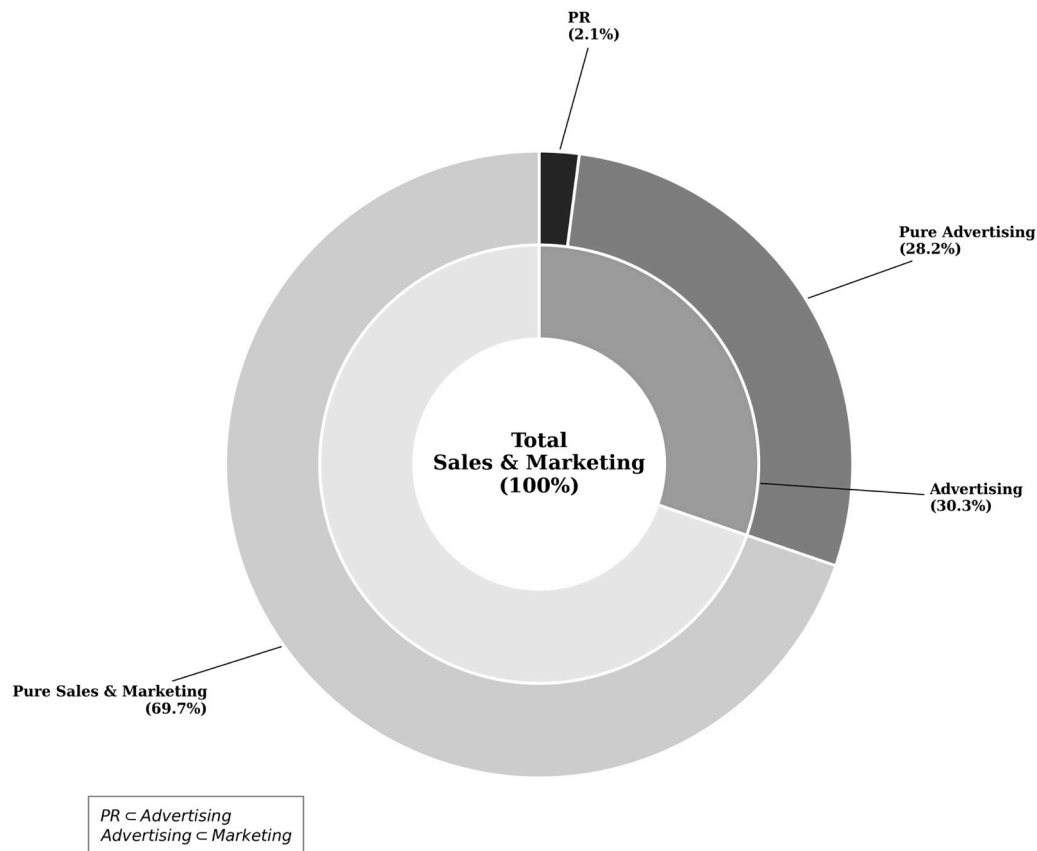


Fig. 1. Hierarchical Sector Classification of AI Startups based on Crunchbase classification.



Fig. 2. Word clouds of firm industries. The left panel shows firms in the PR firms, the central panel shows Advertising firms, and the right panel shows firms in Sales and Marketing.

largest effect), suggesting earlier capital securing and subsequent maturation. Ecosystem context effects remain negligible ($\delta \leq 0.08$).

4.3. PR vs. advertising

Table 2 presents PR firms (n = 98) versus pure Advertising firms (n = 1347), isolating PR within the advertising ecosystem.

Significant differences concentrate exclusively in investment infrastructure, while visibility variables show negligible effects, directly supporting the structural invisibility thesis. PR firms attract substantially fewer investors (median 2 vs. 3; $\delta = -0.36$), the largest effect in either comparison, identifying investor access as the primary mechanism of PR's marginalization. PR firms also exhibit lower funding status ($\delta = -0.21$) and fewer funding rounds (median 1 vs. 2; $\delta = -0.19$). The employee-to-funding ratio shows a positive trend ($\delta = 0.19$) consistent with labor-intensive models, though confidence intervals include zero. PR firms cluster in slightly higher-HDI countries ($\delta = 0.13$).

Visibility variables (tenure, web presence, articles) showed no

differences meeting the reporting threshold ($p \leq .10$); the key finding of comparison. PR firms achieve equivalent symbolic presence despite restricted capital access. Fig. 3 depicts this capital-visibility decoupling: PR firms show a median of 6 articles compared to 5 for Advertising, despite fewer investors and weaker funding. PR is seen more but funded less. This decoupling is a population-level characteristic, not a sampling artifact.

Fig. 4 shows how funding scales with organizational size.⁹ PR firms consistently occupy lower funding positions, with the gap widening dramatically. Marketing firms at 501–1000 employees attract ~\$342 M, nearly four times Advertising (\$86.5 M). Structural funding disadvantage intensifies as organizations scale.

⁹ This visualization utilizes a sub-sample of 1405 firms for which both employee and funding data were concurrently available, representing approximately 29% of the total population.

Table 1

Mann-Whitney U Test Results Comparing Advertising and PR firms (Ad+PR) with pure Sales and Marketing Firms, and Achieved Statistical Power ($\alpha=0.05$). Only variables with $p \leq .10$ are reported; complete results are available in the project repository. Bolded median values indicate the group more advantageously positioned in the AI ecosystem for that variable: higher is advantageous for capital, investment and visibility indicators; lower is advantageous for per-capita CO₂ emissions and material footprint.

Cluster	Variable	PR + AD Median (95% CI)	Mkg Median (95% CI)	(U + Sig)	Cliff's δ + 95% CI	Achieved Power
Ecosystem context	Human Development	4.00 [4.00, 4.00]	4.00 [4.00, 4.00]	(2298792) ***	0.07 [0.04, 0.09]	0.95
	Human Development Index (HDI)	0.92 [0.92, 0.92]	0.92 [0.92, 0.92]	(2280029) **	0.06 [0.02, 0.09]	0.88
	Planetary pressures-adjusted HDI (PHDI)	0.70 [0.70, 0.70]	0.70 [0.70, 0.70]	(2279276) ***	0.08 [0.05, 0.11]	0.99
	Adjustment factor for planetary pressures	0.76 [0.76, 0.78]	0.78 [0.76, 0.79]	(1995451) **	−0.05 [−0.09, −0.02]	0.84
	Carbon dioxide emissions per capita (production)	8.22 [8.06, 14.20]	8.15 [8.15, 8.22]	(2248120) *	0.04 [0.01, 0.08]	0.65
	Carbon dioxide emissions (production) index	0.88 [0.79, 0.88]	0.88 [0.88, 0.88]	(2063816) *	−0.04 [−0.08, −0.01]	0.65
	Material footprint per capita	29.65 [29.65, 29.65]	29.65 [29.65, 29.65]	(2243735) ***	0.06 [0.03, 0.10]	0.93
	Material footprint index	0.72 [0.72, 0.72]	0.72 [0.72, 0.72]	(1977715) ***	−0.06 [−0.10, −0.03]	0.93
Financial dynamics	Total Funding Amount Currency (in USD) (log_transformed)	2.47 M [1.84M–3.00 M]	2.0 M [1.58M–2.22 M]	(241090) *	0.07 [0.01, 0.13]	0.63
	Days Since Last Funding	5.00 [4.00, 5.00]	3.00 [3.00, 4.00]	(433392) ***	0.17 [0.12, 0.23]	1.00
	Funding Efficiency Ratio (log_transformed)	1.19 M [0.95M–1.42 M]	0.87 M [0.75M–1.00 M]	(242300) *	0.08 [0.02, 0.14]	0.70
	Funding Status	1.00 [1.00, 2.00]	1.00 [1.00, 1.00]	(340848) ***	0.10 [0.05, 0.15]	0.94
Investment	Average Investment Per Investor (log_transformed)	0.99 M [0.75M–1.14 M]	0.65 M [0.54M–0.75 M]	(165972) **	0.11 [0.04, 0.17]	0.85
	Tenured	8.00 [8.00, 8.00]	7.00 [7.00, 7.00]	(2297399) ***	0.08 [0.05, 0.12]	1.00
Visibility	Web Presence Score	0.67 [0.67, 1.00]	0.67 [0.67, 0.67]	(2532546) **	0.05 [0.02, 0.09]	0.85
	Number of Articles	5.00 [4.00, 6.00]	4.00 [4.00, 5.00]	(377739) **	0.09 [0.03, 0.14]	0.87

Significance levels: * $p < .05$; ** $p < .01$; *** $p < .001$.

Table 2

Mann-Whitney U Test Results Comparing PR and Advertising Firms, and Achieved Statistical Power ($\alpha=0.05$). Only variables with $p \leq .10$ are reported; complete results are available in the project repository. Bolded median values indicate the group more advantageously positioned in the AI ecosystem for that variable: higher is advantageous for investment and financial-dynamics indicators; lower is advantageous for the employee-to-funding ratio (read as a marker of capital intensity from the investor lens).

Cluster	Variable	PR Median (95% CI)	Ad Median (95% CI)	(U + Sig)	Cliff's δ + 95% CI	Achieved Power
Ecosystem context	Human Development Index (HDI)	0.92 [0.92, 0.92]	0.92 [0.92, 0.92]	(66310) *	0.13 [0.02, 0.24]	0.57
Financial dynamics	Number of Funding Rounds	1.00 [1.00, 2.00]	2.00 [2.00, 2.00]	(8378) ·	−0.19 [−0.33, −0.02]	0.49
Investment	Funding Status	1.00 [1.00, 1.00]	1.00 [1.00, 2.00]	(6892) *	−0.21 [−0.35, −0.05]	0.53
	Number of Investors	2.00 [1.00, 2.00]	3.00 [3.00, 3.00]	(3957) **	−0.36 [−0.52, −0.19]	0.91
Operational efficiency	Employee to Funding Ratio	0.00 [0.00, 0.00]	0.00 [0.00, 0.00]	(6878) ·	0.19 [−0.05, 0.42]	0.40

Significance levels: * $p < .05$; ** $p < .01$; *** $p < .001$.

4.4. Sector-by-sector summary

These comparisons reveal three distinct sectoral profiles. Advertising occupies the structurally dominant position: capital-intensive, diversified investor bases, multiple funding rounds, moderate visibility. Effect sizes confirm advantages over PR concentrate in investment infrastructure ($\delta = -0.21$ to -0.36) rather than symbolic presence.

Sales & Marketing occupies an intermediate position: ongoing capital access, moderate labor intensity, modest visibility. Effects relative to Ad + PR are small ($\delta < 0.17$), with differentiation primarily in funding temporality. PR occupies the most paradoxical position: numerically scarce (2.1%), fewer investors (median 2 vs. 3), fewer funding rounds

(median 1 vs. 2), more labor-intensive, yet achieving visibility indistinguishable from Advertising. This combination of equivalent visibility and restricted capitalization constitutes the empirical signature of structural invisibility, observed directly in the population.

5. Discussion

5.1. Answering RQ1: Sectoral positioning of AI-related PR start-ups

To address RQ1, we compared AI-related PR start-ups with Advertising and Sales and Marketing firms in terms of capitalisation, funding dynamics, organisational models and media visibility. The three sectors

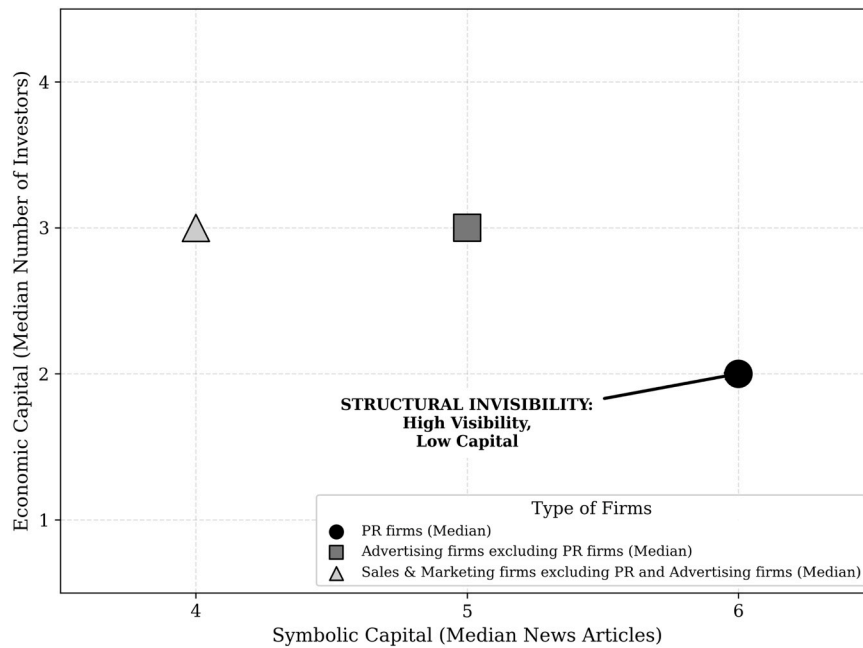


Fig. 3. Capital-Visibility Decoupling in the AI Ecosystem.

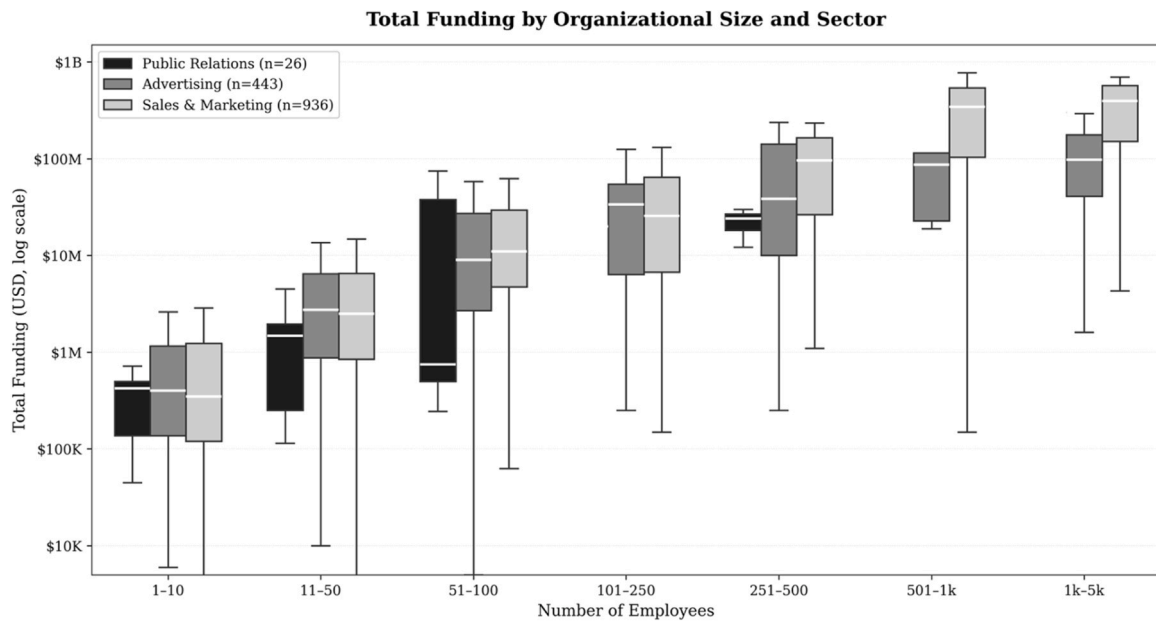


Fig. 4. Total Funding by Organizational Size and Sector (log scale). Organizations with no disclosed funding are excluded.

show clearly different configurations of resources and visibility, which place PR at the vulnerable end of the spectrum, Advertising at the privileged end, and Sales and Marketing in an intermediate position.

In our sample, PR start-ups are structurally fragile. They attract fewer investors, close fewer rounds, and generate smaller revenue. At the same time, they tend to employ more people per unit of funding, reflecting the labor-intensive organizational structures described by Edwards (2018) and Fuchs (2020), which points to labor-intensive models sustained with relatively scarce capital. Funding also appears slower and more irregular: many PR firms have gone longer without raising a new round, suggesting that once the initial window of interest closes, it is difficult for them to re-enter investment pipelines and convert early experiments into scalable ventures (Bourne, 2019). Yet this lack of capital does not mean lack of attention. PR start-ups appear

frequently in news coverage and public discussion, more often than their financial profile would suggest. This aligns with Bourdieu's (1986) notion of symbolic capital. Symbolically, they are recognized as relevant; structurally, they remain marginal in investor portfolios and are rarely treated as "real" AI growth bets. This pattern corresponds to the structural invisibility described by Bourne (2019). PR thus combines low capital, weak funding dynamics and relatively high visibility.

Advertising start-ups, by contrast, show the most consolidated profile. Their business models are capital-intensive and highly scalable, and they align closely with investor expectations around AI-driven optimization, targeting and automation (Bourne, 2019; Galloway and Swiatek, 2018; Swiatek et al., 2024). They typically display rapid, early funding momentum. Advertising's media visibility is also steady and broadly proportional to its structural advantages. In this sector, symbolic

legitimacy and access to capital go hand in hand, echoing the long-standing role of advertising as the commercial engine of media and platform economies (Christensen and Andersson, 2025; Logan and Waymer, 2024). This sector can be characterized as high-capital, high-funding-dynamics and medium-visibility.

Sales and Marketing start-ups remain in a middle ground (Kenney & Zysman, 2019). They are able to mobilize a relatively broad investor base and engage in repeated rounds, but with medium-sized ticket sizes and mid-range total funding and efficiency. Their growth is less about large bets and more about incremental, distributed capital accumulation. Temporally, this is the most active sector. Sales & Marketing firms show more recent funding activity than PR and Advertising, and they appear to remain in the pipeline of viable opportunities in areas like customer analytics, CRM and performance marketing. However, this financial embeddedness is not matched by similar symbolic presence. Despite their active fundraising, Sales & Marketing firms receive comparatively little media attention, and they are under-represented in broader narratives about AI in communication (Logan and Waymer, 2024; Qian et al., 2024). The sector therefore combines medium capital, medium-to-high funding dynamics and low visibility.

These patterns answer RQ1 by showing a clear hierarchy in the AI start-up ecosystem: Advertising concentrates capital and scalable models; Sales & Marketing consolidates a financially integrated but discursively quieter position; and PR combines structural fragility with comparatively high discursive presence.

5.2. Answering RQ2: Structural invisibility of PR in the AI ecosystem

RQ2 asked whether these sectoral configurations support or challenge the idea of PR's structural invisibility in the AI ecosystem. The findings strongly support this statement.

The profile of PR start-ups (e.g., undercapitalized, unevenly funded and yet relatively visible according to the RQ1) mirrors the notion of structural invisibility as a disconnection between discursive legitimacy and access to resources (Bourdieu, 1986; Bourne, 2019). PR firms are seen, quoted and sometimes celebrated, but they are not funded in a way that grants them real influence over how AI in communication is designed and deployed. The paradox at the heart of symbolic capital, being recognized but unable to convert that recognition into economic or infrastructural power, appears clearly in the data.

The Bourdieusian framework, however, requires a more precise interpretation of this visibility. Bourdieu (1986) conceptualized symbolic capital as legitimized recognition that, under the right conditions, converts into economic, social, or cultural resources. Our findings suggest that PR's media presence may not constitute genuine symbolic capital. Instead, it functions as what we term hollow visibility: discursive recognition that circulates widely but has become structurally inert, failing to convert into economic capital.

Genuine symbolic capital retains convertibility, it translates into access to resources, networks, and decision-making spaces (Ihlen, 2005; Ihlen, 2007). Hollow visibility operates as ceremonial acknowledgment: PR is invoked in innovation discourse yet excluded from the material circuits (venture capital, platform infrastructures, regulatory design) where AI's future is determined. This resonates with Fraser (1995)'s critique of "recognition without redistribution". As Edwards (2018) and Ihlen and Verhoeven (2012) have argued, PR has historically struggled to convert claims to expertise into institutional power, a pattern intensifying in the AI context. PR's visibility functions not as convertible capital but as a discursive placeholder allowing the ecosystem to claim inclusivity while maintaining structural exclusion: visible enough to be seen, not legitimate enough to be resourced.

Hollow visibility is not a new form of capital, not a subtype of symbolic capital, and not a degraded version of it. It designates a relational configuration in which the discursive markers of legitimacy continue to circulate while the institutional channels that translate them into economic, infrastructural or decisional power are foreclosed.

Bourdieu's framework assumes that, within a settled field, the different species of capital remain mutually convertible. Hollow visibility identifies the specific situation in which those rules of exchange break down for an actor while the symbolic surface of recognition persists. It is therefore field-specific, produced by the joint operation of three logics: platformization (Srnicek, 2017), financialization (Birch, 2017; Fuchs, 2020) and epistemic exclusion (Bourne, 2019; Logan and Waymer, 2024).

The statistical pattern confirms this interpretation. Significant differences between PR and Advertising emerge exclusively in investment infrastructure (investors, funding rounds, funding status), while visibility indicators show no sectoral differences. PR's marginalization operates not through broad exclusion but through targeted restriction within the capital circuits through which platform capitalism allocates resources and power.

The contrast with Advertising underlines this point. Advertising emerges as the sector where AI's core promises (i.e., scalability, optimization and cost reduction) better fit with the logics of platform capitalism (Srnicek, 2017). Investor attention flows to business models that can be easily scaled across data infrastructures, automated pipelines and automated measurement, amplifying already dominant positions (Crawford, 2021; Zuboff, 2019). The results suggest that this synergy between AI and advertising is not merely technical, but deeply institutional: it reflects decades of advertising's central role in monetizing communication systems (McChesney, 2013). In such a context, PR's relational, context-dependent and often slow work sits awkwardly with prevailing expectations of what AI innovation should look like.

The intermediate position of Sales & Marketing helps nuance the picture. These firms show that it is possible to be relatively well connected to capital without commanding strong media visibility. Capital and visibility are not always aligned. However, the sector's positive funding dynamics indicate that it is still read as compatible with the logics of scalability and standardization that AI rewards, especially where tacit commercial know-how can be turned into data-driven processes (Christensen & Andersson, 2025). PR, by contrast, remains in the quadrant where labor intensity is high, capital is scarce and symbolic visibility does not translate into structural power.

The organizational indicators, especially the employee-to-funding ratio, show empirically that PR remains more labor-intensive than Advertising and Sales & Marketing. This pattern gives concrete form to arguments that AI does not transform all communicative work equally but tends to amplify the advantages of sectors whose processes are easier to automate (Diakopoulos, 2019; Frey and Osborne, 2017). In PR, where managing dissent, navigating ethics and exercising contextual judgement are central (Edwards, 2018; McKie and Munshi, 2007), AI functions more as support than a replacement. Investor metrics centered on scalability and efficiency might challenge PR when comparing with other more advantageous investments.

The combination of undercapitalization, labor-intensive models and relatively high visibility shows that PR's structural invisibility in the AI ecosystem is less about absence and more about misalignment. PR is present in discourse but largely absent from the material infrastructures, funding circuits and design spaces that shape AI in communication.

5.3. Theoretical implications: structural invisibility, agonistic PR and communicative justice

Beyond the direct answers to the research questions, the findings connect to ongoing theoretical debates in critical, agonistic, intersectional and decolonial public relations. They indicate that structural invisibility is not a temporary anomaly produced by slow adoption, but a persistent feature of how AI capitalism organizes value, voice and expertise.

The case of PR reinforces arguments from agonistic and critical approaches. The clear lack of investment and the limited participation of PR start-ups in funding rounds indicate that marginalization is not

simply a matter of “being late to AI”. Rather, it reflects deeper tensions between the field’s normative commitments (relationality, ethics, mediation) and the dominant logics of AI, which privilege efficiency, quantification and automation (Bourne, 2019; Holtzhausen, 2000). In this light, the results echo Ihlen and Verhoeven’s (2012) claim that power relations are not corrected by adding more dialogue: exclusion is built into the architecture of the technological and economic systems in which PR operates.

The findings also resonate with intersectional and decolonial perspectives. PR’s weak presence in accelerated funding circuits implies weak presence in the spaces where AI’s values, metrics and architectures are decided, as Logan and Waymer (2024) emphasize. This displacement is not only professional; it parallels broader patterns described by Dutta and Pal (2011), where epistemologies grounded in reciprocity, care and community are sidelined in favor of technocratic, instrumental logics. When PR is structurally underpowered, its potential to advance communicative and democratic justice is likewise constrained (Edwards, 2016).

The findings surface a pattern we term capital-visibility decoupling: symbolic capital (media coverage, web presence, tenure) remains intact while economic capital (investor access, funding structures) becomes restricted. This decoupling may generalize beyond PR to other fields marginalized within technology ecosystems, those characterized by relational work, context-dependent expertise, and labor-intensive service delivery.

Structural invisibility, on this account, operates not through absence from conversation but through absence from the material mechanisms of power allocation. The correlation between discursive recognition and resource access, typically assumed in professional legitimization theories, breaks down when platform capitalism privileges technical scalability over relational complexity. PR’s predicament illuminates a general tension: AI development may systematically exclude professional capabilities that depend on human judgment, contextual interpretation, and relationship cultivation.

From a theoretical standpoint, structural invisibility emerges as a useful lens for studying AI in public relations. The issue is not simply that PR is underrepresented, but that the criteria that define value in the AI ecosystem systematically devalue relational, critical and agonistic forms of knowledge and practice. As Collister (2015) argues, algorithmic communication architectures increasingly determine visibility and influence, privileging actors embedded within these infrastructures and sidelining those, such as PR, without access to them.

5.4. Practical implications

The findings also have consequences for how practitioners and organizations might respond to AI. PR appears unlikely to secure a stronger position in the ecosystem by trying to imitate Advertising and Sales & Marketing on their own terms, that is, by chasing the same capital-intensive, automation-driven models that investors already prefer.

Christensen and Andersson’s (2025) idea of ‘slow implementation’ is particularly relevant here. If PR cannot compete on speed, scale or automation, its distinctive contribution may lie in bringing other values into the conversation: reflexivity, deliberation, care, and attention to power and inequality. The results imply that pursuing a purely integrationist strategy (i.e., trying to fit smoothly into existing AI agendas) will not impact the underlying capital asymmetries. They lend support to the idea that PR could act as an agonistic force in AI debates, questioning dominant assumptions about what counts as innovation and for whom AI systems should be designed.

5.4.1. Enacting Agonistic Critique: Concrete Scenarios

To move beyond theoretical articulation, it is useful to illustrate what an agonistic approach to AI in PR might look like in practice. We offer two concrete scenarios that operationalize the strategic principles

outlined above.

- **Scenario 1: Slow Implementation of Generative AI in PR Agencies.** Consider a mid-sized PR agency evaluating a generative AI platform. Rather than rapid procurement, a slow implementation approach would: (1) form a cross-functional working group including practitioners and external stakeholders to evaluate capabilities, ethical implications, and impacts on professional identity (Christensen and Andersson, 2025; Costanza-Chock, 2020); (2) deploy in a limited context while documenting effects on relational work and stakeholder dialogue (Edwards, 2018); (3) negotiate with vendors for transparency features and stakeholder feedback loops; (4) publish findings with professional associations and regulatory bodies.
- **Scenario 2: Coalition-Building in Algorithmic Governance Debates.** Consider a regulatory consultation on transparency requirements for AI-driven platforms (European Commission, 2021). An agonistic coalition strategy would: (1) reach out to marginalized actors—community media, digital rights NGOs, labor unions, and researchers (Dutta and Pal, 2011; Noble, 2018); (2) frame the issue as communicative justice (Edwards, 2016); (3) co-develop proposals extending beyond technical transparency to include who designed algorithms, whose interests they serve, and how choices were made (Ananny and Crawford, 2018; Flyverbom et al., 2017); (4) submit joint comments and coordinate media outreach, leveraging PR’s relational skills to compensate for structural weakness in economic capital (Holtzhausen, 2000; Mouffe, 2005).

These scenarios show that agonistic critique comprises concrete practices that practitioners and professional associations can adopt to reshape the AI ecosystem.

5.5. Limitations and future research directions

Four limitations simultaneously open research directions. First, our data capture organizational positioning at a single point (January 1, 2024). Longitudinal tracking would reveal whether structural invisibility deepens, stabilizes, or reverses as the ecosystem matures. Second, PR firms constitute only 2.1% of our sample ($n = 98$), limiting statistical precision. Qualitative research (founder interviews, investment decision case studies) could surface the tacit assumptions through which investors deprioritize PR ventures. Third, Crunchbase indexes primarily venture-backed firms, potentially excluding self-funded boutiques and regionally focused organizations. Comparative studies using industry association directories or regional databases would test whether structural invisibility extends beyond the venture-backed segment. Fourth, sectoral classifications rely on self-reported tags, which firms may strategically adjust. Combining automated text analysis with expert coding could develop more robust classification schemes. Beyond these extensions, action-oriented research is needed to convert critical frameworks into concrete organizational strategies and alliances, building coalitions capable of contesting platform capitalism’s investment logic.

6. Conclusions

The analysis suggests that PR’s subordinate position in the AI ecosystem cannot be reduced to a simple story of late adoption. The sector’s configuration (low capital, fragile funding trajectories, labor-intensive models and relatively high visibility) points instead to structural hierarchies reinforced by platformization, financialization and infrastructural concentration (Crawford, 2021; Fuchs, 2020; Srnicek, 2017). PR start-ups are highly visible but attract poor capital, embodying the paradox already identified by Bourdieu (1986): they hold symbolic capital that is seldom converted into economic or infrastructural power. The structural invisibility of PR in AI is therefore not

an accident or a matter of professional will; it reflects economic, technocratic and epistemic logics that favor capital-intensive, data-driven models over relational, dialogic and critical practices (Bourne, 2019; Ihlen and Verhoeven, 2012; Logan and Waymer, 2024).

These findings have two main implications. For PR scholarship, they indicate that AI-related marginalization should be understood as structurally embedded in platform capitalism, not as a temporary gap that will close once practitioners learn AI or communicate its benefits more effectively. For practice, they warn that strategies aimed solely at aligning with dominant metrics of scalability and automation may help individual organizations in the short term but are unlikely to shift the broader hierarchies that limit PR's influence on AI design and governance. Without an explicit focus on power, justice and participation, PR risks accepting a structurally subordinate role in an AI ecosystem built on other sectors' priorities.

What, then, can PR do? Our findings suggest that trying to 'catch up' by replicating the logic of scalability and automation that characterize advertising and marketing is, at best, a partial response. A strategy consistent with the critical and agonistic framework developed in this article would involve at least four moves. First, PR can explicitly adopt a contestatory role in AI debates, framing its marginalization not as a failure to modernize but as an issue of communicative justice and democratic representation (Holtzhausen, 2000; Motion and Leitch, 2009). Second, it can invest in critical AI literacy and "slow implementation", asserting reflexivity, deliberation and care as legitimate criteria for evaluating innovation (Christensen & Andersson, 2025). Third, it can build coalitions with other actors sidelined by the data economy - communities affected by predictive systems and automated discrimination, racialized organizations and anti-racist movements, feminist and data justice groups, unions in the technology sector, platform workers' collectives, digital rights NGOs, independent journalism networks and community media and literacy initiatives, in order to contest regulatory frameworks and design standards (Dutta and Pal, 2011; Eubanks, 2018; Noble, 2018). Finally, even if only experimentally and at the margins, PR can help develop infrastructures and practices that embody dialogic, relational and democratic ethics. The discomfort that many practitioners feel with dominant AI logics can thus become a starting point for imagining and practicing alternative communicative futures while acknowledging this aspect as a fact and stop admitting that the field is simply behind. Although the empirical anchor here is PR, hollow visibility is in principle observable wherever symbolic recognition circulates without convertibility; academic disciplines, NGOs and knowledge professions celebrated for their judgement but excluded from the infrastructures that govern their work.

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Data availability

The authors have shared in the reviewer response public and confidential dataset

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