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# **Entrepreneurship at the Edge of Informality and Digitalization: Mapping Hybrid Business Models in Under-Institutionalized Contexts**

**Muhammad Salman Shabbir & Rabia Salman**

## **Abstract**

*This study examines how digitalisation and informality jointly shape hybrid business models in under-institutionalised contexts, using a Bibliometric–Systematic Literature Review of 263 peer-reviewed articles (2009–2024). It identifies four thematic clusters: digital labour and informal platforms, social-media-enabled ventures, hybrid innovation in urban informal economies, and digitally mediated financial and learning infrastructures. Integrating Institutional Voids Theory, Hybrid Organization Theory, Digital Platform Governance, and Opportunity Construction Theory, the study develops the construct of Digital-Informal Institutional Bricolage—an adaptive process through which entrepreneurs recombine informal norms, digital infrastructures, and selected formal institutional elements. The findings show how entrepreneurs leverage digital tools and grounded legitimacy to construct opportunities, coordinate exchange, and navigate platform asymmetries and regulatory fragmentation. The study provides a coherent conceptual foundation for analysing hybrid entrepreneurship, offers policy insights on flexible legitimacy pathways and inclusive platform design, and outlines future research directions on temporal dynamics, intersectionality, and formal–informal complementarities.*

**Keywords:** *Hybrid Entrepreneurship; Digital Platform Governance; Institutional Voids; Informal Economy; Opportunity Construction*

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## **Introduction**

Entrepreneurship in the twenty-first century is being reshaped by the convergence of two defining macro-trends: the rapid expansion of digital infrastructures and processes, and the persistent, widespread nature of informality. While much of the entrepreneurship literature has been oriented around formal institutions, venture capital, and legality (North, 1990; Scott, 2008), a substantial share of entrepreneurial activity globally, particularly in the Global South and increasingly in peripheral economies of the Global North, is embedded in institutional settings with incomplete rule systems, limited rule enforcement, and sociocultural contexts outside of the formal (Bruton et al., 2010; Sutter et al., 2019). At the same time, the ascendance of digital infrastructures, including mobile financial services, e-commerce marketplaces, social media networks, and algorithmic governance systems, has enabled new platforms for transaction facilitation, network organization, and reputational validation, often by circumventing or reshaping established institutional frameworks (Autio et al., 2018; George et al., 2021). Rather than rendering formal institutions obsolete, these developments accentuate dynamic interplays and tensions among formal regulations, informal conventions, and digital infrastructures in influencing entrepreneurial behaviour (Mair et al., 2012; Suddaby et al., 2017).

The convergence of informality and digitalization has given rise to a distinctive set of entrepreneurial ventures that this research terms hybrid business models. These ventures are simultaneously digital (mediated by digital platforms), social (embedded in social institutions), informal (legitimate within informal institutions), algorithmic (visible and responsive to digital platforms' algorithms), institutionalised (operating within formal rules) and institutionalising (shaping institutions through their actions) (Bicho et al., 2022). Rather than fitting neatly into either a fully formal or fully informal economy, such ventures mobilise mixtures of informal practices, local trust networks, online platforms, and evolving governance arrangements to create and sustain entrepreneurial opportunities (Webb et al., 2013; Khavul et al., 2009; Bangun et al., 2022). In many places, from Lagos and Dhaka to Cairo and Jakarta, micro-entrepreneurs use Facebook groups, WhatsApp business features, TikTok shops, and platform-based mobile banking to create value and to build legitimacy, customer bases, and access to liquid micro-marketplaces that extend beyond the direct reach of conventional regulation (Herlina et al., 2024; Lehdonvirta et al., 2021).

A central question that underlies these developments is whether such ventures are primarily adaptive responses to fractured institutional ecologies via digital infrastructures, or whether, over time, digitalization helps to reconstitute informality as a partially competing institutional order in relation to formality (Aldrich & Ruef, 2018).

Despite their growing visibility, digitally facilitated hybrid entrepreneurship in under-institutionalized contexts remains theoretically fragmented and under-theorized within entrepreneurship research (Welter and Smallbone, 2011). Work on informal entrepreneurship often depicts such activities as marginal, survivalist, or transitory, and rarely considers the purposeful leveraging of digital infrastructure to cope with or exploit institutional voids (Williams & Nadin, 2012). Conversely, fast-growing literatures on digital entrepreneurship and platform ecosystems often assume levels of formality, digital literacy, and market regularity that are frequently absent in low-income, peripheral, or institutionally fluid contexts (Nambisan, 2017; Autio et al., 2018). As a result, the institutional complexity, governance ambiguity, and identity work involved in navigating between informality and digitalization remain under-theorized, particularly in relation to how informal and formal institutions interact through platform governance and other digital infrastructures (Cutolo & Kenney, 2021).

Contributions from digital development studies, feminist geography, and platform studies, among others, complicate these narratives further. Soluk et al. (2021) and Prasetyo (2024), for instance, show empirically how digital platforms host informality selectively through governance tactics that are at once inclusive and extractive. Gendered analyses such as Gardner et al. (2022) reveal how digital coworking spaces may reproduce institutional exclusions rather than overcoming them, and caution against decontextualising entrepreneurial agency from socio-spatial power dynamics. Taken together, these strands of work point to the need to re-theorise entrepreneurship in digital–informal contexts where opportunity construction is co-shaped not only by market inducements but also by socio-technical affordances, algorithmic asymmetries, and local systems of legitimacy. Responding to this need requires a theory-oriented synthesis that can draw together dispersed research in institutional voids, hybrid organising, digital platform governance, and opportunity construction, with close attention to the complementary and shifting roles of formal and informal institutions (Mair & Martí, 2009; Battilana & Dorado, 2010; Autio et al., 2018; Garud et al., 2014).

Against this backdrop, the current study is motivated by the following broad question: how do entrepreneurs establish and maintain hybrid business models at the intersection of informality and digitalization, and how do digital infrastructures mediate the interplay between formal and informal institutions in under-institutionalized contexts? The framework developed here is proposed as a mid-range, theory-oriented lens that is particularly suited to under-institutionalized, digitally mediated settings where platform governance and weak state enforcement co-exist, and is less applicable to highly formalised sectors with strong regulatory oversight. To address the identified gaps, this research offers a Bibliometric–Systematic Literature Review (BSLR) of 263 peer-reviewed articles published between 2009 and 2024. It maps the academic underpinnings, conceptual boundaries, and emerging contours of scholarship on hybrid entrepreneurship at the edge of informality and digitalization. Following a theory-driven BSLR logic, the study proceeds from structural mapping to thematic synthesis and conceptual abstraction (Tranfield et al., 2003; Kraus et al., 2020). Integrating insights from Institutional Voids Theory, Hybrid Organization Theory, Digital Platform Governance, and Opportunity Construction Theory, the study advances an integrative conceptual framework that reconceptualises hybrid entrepreneurship as a form of institutional bricolage that is contextually embedded, digitally intermediated, and socially negotiated in weak institutional settings, termed Digital Informal Institutional Bricolage.

The contribution of this research is fourfold. First, it identifies central thematic clusters and theoretical gaps in existing literatures, particularly the disconnect between studies on digital entrepreneurship and those on informality, alongside the under-examined role of formal institutional arrangements that condition and constrain digitally enabled informality. Second, it conceptualises hybrid business models not as anomalies, but as institutionally generative actors operating within and across overlapping governance systems that are platform-based, community-based, and state-based. Third, it develops an integrative theoretical framework that clarifies how digital infrastructures are not simply substitutes for institutional voids, but dynamically reconfigure the contours of entrepreneurial legitimacy, coordination, and opportunity in contexts where the interaction between formal and informal institutions is especially salient and contested. Fourth, it outlines several promising avenues for future work that foreground intersectionality, algorithmic authority, and the longitudinal dynamics of ventures, with particular emphasis on: (1) developing more nuanced understandings of the socio-technical processes of entrepreneurship in

digitally informal economies, and (2) examining the conditions and processes through which such bricolage enables more scalable, resilient, or fragile entrepreneurial outcomes.

In this way, the study responds to pressing calls for contextualised and inclusive theorising of entrepreneurship (Zahra et al., 2014; McMullen & Dimov, 2013). By challenging assumptions of institutional completeness, technological neutrality, and venture formality, it positions hybrid entrepreneurship as a frontier of experimentation where digital platforms, informal practices, formal support infrastructures, and entrepreneurial agency intersect in new, contested, and potentially transformative ways.

## **Theoretical Framework**

A significant proportion of contemporary entrepreneurial activity takes place in under-institutionalised environments where standard theoretical lenses that separate the formal from the informal, the structured from the agentic, or the digital from the social are of limited use. The existence of hybrid business models and hybrid organisational formations that hover between digital infrastructures and informal norms poses a substantial theoretical challenge to established paradigms of entrepreneurship (Bicho et al., 2022; Carr et al., 2023). Far from being marginal or transitional, these ventures develop their own entrepreneurial logic, constituted by the ways in which actors construct opportunities, negotiate legitimacy and mobilise resources in fragmented institutional settings characterised by rapidly evolving digital architectures. At the same time, such ventures remain strongly conditioned by formal regulations, policy programmes and support structures, so that formal and informal rules coexist and interact rather than forming a simple binary (Mair et al., 2012; Williams, 2017).

To make this phenomenon analytically tractable, this section purposefully reconfigures four strands of theory that are especially salient for understanding entrepreneurship at the intersection of digitalisation and informality: Institutional Voids Theory, Hybrid Organization Theory, Digital Platform Governance and Opportunity Construction Theory. These perspectives are not treated as a single monolithic theory. Rather, they are combined into a more robust, context-sensitive framework that can address the structural, agentic and technological features of hybrid entrepreneurship in digitally informal settings, while also clarifying the mechanisms, levels and

boundary conditions under which this form of entrepreneurship tends to emerge (Welter and Smallbone, 2011; Carr et al., 2023). In brief, Institutional Voids Theory specifies the background pattern of institutional multiplicity, Hybrid Organization Theory illuminates how actors negotiate multiple logics in organisational practice, Digital Platform Governance captures the institutional role of platforms as rule-setting infrastructures, and Opportunity Construction Theory explains how entrepreneurs frame and reframe opportunities within these conditions. The integrative construct of Digital-Informal Institutional Bricolage developed here is a mid-range conceptual framework and interpretive lens that connects these strands around three recurring mechanisms: resource recombination, legitimacy work and coordination in multi-layered institutional fields.

### ***Institutional Voids Revisited: From Absence to Institutional Multiplicity***

Institutional Voids Theory, as originally proposed by Khanna and Palepu (1997), provides a starting point for understanding entrepreneurship where reliable, efficient and effective formal institutions such as legal enforcement, property rights and capital markets are weak or incomplete. In such situations, entrepreneurs are expected to bypass, substitute or create institutions in response to these voids (Mair & Martí, 2009; Webb et al., 2013). More recent work contests the idea of voids as empty spaces. Rather than simple absences, voids have been characterised as institutional multiplicities (Cirolia and Pollio, 2024; Soluk et al., 2021), comprising competing logics, informal norms, fragmented regulations and emerging digital rules and governance. This reframing directs attention from absence to the way entrepreneurs make sense of and co-produce alternatives institutionally through bricolage, improvisation and digital experimentation (Martin et al., 2019).

Within this view, digital platforms should not be seen as neutral or purely compensatory tools. They function as institutional actors that simultaneously enable and constrain entrepreneurial action. Entrepreneurs in these contexts do not encounter a vacuum; they face a complex ecology of algorithmic rule-making, locally sourced legitimacy and sometimes arbitrary state intervention. The assumption of a unitary void is therefore replaced by an assumption of institutional complexity, in which entrepreneurs must mediate between fractured normative orders and regulatory tensions. In this study, such complexity is treated as the structural backdrop for Digital-Informal Institutional Bricolage, in which entrepreneurs reassemble informal norms, platform policies and partial elements of formal oversight to piece together workable coordination, resource and legitimacy arrangements (Baker & Nelson, 2005; Sutter et al., 2013).

### ***Hybrid Organising as Everyday Negotiation Across Logics***

Hybrid Organization Theory has typically examined how organisations reconcile multiple institutional logics, such as social welfare and commercial performance, within a single organisational form (Battilana & Dorado, 2010; Pache & Santos, 2013). In hybrid digital-informal ventures, hybridity is less a stable organisational category and more a continuous, everyday negotiation across logics. Entrepreneurs juggle multiple and sometimes contradictory institutional demands (Carr et al., 2023). They may be fully compliant with platform requirements while remaining informal in relation to labour practices, taxation or ownership. Simultaneously, they cultivate social legitimacy in their local communities and conform to the more detached, metric-based legitimacy associated with algorithms and customer ratings (Reuter, 2022; Foster et al., 2018).

This ongoing balancing act makes hybridity a multimodal and dynamic process rather than a fixed compromise. In contrast to classic hybrid organisations that seek to stabilise two or more logics, entrepreneurs in digitally informal landscapes operate in constant flux, shifting between digital compliance and informal improvisation according to resource availability, market conditions and platform affordances. We therefore conceptualise the hybrid entrepreneur as an institutional bricoleur, continually constructing organisational coherence out of socially and historically embedded practices and technically shaped expectations. A bricolage perspective highlights micro-level processes and tactics such as selective rule-following, tactical formalisation and symbolic boundary work that underpin the integrative model developed later (Tracey & Stott, 2017).

### ***Digital Platforms as Institutional Actors: Asymmetries and Ambivalence***

Digital Platform Governance introduces a further layer of complexity. It sheds light on platforms as institutional infrastructures with embedded forms of governance (Kenney & Zysman, 2016; Cutolo & Kenney, 2021). Platforms such as Facebook, WhatsApp or Shopee are not neutral intermediaries; they are gatekeepers of visibility, trust and monetisation. They enforce systems of algorithmic benchmarks, ratings-based legitimacy and data-centric resource allocation that profoundly shape entrepreneurial action and opportunity structures (Markus & Poushter, 2021; Graham et al., 2021; Kumar, 2021).



For entrepreneurs embedded in informal contexts, platforms create opportunities and risks in equal measure. They lower barriers to entry, provide scalable supply and demand channels and facilitate digital legitimacy. At the same time, they generate new forms of precarity, exclusion and dependency, particularly for those with low digital literacy, uneven connectivity or informally organised operations (Graham et al., 2017; Herlina et al., 2024). Platform logics of governance are not applied uniformly, but vary with geography, user status and infrastructural access, thereby producing asymmetrical participation. Theoretical models therefore need to move beyond representations of platform governance as a stable architecture and instead treat it as a fluid and negotiated institution that coexists with informal economies rather than fully replacing them. In interaction with state regulation and local customary norms, platform governance contributes to a multi-layered institutional field in which bricolage must continually respond to shifting, and often conflicting, rule systems (Cutolo & Kenney, 2021).

### ***Opportunity Construction in Sociotechnical and Cultural Fields***

Opportunity Construction Theory reconceptualises opportunity discovery as opportunity representation and construction. Rather than treating opportunities as pre-existing entities to be found, this perspective argues that they are socially produced and negotiated (Garud & Giuliani, 2013; Dimov, 2011). In hybrid digital-informal settings, opportunities arise from the interplay of sociotechnical affordances and culturally grounded logics (Garud & Giuliani, 2013). Entrepreneurs construct new opportunities by drawing on vernacular narratives, shared memories, social meanings and framing strategies when they engage with digital tools, conventional exchanges and platform-mediated reputations (Bangun et al., 2022; Roundy, 2019).

Opportunity construction is reiterative, relational and materially grounded. It is not a purely cognitive exercise, but an ongoing endeavour that gains clarity through digital experimentation, peer learning and the dynamics of platform visibility games. Entrepreneurs work to render their activities lawful and legitimate by responding to customer comments, activating informal networks and navigating algorithmic rankings, while managing economic vulnerability and social embeddedness. Opportunity construction is therefore deeply embedded in complex institutional ecologies in which culture, technology and familiarity jointly shape entrepreneurial action (Schou and Adarkwah, 2024). This perspective also underscores that bricolage has narrative and symbolic dimensions. It involves continuous reframing of what counts as legitimate, investable and socially

acceptable entrepreneurship in the eyes of both formal and informal audiences (Garud et al., 2014; Lounsbury & Glynn, 2019; Mair & Marti, 2009).

### ***Integrative Perspective: Toward a Theory of Digital-Informal Institutional Bricolage***

Bringing these arguments together, the study develops the theoretical concept of Digital-Informal Institutional Bricolage. This concept places the interplay between informal rules and digital architectures at the centre of analysis and connects the four strands of theory through shared mechanisms. Institutional Voids Theory specifies a background of institutional multiplicity rather than emptiness; Hybrid Organization Theory focuses attention on the ongoing negotiation of multiple logics in organisational practice; Digital Platform Governance shows how algorithmic and datafied infrastructures operate as institutional actors; Opportunity Construction Theory explains how entrepreneurs interpret and reframe possibilities within these fields.

Within this configuration, bricolage is neither residual nor merely temporary. Building on, but extending, classic accounts of bricolage as making do with resources at hand (Baker & Nelson, 2005), Digital-Informal Institutional Bricolage is concerned with how entrepreneurs, networks and ecosystems actively and selectively recombine digital technologies, informal rules and partial formal supports to create new packages of coordination, resources and legitimacy in multi-layered institutional fields (Autio et al., 2018). Digital mediation changes bricolage by accelerating experimentation, expanding the spatial and relational range of available resources and exposing ventures to new forms of algorithmic scrutiny and governance.

The framework operates at three interlocking levels. At the individual level, entrepreneurs reconfigure daily practices, contracts and identities to navigate platform rules, community norms and regulatory expectations. At the network level, communities of peers, associations and local intermediaries stabilise shared routines, knowledge and reputational currencies that support or constrain bricolage. At the ecosystem level, evolving interactions among platforms, state agencies and community institutions reshape the wider opportunity structure within which bricolage takes place. Across these levels, the three recurring mechanisms of resource recombination, legitimacy work and coordination provide a consistent basis for analysis.

The scope of the framework is not unlimited. The dynamics it captures are most prevalent in contexts where formal institutions are partial, contested or selectively enforced, and where digital

platforms are prominent vehicles for organising exchange. In settings where exchanges are highly formalised, capital intensive and embedded in strong regulatory infrastructures, or where organisational intermediation is deep and stable, other theoretical lenses may be more suitable. Recognising these boundary conditions helps to avoid overgeneralising the prevalence of Digital- Informal Institutional Bricolage and to acknowledge situations in which formal institutions remain central.

This theoretical synthesis underpins the bibliometric-systematic review in the next section, guiding the empirical identification of how these dynamics have been theorised across different literatures. It also provides a foundation for rethinking policy, platform design and entrepreneurial support systems in ways that better acknowledge both the challenges and the creativity inherent in hybrid entrepreneurial logics, and for tracing how patterns in the literature inform the mechanisms, levels and boundary conditions embedded in the framework.

## **Methodology**

### ***Research design and rationale***

This study adopts a Bibliometric–Systematic Literature Review (BSLR) as a theory-building approach to examine how entrepreneurship at the nexus of informality, digitalization and institutional hybridity has been framed and theorised (Berman et al., 2024). Rather than merely mapping existing trends, the review aims to identify conceptual fragmentation, expose theoretical blind spots and develop an integrative framework that advances understanding of hybrid entrepreneurship in digitally mediated, under-institutionalised settings. In this sense, and consistent with recent advances in literature-based theorising, the BSLR is employed not only as a descriptive tool, but as a structured process that progresses from data consolidation to conceptual abstraction (Shepherd & Suddaby, 2017).

The BSLR method provides a systematic and transparent protocol for synthesising a heterogeneous and fast-growing body of literature (Donthu et al., 2021; Kraus et al., 2020). It is particularly suitable for areas marked by interdisciplinary dispersion and theoretical pluralism, such as digital–informal entrepreneurial activity. By combining quantitative bibliometric mapping with qualitative thematic analysis, the design enables identification of both the structural architecture of the field (for example, core authors, clusters, citation networks) and the conceptual trajectories that underpin its development. This mixed-method configuration is especially appropriate here because it allows patterns in the literature to be connected to the emerging construct of Digital-Informal Institutional Bricolage.

Echoing calls for more integrative and theory-generating reviews in entrepreneurship research (Paul et al., 2021; McMullen & Dimov, 2013), the study moves beyond descriptive synthesis. It seeks to surface underlying relationships among four under-integrated bodies of theory – Institutional Voids Theory, Hybrid Organization Theory, Platform Governance and Opportunity Construction – and to advance a conceptual model of digital–informal institutional bricolage. Accordingly, each methodological decision (for example, keyword terms, inclusion criteria, clustering parameters) was anchored in these four conceptual pillars. The BSLR protocol followed in this study comprises five main steps: (1) formulation of research scope and protocol, (2) systematic literature search, (3) screening and eligibility checks, (4) bibliometric mapping and (5) thematic synthesis.

### ***Data sources and search strategy***

To ensure broad coverage and procedural transparency, the literature search drew on two comprehensive bibliographic databases: Scopus (Elsevier) and Web of Science (Clarivate Analytics). These databases were selected due to their multidisciplinary scope, high-quality peer-reviewed coverage, and robust filtering functions for bibliometric export. Together, they provide a strong foundation for both citation-based and content-based analysis across entrepreneurship, innovation, management, sociology and development studies. Using both databases also mitigates the risk of database-specific bias and supports the replicability of the search procedure.

The search strategy was developed through iterative refinement and benchmarked against prior reviews in entrepreneurship and hybrid organising. An initial pool of candidate keywords was generated from seminal work on informal entrepreneurship, digital entrepreneurship and hybrid organising, and was refined through pilot searches and inspection of highly cited papers. Generic terms such as “innovation” or “SMEs” in isolation produced a very large volume of articles outside the conceptual scope and were therefore excluded, whereas terms explicitly linking entrepreneurship, informality and digitalization were retained. The final query was designed to capture studies at the intersection of four conceptual domains: (1) entrepreneurship and new ventures; (2) informality and institutional fragility; (3) digitalization and platform ecosystems; and (4) hybrid organisations and logic plurality.

For Scopus, the search string was:

(TITLE-ABS-KEY(entrepreneur\* OR "startup\*" OR "business model\*" OR "new venture\*" OR "informal economy")) AND

(TITLE-ABS-KEY("digital platform\*" OR platform\* OR "mobile technolog\*" OR ICT OR "gig economy" OR "sharing economy" OR "digital entrepreneurship" OR "technology-enabled")) AND

(TITLE-ABS-KEY(informal\* OR "institutional void\*" OR "institutional fragility" OR "weak institution\*" OR unregulated OR "grey economy" OR "shadow economy"))

The query was limited to journal articles published between 2009 and 2024, written in English and classified as peer-reviewed journal articles. The time window reflects the period in which digital platforms and mobile technologies became widely diffused and scholarship on digital

entrepreneurship and informality gathered momentum. After applying these filters, the Scopus search yielded 246 documents.

For Web of Science, a conceptually equivalent search string was used:

Entrepreneur OR startup OR business model OR new venture OR informal economy AND Digital platform OR platform OR mobile technolog OR ICT OR gig economy OR sharing economy OR digital entrepreneurship OR technology-enabled AND

Informal OR institutional void OR institutional fragility OR weak institution OR unregulated OR grey economy OR shadow economy

The same parameters were applied: document type (article), language (English) and publication years (2009–2024). This search produced 17 additional unique records after de-duplication against the Scopus results.

Records from both databases were imported into bibliographic management software, and duplicates were identified and removed. An overview of the key search characteristics (databases, document types, timeframe, language and main conceptual domains) forms part of the review protocol and underpins the transparency and reproducibility of the procedure.

### ***Screening and eligibility criteria***

All retrieved records were subjected to a two-stage screening process. In the first stage, titles and abstracts were reviewed for thematic relevance; in the second stage, full texts were consulted where clarification was needed. Screening was conducted using a shared coding template. Borderline cases were discussed collectively and decisions were recorded to reduce idiosyncratic judgement and enhance consistency.

Articles were retained if they fulfilled the following conceptual criteria:

- Explicit focus on entrepreneurship, venture creation or business model innovation;
- Engagement with informal economic practices, institutional weakness or governance gaps;
- Analysis of digital infrastructures, mobile technologies, platform-based systems or digitally mediated entrepreneurship;
- Consideration of business model hybridity, organisational hybridity or plural institutional logics.

Articles were excluded if they:

- Discussed only digital labour, gig work or platform users without an entrepreneurial focus;
- Emphasised digital transformation in large firms or fully institutionalised settings;
- Lacked a theoretical or conceptual contribution to hybrid or informal entrepreneurship;
- Were non-peer-reviewed or written in languages other than English.

To limit subjectivity in assessing theoretical or conceptual contribution, explicit indicators were used, including the presence of a conceptual framework, clearly stated propositions or theoretical claims, and explicit engagement with core constructs such as institutional voids, hybridity, platform governance and opportunity construction. In the absence of such elements, papers were excluded even where the empirical focus overlapped with digital or informal activity. After de-duplication and exclusion, the final dataset comprised 263 articles, forming a theoretically relevant and methodologically coherent corpus for bibliometric mapping and thematic synthesis.

### ***Bibliometric mapping***

The included articles were first analysed using quantitative bibliometric techniques. Three standard forms of bibliometric mapping were employed: keyword co-occurrence, bibliographic coupling and citation network analysis, conducted using VOSviewer (van Eck and Waltman, 2014). These analyses provided insight into the structure of the field, including the most prolific authors and journals, key conceptual and thematic clusters and emerging research streams.

Country- and author-level network analyses were undertaken using full counting, with minimum thresholds set for node inclusion in order to avoid disconnected and outlier nodes. Alternative thresholds were explored to test the sensitivity of key patterns to parameter choices; these checks indicated that only minor differences in country rankings arose under different settings. The bibliometric results thus establish the structural backbone within which the more interpretive, theory-oriented analysis is situated.

### ***Thematic coding and conceptual integration***

In a second stage, the content of each article was subject to inductive coding to develop a thematic understanding of the field. Core codes were developed around the four guiding theoretical pillars – institutional voids, hybridity, platform governance and opportunity construction – while sub-codes captured the empirical setting, theoretical perspective and methodological approach. The coding scheme was developed iteratively through repeated readings of a sub-sample of highly cited and recent papers and was then applied to the full corpus.

To enhance reliability, the coding framework was refined through joint discussion and trial coding of selected articles. Ambiguous cases were revisited collectively until agreement was reached, and adjustments to the codebook were documented. This process helped to ensure that the application of codes remained consistent across the dataset.

Thematic categories derived from the qualitative coding were then mapped onto the bibliometric clusters to ensure that structurally defined groupings corresponded to coherent conceptual content. This cross-validation step made it possible to align data-driven clusters with the four theoretical domains steering the study, and to identify cross-cutting mechanisms such as bricolage, legitimacy work and platform dependence. These mechanisms were later mobilised in the development of the Digital-Informal Institutional Bricolage framework.

### ***Analytical logic and outcome***

This two-tiered analytical strategy enabled the study to move beyond uncovering patterns in publication activity towards offering a theoretically informed synthesis of how the field conceptualises hybrid entrepreneurship in digitally mediated, under-institutionalised contexts. Bibliometric mapping provided an overview of the structural landscape, while thematic analysis generated deeper interpretive insights into how existing research engages with institutional voids, hybrid organising, platform governance and opportunity construction.

The overall process, from database search and screening, through bibliometric mapping to thematic abstraction and theory development, is summarised in Figure 1. This sequenced design underpins the subsequent results and supports the theory-building ambition of the review.

**Figure 1 here**

### **Bibliometric Results and Analysis**

This section presents a bibliometric overview of the 263 journal articles included in the review, providing insight into the intellectual and geographical structure of scholarship on hybrid entrepreneurship at the intersection of digitalization and informality. Using VOSviewer, we analysed the corpus along three dimensions: author productivity and collaboration, geographical distribution, and temporal trends in publication. These patterns offer a structural vantage point and an empirically grounded starting point for the subsequent thematic analysis and theory-building around Digital-Informal Institutional Bricolage.

#### ***Leading contributors and collaboration dynamics***

The productivity and co-authorship networks are markedly skewed and only loosely connected. As shown in Figure 2, Horodnic, I. A. has published four papers, followed by Pollio, A., Slabbert, A. D., Ukpere, C. L., and Williams, C. C. with three papers each. These scholars have been central to framing debates on informal economic activity, hybrid governance and embeddedness, particularly in relation to institutional duality and the social foundations of informality.

**Figure 2 here**

Within this group, the work of Williams, C. C. and Horodnic, I. A. is especially noteworthy, not only in terms of productivity but also in its role in reframing informal entrepreneurship. Their research foregrounds institutional duality, legitimacy and regulation in contexts of weak institutions and moves beyond simple formal–informal dichotomies towards logics of mixing as

behavioural responses to hybridity in marginal, under-regulated or transitional settings. This aggregation of influence provides an important anchor for the present review, which similarly treats hybrid entrepreneurship as a non-arbitrary response to institutional plurality rather than a deviation from a formal norm.

The co-authorship network in Figure 3 suggests that the intellectual structure in this area remains fragmented and only sparsely connected. Although there are some important author nodes, such as Horodnic and Williams, many scholars appear as isolated authors or work in small, nationally or regionally focused teams. There are few densely knit clusters of research activity and little evidence of globally networked research communities.

**Figure 3 here**

The predominance of small, disconnected clusters indicates that a cohesive intellectual community has yet to consolidate, despite the presence of recognised thought leaders. This fragmentation likely contributes to theoretical dispersion, as debates on informality, digitalization and hybridity often proceed in parallel rather than in dialogue. For future scholarship, this highlights the value of building cross-disciplinary and cross-regional collaborations, including stronger links across the Global North–South divide. From the perspective of this BSLR, the disintegrated co-authorship network underscores the need for an integrative framework such as Digital-Informal Institutional Bricolage, which can help to weave together partially isolated debates into a more connected conceptual architecture.

***Country-level authorship and collaboration patterns***

Geographical patterns in authorship and co-authorship provide further insight into the global distribution of research in this field. As illustrated in Figures 4 and 5, the United Kingdom (43 articles) and the United States (42 articles) are the most prolific publishing countries, followed by India (21), South Africa (19), Australia (16) and China (15). Given that the country ranking is based on full counting of author affiliations with a minimum publication threshold, small differences in the number of publications may shift relative positions where activity levels are similar, as in the case of Australia and China.

**Figure 4 here**



### Figure 5 here

The prominence of the United Kingdom reflects its strong tradition in the study of informal work, post-colonial state formation and critical entrepreneurship studies. A substantial portion of the research on informal entrepreneurship, including contributions by Williams and Pollio, is rooted in UK-based scholarship and questions the socio-institutional basis of informality. In the United States, work has tended to focus more on platform entrepreneurship, digital governance and hybrid labour and consumption, often through the lens of digital economy and innovation studies.

Countries such as India, South Africa and China, which combine structural institutional weaknesses with rapid digital expansion, stand out as particularly important empirical sites for this review. The literature from these contexts is not only rich in situated empirical detail but also contributes to theory-building on entrepreneurial agency under institutional complexity and technology-enabled inclusion. These settings are especially useful for examining the bricolage processes theorised later in the paper, including strategic formalisation, negotiation of platform rules and community-based legitimacy building.

The country collaboration map in Figure 4 shows a relatively strong web of North–South connections, with the most sustained and robust relationships between the United Kingdom and India, and between the United States and South Africa. These collaborations tend to be project-specific or policy-led, often focusing on informal economies in urban settings, digital access and inclusive entrepreneurship. By contrast, collaboration between Southern countries is almost absent, reinforcing the continuing unevenness and asymmetry of knowledge production. Enhancing intra-regional collaboration across South Asia, Africa and Latin America could open new avenues for contextually grounded theoretical contributions on digital–informal hybridity as a practice of institutional bricolage, improvisation and experimentation under resource constraints and institutional voids.

Several European countries, such as the Netherlands, Italy and Germany, play bridging roles in the collaboration network, bringing transnational perspectives on migration, informality and governance. However, the relatively low presence of Latin American countries in the top ranks signals a likely underrepresentation of contextually rich but less globally networked research. Overall, the geographic distribution of authors suggests that current theorising is disproportionately informed by studies from a limited set of regions and countries. This

concentration strengthens the case for testing and refining the Digital-Informal Institutional Bricolage framework across a broader range of institutional contexts, including high-tech sectors and regions where formal support infrastructures are more prominent.

### ***Temporal trends in research output***

Figure 6, which displays the annual number of publications, indicates a steady and then accelerated growth of interest in hybrid entrepreneurship at the digital–informal interface over the past 15 years. In 2010, only seven articles were published on related topics, and overall activity remained modest until around 2016. After 2016, the pace of research increased noticeably: by 2019, annual output had risen to 17 articles, and in the subsequent three years (2020–2022) the field experienced a marked surge. The highest number of articles (40) was recorded in 2022, with strong levels maintained in 2023 (37 articles) and 2024 (39 articles so far).

### **Figure 6 here**

The second wave of growth after 2020 coincides with the onset of the COVID-19 pandemic. The crisis exposed weaknesses in formal systems and prompted many informal entrepreneurs to accelerate digitalisation as a coping and adaptation strategy. A significant share of papers published during this period examines how hybrid ventures leveraged mobile commerce, digital peer communities and platform-based tools to maintain continuity in contexts of disrupted mobility, fractured sovereignty and heightened uncertainty. This intense temporal clustering provides a rich empirical basis for identifying the temporal dimensions of bricolage, such as rapid digital trial-and-error and evolving regulatory responses at the interface of formal and informal orders.

The broader upward trend in publication volume also signals a maturing of the field. Journals across development economics, innovation studies and entrepreneurship have become more receptive to contributions that cross disciplinary boundaries and treat hybrid entrepreneurship as a theoretically meaningful phenomenon rather than an anomaly. Over time, the nature of contributions appears to have shifted from predominantly exploratory, case-based work towards more theory-grounded studies engaging with institutional theory, governance and social entrepreneurship perspectives on hybrid models.

More recent work has increasingly incorporated intersectional themes, including gendered informality, youth-led digital entrepreneurship and regulatory frictions within platform economies. These layers indicate not only numerical growth but also diversification in methodology and topic. Temporal and intersectional concerns are particularly important for this review, as they underpin the four thematic groups outlined in the next section and substantiate the argument for a more integrative theoretical approach. Together, these bibliometric patterns support the case for Digital- Informal Institutional Bricolage as a framework capable of systematising and extending the disparate strands of work that have emerged during this period of rapid scholarly expansion.

### **Thematic Clusters: Mapping the Intellectual Landscape of Hybrid Entrepreneurship**

The keyword co-occurrence network (Figure 7) reveals four main topic clusters that characterise the knowledge domain of hybrid entrepreneurship in digitally enabled and under-institutionalised contexts. Identified through keyword co-occurrence analysis, these clusters provide a structured lens for understanding the prevailing themes and approaches in the literature. They are not mutually exclusive; rather, they represent complementary perspectives on a shared phenomenon, reflecting overlapping conceptual frameworks and methodological orientations across the research landscape. Each cluster relates to the rise, adaptation and scaling of entrepreneurial activity under conditions of institutional voids and digitalisation. In this article, the four clusters are treated as interconnected vantage points on a single research object, rather than as separate subfields. Together, they offer the empirical grounding for the Digital-Informal Institutional Bricolage framework developed later in the paper.

**Figure 7 here**

#### ***Cluster 1: Informal Economy, Platform Work and the Gig Ecosystem (Green Cluster)***

This cluster captures a growing body of work examining how informal actors strategise, work and experiment within digital platforms, and how platform governance in turn shapes their possibilities. Keywords such as informal economy, platform economy, gig economy, labour, platform work and digital labour signal a convergence of literature that blurs the boundary between work and business, and shows how gig and platform settings can function as incubators for micro-entrepreneurship.

Although the gig economy is often analysed through a labour relations lens, it also reveals the complex operations of micro-entrepreneurship, particularly where actors are excluded from traditional employment. For many, platforms have become laboratories of entrepreneurship: they test services, build client bases, trial pricing strategies and manage reputational scores. This entrepreneurial agency, however, unfolds within skewed power relations, marked by algorithmic opacity, uneven governance and precarious participation terms (Cutolo & Kenney, 2021; Foster et al., 2018).

Platform sites located within institutional voids provide a form of semi-institutional infrastructure: they help build trust through ratings and reviews, translate terms of service into quasi-contractual arrangements and create payments systems via digital wallets. Yet the governance structures of these platforms are not neutral. Entrepreneurs are exposed to platform decisions with limited channels for redress and without clearly articulated digital rights or protective policies, particularly in developing economies where state regulation of platform work is weak or absent. These asymmetries create significant risks for the sustainability of entrepreneurial undertakings and raise fundamental questions about whether platform-based entrepreneurship functions primarily as empowerment or as a new mode of exploitation (Graham et al., 2017; Acquier et al., 2017).

The literature in this cluster documents an inherent tension between individual autonomy and institutional constraint. Platforms reduce entry barriers and open new markets, but at the same time generate hidden dependencies and effectively shape which business models thrive and which actors are rendered visible. Theoretical treatments often combine ideas from Digital Platform Governance and Institutional Voids Theory, yet there remains scope for deeper integration to explain how power, legitimacy and economic opportunity are allocated within gig-mediated informal systems. From the perspective of Digital-Informal Institutional Bricolage, Cluster 1 foregrounds resource recombination and coordination at the labour–enterprise boundary: informal actors use platform infrastructures as semi-formal institutions to coordinate work, payments and reputation, while their legitimacy is simultaneously constructed and constrained by platform rules. Future research could trace divergent trajectories of platform-mediated entrepreneurship in low-income and high-income settings, and explore how entrepreneurs reconfigure their practices in response to platform algorithmisation and shifting conditions of participation.

***Cluster 2: Entrepreneurship, Social Media and Digital Opportunity Construction (Red Cluster)***

The second cluster is organised around terms such as entrepreneurship, social media, e-commerce, technology adoption, social capital and digitalisation. It reflects an active debate on how individuals leverage digital communication channels to connect with, construct and sustain entrepreneurial opportunities, often in contexts with weak institutional infrastructures or constrained formal labour markets. Studies in this cluster frequently focus on micro-ventures emerging on platforms such as Facebook Marketplace, Instagram, WhatsApp and context-specific local applications.

Social media is depicted as a dual institutional form: it is both a relational practice space and a mediating infrastructure for economic activity. Legitimacy is rarely gained through licences or formal credit histories; instead, it is performed through informal vouching, local trust and the crafting of online narratives. Entrepreneurial subjectivities are shaped through performative practices, including storytelling, documenting backstage processes and cultivating emotional resonance with audiences, all of which compensate for the absence of formal branding, logistics or customer service (Roundy, 2019).

A distinctive feature of this cluster is its focus on opportunity construction rather than opportunity recognition. Under high uncertainty, resource scarcity and pervasive digital mediation, entrepreneurs do not simply respond to objective market gaps. They actively create new forms of demand, for instance by transforming home-cooked meals or handmade garments into products tailored for online markets, often targeted at migrant or metropolitan customers. This process is iterative and experimental: entrepreneurs adjust pricing, packaging, delivery and self-branding through cycles of trial and error, supported by informal peer learning and distributed community knowledge (Garud & Giuliani, 2013).

Much of the digital entrepreneurship literature in this space has foregrounded female, youth and migrant entrepreneurship, bringing intersectional concerns of gender, mobility and informality to the fore. However, many studies remain largely descriptive. There is room to strengthen theoretical depth by drawing more explicitly on narrative theory, cultural entrepreneurship and micro-institutional perspectives, as well as by examining how social media platforms shape opportunity paths through algorithmic visibility, monetisation thresholds and shifting policy regimes. Within a Digital-Informal Institutional Bricolage lens, Cluster 2 highlights the narrative and symbolic dimensions of bricolage: entrepreneurs recombine social capital, vernacular stories and platform

affordances to construct legitimacy and coordinate exchange. Future work could examine how these socio-technical storytelling practices evolve over time and how they interact with gendered and generational inequalities in digital visibility and monetisation.

***Cluster 3: Hybrid Business Models, Innovation and Urban Informality (Orange–Purple Cluster)***

The third cluster, associated with keywords such as innovation, hybrid business models, city development, recycling, sustainability, strategic approach and urban area, focuses on the emergence and functioning of hybrid ventures in complex urban systems. These systems are often marked by policy fragmentation, socio-economic inequality and environmental pressures.

Much of this research is situated in the Global South, including countries such as India, Kenya and Turkey, where hybrid organisations address urban challenges through market-based solutions that draw deeply on informal practices. Examples include recycling cooperatives, street food ventures and digital micro-services for residents in informal settlements. Such hybrids typically combine community-based sources of legitimacy with digital coordination tools, for instance using mobile payments, geolocation services or simple mobile applications to organise supply chains and service delivery (Reuter, 2022; Mair et al., 2015).

In this cluster, hybridity is increasingly understood not only as an organisational category, but as an adaptive strategy. Entrepreneurs navigate a delicate balance between official recognition and informal provision, leveraging local norms and tacit know-how while interacting with formal regulators, municipal authorities, NGOs and partner platforms. Innovation is often described as frugal, born of scarcity and closely tied to social value creation and survival. These conditions challenge conventional notions of impact, scale and replication, and point to the need for location-specific evaluation frameworks that recognise the importance of neighbourhood, infrastructure and local governance arrangements.

Despite these strengths, this cluster remains theoretically fragmented. Hybrid Organization Theory is cited, but often in relative isolation from urban studies, environmental entrepreneurship and informal economy research. Moreover, only a minority of studies explicitly examine how digital technologies and data infrastructures reshape hybridity through governance, surveillance or so-called smart city interventions. There is considerable scope for future work to analyse how hybrid

entrepreneurs manage conflicting expectations from city regulators, platform companies and community actors, and how legitimacy dilemmas play out across overlapping urban institutions. In terms of Digital-Informal Institutional Bricolage, Cluster 3 illuminates meso-level processes where ventures recombine urban formal institutions, community norms and digital tools to coordinate collective responses to shared problems. Here, bricolage is visible not only within firms, but also across neighbourhoods and city spaces, as entrepreneurs, residents and institutions co-produce new arrangements for resource flows, legitimacy and coordination in urban environments.

***Cluster 4: Financial Access, Informal Learning and Entrepreneurial Support Systems (Blue Cluster)***

The fourth cluster centres on keywords such as crowdfunding, entrepreneurial finance, informal learning, motivation and online platforms, and examines how informal and hybrid entrepreneurs access finance, information and skills where established systems are weak or absent.

In terms of financial access, microfinance, peer-to-peer lending and crowdfunding platforms offer digital avenues for necessity and opportunity entrepreneurs to mobilise resources. These platforms function as financial intermediaries and as legitimacy-granting institutions: they screen proposals, showcase success stories and broker connections with investors. In institutional contexts where credit histories, collateral and formal contracts are limited, such mechanisms help to address institutional voids and enable venture formation (Khavul et al., 2009; Aldrich & Ruef, 2018).

Informal learning is a second core theme within this cluster. Entrepreneurs frequently develop digital skills, marketing capabilities and financial literacy through peers, online tutorials and local support groups rather than formal education. Informal learning processes are implicit, iterative and highly embedded in everyday life, often taking place alongside multiple roles and responsibilities, such as parenting, studying or holding other forms of precarious work. This flexibility is crucial in enabling hybrid entrepreneurs to experiment with digital tools and adapt their business models.

Despite its importance, this line of research remains relatively undertheorised. Concepts from the Resource-Based View and Entrepreneurial Cognition Theory offer promising avenues, but only a limited number of studies examine how informal learning shapes opportunity development, resilience or strategic pivoting in depth. There is also limited exploration of how structural

inequalities related to gender, ethnicity or rural location condition access to digital financial and learning infrastructures. Future work might investigate the specific logics of crowdfunding and micro-investment platforms and their impact on venture trajectories, or examine how so-called platform literacy is built over time. There is further scope to study how entrepreneurs negotiate tensions between informal social obligations, such as family-based redistribution norms, and platform-driven imperatives of growth, scale and profit maximisation.

Viewed through the lens of Digital-Informal Institutional Bricolage, Cluster 4 foregrounds the resource and capability side of bricolage. It shows how alternative finance infrastructures and informal learning networks provide critical resources, skills and legitimacy that enable hybrid ventures to coordinate action and survive under institutional constraint. These processes of recombination and learning are foundational to understanding how hybrid entrepreneurs build resilience in environments where both state support and conventional financial systems are partial or exclusionary.

### ***From clusters to Digital-Informal Institutional Bricolage***

Taken together, the four clusters depict a heterogeneous yet interconnected field in which entrepreneurs repeatedly combine informal norms, digital infrastructures and selected elements of formal support. Cluster 1 highlights labour–enterprise tensions and dependence on platform governance; Cluster 2 foregrounds narrative, identity and opportunity construction through social media; Cluster 3 draws attention to urban, collective and spatial dimensions of hybridity; and Cluster 4 focuses on financial and learning infrastructures that underpin capability development. Across these domains, common mechanisms appear: tactical formalisation, negotiation with platform and state rules, reliance on community-based legitimacy, intensive informal learning and creative recombination of resources and coordination arrangements.

These recurring patterns form the empirical foundation for the Digital-Informal Institutional Bricolage framework developed in the subsequent discussion. In that framework, the clusters are reframed as complementary pathways through which hybrid entrepreneurs adapt, gain legitimacy and participate in processes of digital institutionalisation within under-institutionalised entrepreneurial ecosystems.



## Discussion

This study has offered a theoretically guided synthesis of research on hybrid entrepreneurial business models that operate at a double boundary: informality and digitalisation, particularly in under-institutionalised contexts. Using a Bibliometric–Systematic Literature Review (BSLR) of 263 peer-reviewed articles, the study goes beyond mapping the field to address a central theoretical problem: how hybrid entrepreneurs establish and maintain ventures at the intersection of informal practices and digital infrastructures, and how these infrastructures mediate the interplay between formal and informal institutions. The guiding research question was: *In what ways do hybrid entrepreneurs build legitimacy and agency in the absence or partial presence of formal institutions, and with digital platforms acting as alternative governance regimes?*

Organising the review around four thematic clusters - gig and platform work, social media-based entrepreneurship, urban hybrid ventures, and digitally mediated finance and learning - the analysis shows that hybrid entrepreneurship in digitally informal economies is neither marginal nor transitory. Rather, it represents a dynamic institutional response to conditions of incomplete state enforcement, thin market infrastructure and partial regulatory coverage. Across the clusters, entrepreneurs creatively mobilise mobile technologies, platform ecologies, social media and peer networks to navigate governance gaps and resource constraints. They do not simply reproduce formal entrepreneurial templates; instead, they exercise agency through bricolage, experimentation and contextually embedded strategies that blend algorithmic credibility with community validation (Baker & Nelson, 2005; Vaghely & Julien, 2010; Garud & Giuliani, 2013).

These findings reorient the epistemology of opportunity and legitimacy from compliance with stable formal rules towards situated, emergent practices of bricolage. At the same time, the review indicates that hybrid entrepreneurs rarely reject formal institutions outright. Several studies show selective engagement with formal structures, for example partial registration, targeted use of incubators or compliance with specific regulatory programmes, suggesting that bricolage often involves recombining rather than abandoning formal rules (Mair et al., 2012; Sutter et al., 2013). Hybrid entrepreneurship in digitally informal contexts is therefore better understood as institutionally productive and selectively formalising, rather than simply informal or oppositional.

A key theoretical insight concerns the institutional status of digital infrastructures. Tools and platforms that were previously treated as enabling technologies now function as de facto

institutional frameworks. Uber, WhatsApp Business, Instagram and M-Pesa, among others, embed rules and protocols - ratings, payment systems, identity verification, algorithmic classifications - that perform governance functions typically associated with states or formal market intermediaries (Kenney & Zysman, 2016; Autio et al., 2018). This institutional role, however, introduces new dependencies and asymmetries. Entrepreneurs with limited digital literacy or weak connectivity face heightened risks of exclusion, operate with lower visibility and bargaining power, and are subject to uncertain rule enforcement (Cutolo & Kenney, 2021; Foster et al., 2018).

The configuration that emerges is neither straightforwardly formal nor informal. Hybrid entrepreneurs navigate legitimacy simultaneously through social ties and platform indicators, as observed especially in Cluster 1 (platform work) and Cluster 4 (finance and learning). These empirical patterns exemplify Digital-Informal Institutional Bricolage as a Janus-faced strategy: platforms supply infrastructure and access, but also intensify exposure to opaque governance and data extraction.

A further, still emerging, theme concerns platform strategies and their role in directing trajectories of informal entrepreneurship. Studies such as Prasetyo (2024) and Soluk et al. (2021) demonstrate how platforms in the Global South often adopt strategic ambiguity, accommodating informality where it supports user growth while algorithmically managing reputational risk. Informal entrepreneurs are thus both enabled and disempowered: they gain market access but have limited influence on the rules shaping their participation, being visible to customers but largely invisible to regulators. Platforms therefore appear not as neutral tools, but as political-economic agents that co-produce the institutional space in which hybrid ventures operate. Their influence is visible across all four clusters: platform rules determine which gig tasks can be offered (Cluster 1), which social media content is surfaced (Cluster 2), how urban services are integrated or excluded (Cluster 3) and which projects secure funding on crowdfunding and fintech platforms (Cluster 4).

The analysis also underlines the central role of informal learning, peer-based capability development and social reproduction in sustaining hybrid entrepreneurship. Many entrepreneurs acquire digital and business skills informally, through emulation, peer advice and online resources, in an incremental process that supports both individual ventures and local entrepreneurial cultures (Bangun et al., 2022; Aldrich & Ruef, 2018). These informal learning dynamics are frequently gendered, localised and intertwined with care responsibilities, and they constitute a parallel

institutional infrastructure that remains under-recognised in mainstream entrepreneurship theory. Definitions of entrepreneurial cognition, which often draw on Western, formal market assumptions, need to be reconsidered to accommodate these alternative epistemologies. Cluster 4, in particular, shows that informal learning and alternative financial infrastructures are crucial inputs into bricolage, enabling entrepreneurs to understand platform interfaces, test new business models and adjust to changing regulatory and technological environments.

At the empirical level, the literature spans a diverse set of countries and regions, including sub-Saharan Africa, South and South East Asia and Latin America. Yet it remains thin in terms of longitudinal and multi-scalar theorisation. Many studies offer rich cross-sectional snapshots of hybrid venturing, but fewer trace how ventures evolve over time as they move across regulatory regimes, infrastructures or platforms. The temporal dimension of hybridity therefore warrants further theorisation to capture trajectories beyond short term survival, including transitions towards greater scalability, shifts in dependence on platforms and experiments with community-based ownership models. Similarly, issues such as gender, migration and mobility are increasingly visible, but remain relatively under-explored in relation to long term entrepreneurial outcomes in digitally informal settings (Gardner et al., 2022; Acosta-Enriquez et al., 2024). These empirical limitations define the scope of the current framework and indicate that some of its claims about resilience, scalability and institutional transformation need to be tested further through longitudinal and comparative studies and in sectors where formal institutions and high-tech infrastructures are more pronounced (Autio et al., 2018; Nambisan et al., 2019).

Taken together, the evidence suggests that hybrid entrepreneurship in digitally informal economies cannot be adequately captured by theories that presume stable institutional orders, linear formalisation paths or a sharp distinction between formal and informal logic. Instead, it should be understood as a situated, relational and institutionally productive practice that is simultaneously embedded in digital and informal economies. The dual nature of this embeddedness calls for integrating theories of platform governance, institutional pluralism and opportunity construction in socio-technical systems. Within this context, Digital-Informal Institutional Bricolage is best understood as an interpretive, mid-range framework that organises observed mechanisms and generates testable expectations rather than as a universal or context-free theory.

### ***Implications for theory and practice***

The study makes several contributions to theory by providing a more nuanced and integrative account of hybrid entrepreneurship in digitally mediated informal economies.

First, it reconceptualises institutional voids not as static absences, but as fluid and heterogeneous fields shaped by the interaction of formal state institutions, informal social norms and digital platform logics. Entrepreneurs do not simply accommodate themselves to voids; they actively reconfigure these spaces by combining social trust, algorithmic legitimacy and improvisational ingenuity. In doing so, they demonstrate that institutional voids can become arenas of institutional innovation and contestation (Cirolia & Pollio, 2024; Sultana et al., 2021). This reframing positions voids as the structural backdrop for bricolage in which entrepreneurs selectively recombine formal and informal elements, rather than operating entirely outside institutional orders.

Second, the study extends Hybrid Organization Theory by shifting the emphasis from organisational form to entrepreneurial practice. Hybrid entrepreneurs are not only organisations that embody multiple logics; they are agents who attain and negotiate hybridity across time, space and governance systems. They move back and forth between formal registration and informal labour, platform regulation and local reciprocity, algorithmic compliance and community-based legitimacy. Hybrid organising is therefore not a stable or binary condition, but a conditional, multi-embedded process unfolding within layered institutional fields. This practice-oriented perspective connects Hybrid Organization Theory more directly to opportunity construction and institutional entrepreneurship, and highlights how hybrid logics are enacted through everyday bricolage.

Third, the study contributes to the platform governance literature by foregrounding the ambivalence and asymmetry embedded in platform architectures. Platforms do reduce transaction costs and open up access, but they also reproduce power hierarchies through algorithmic opacity, selective enforcement and extractive data practices. Platforms are thus non-neutral institutional systems of rules, timings and visibility, and are key sites where access to entrepreneurship is negotiated, especially for those already marginalised by the state. The Digital-Informal Institutional Bricolage framework offers a way to anticipate when platform governance is likely to support more resilient hybrid configurations for example through grievance mechanisms and inclusive design and when it is more likely to deepen precarity for example through opaque sanctions and unregulated data extraction.

Fourth, the study advances Opportunity Construction Theory by showing that, in digitally informal ecosystems, entrepreneurs construct opportunities through culturally embedded, digitally mediated and community-validated practices (Gartner et al., 2021; Wood, 2019). Opportunities are not primarily discovered or rationally planned; instead, they are constructed iteratively through narrative framing, technological experimentation and informal feedback loops (Garud & Giuliani, 2013; Roundy, 2019). This perspective calls for a different understanding of entrepreneurial cognition that places greater emphasis on bricolage, affective engagement and sociotechnical translation. Digital-Informal Institutional Bricolage connects these insights by portraying opportunity construction as a form of institutional work in which entrepreneurs reinterpret and re-enact formal and informal rules through digital practice.

For practice and policy, the findings suggest that support for hybrid entrepreneurs should move beyond a narrow focus on formalisation and compliance. Policy interventions that assume a straightforward path from informality to formality risk undermining the very capabilities that allow these ventures to survive. Instead, policymakers might consider flexible pathways to legitimacy, such as graduated registration systems, mobile credit scoring mechanisms and low-threshold digital tools that do not penalise informal starting points.

Platforms, for their part, could experiment with more inclusive governance arrangements, including co-created norms, accessible grievance procedures and greater transparency in algorithmic decision making. Policy makers and ecosystem builders should recognise and strengthen peer learning infrastructures, locally embedded incubation and definitions of success that reflect community priorities, rather than only external growth metrics. Where incubators or public funding schemes already exist, they need to be adapted so that they work with, rather than displace, the informal and digitalised ways in which entrepreneurs self-organise.

A central implication is that one-size-fits-all interventions are unlikely to be effective. Success in hybrid entrepreneurship is strongly conditioned by local norms and infrastructure, gendered access to platforms and culturally specific understandings of trust and legitimacy. Supporting hybrid entrepreneurs therefore requires enabling them to thrive on their own terms, rather than pushing them into institutional templates that ignore their creative, adaptive and collective forms of organising. This, in turn, calls for policy measures and platform designs informed by empirical

evidence that is sensitive to intersectional dynamics and to the varying roles of formal institutions in different sectors and territories.

### ***Future research agenda***

Future research needs to move beyond taxonomic exercises that classify types of hybrid or digitally mediated informal entrepreneurship, and instead engage more deeply with the institutional, technological and socio-cultural conditions that shape, and are reshaped by, these ventures. The review highlights several under-theorised areas and empirical gaps that can inform a structured research agenda (summarised in Table 1).

First, longitudinal research is needed to follow bricolage practices over time, including shifts in and out of formality, changes in platform dependence and possible transitions towards community ownership or alternative governance arrangements. Second, comparative work should examine sectors with strong formal infrastructures, such as high-tech or heavily regulated financial services, alongside more weakly regulated domains, in order to test the boundary conditions of the Digital-Informal Institutional Bricolage framework. Third, studies should explore how gender, migration status and place shape access to digital platforms, financial tools and support systems, and how these factors interact with entrepreneurial outcomes in digitally informal contexts.

**Table 1 here**

### ***Comparative analysis***

This review both complements and advances existing review-based studies on informality, digital entrepreneurship and hybrid organising. Earlier reviews have yielded important insights, but have typically addressed these domains separately, or have treated digitalisation and informality as background conditions rather than central analytical focuses. As summarised in Table 2, the present BSLR contributes by bringing these strands into a single, theory-oriented synthesis, and by advancing Digital-Informal Institutional Bricolage as an integrative perspective (Kraus et al., 2020).

In contrast to prior reviews that focus primarily on descriptive mapping, this study combines bibliometric analysis with a mid-range theoretical framework that is explicitly anchored in Institutional Voids Theory, Hybrid Organization Theory, Platform Governance and Opportunity

Construction Theory. This positioning allows for more systematic comparison with existing reviews and clarifies how the current contribution problematises and extends earlier accounts of informal and digital entrepreneurship.

**Table 2 here**

### ***Integrated theoretical framework***

Building on this synthesis, the study proposes an integrated theoretical framework that combines four conceptual strands: Institutional Voids Theory, Hybrid Organization Theory, Digital Platform Governance and Opportunity Construction Theory. The central construct, Digital-Informal Institutional Bricolage, describes the process through which entrepreneurs draw simultaneously on informal social norms, digital infrastructures and fragmented formal institutions to build, legitimise and, in some cases, scale their ventures.

These entrepreneurs operate in multi-layered ecosystems characterised by inconsistent regulatory enforcement, community-based trust and algorithmic control. The framework is primarily interpretive in that it organises the mechanisms identified across the four clusters, but it also has explanatory aspirations, suggesting how particular combinations of digital, informal and formal elements may lead to different outcomes in terms of resilience, scalability or fragility. Its strongest applicability is in under-institutionalised and digitally mediated contexts. In highly formalised, capital-intensive sectors, other theoretical lenses will need to complement or qualify its use, a limitation that future research should address explicitly.

**Figure 8 here**

### **Conclusion**

The purpose of this study was to clarify and systematise a growing, yet fragmented, body of work on hybrid entrepreneurship in under-institutionalised digital settings. Drawing on a Bibliometric–Systematic Literature Review (BSLR) of 263 scholarly articles from Scopus and Web of Science, the study identified four major lines of thought that together illuminate how entrepreneurial action unfolds at the intersection of informality and digitalisation. Brought into conversation, these streams empirically ground the construct of Digital-Informal Institutional Bricolage as a central phenomenon. Building on and extending Institutional Voids Theory, Hybrid Organization Theory,

Digital Platform Governance and Opportunity Construction Theory, the study develops a theoretical framework that shows hybrid ventures not as merely reactive responses to institutional voids, but as active agents in constructing new forms of legitimacy, coordination and value creation through the selective recombination of informal norms, digital infrastructures and formal institutional supports.

The review points to a substantive shift in how entrepreneurship in such contexts ought to be conceptualised. Informality is no longer adequately captured as a temporary or marginal condition, nor digitalisation as a simple technological add-on. Instead, their conjunction gives rise to a distinctive logic of organisation in which entrepreneurs do not passively conform to gaps and weaknesses in institutional arrangements. They fill, bend and re-imagine these gaps through digital bricolage, social narrative building and institutional boundary spanning. Hybrid business models, in this light, are not only organisationally flexible but are also deeply rooted in lived experiences of constraint, uncertainty and innovation. The framework developed here builds on prior accounts of institutional entrepreneurship and hybrid organising in two important respects. First, it specifies how these practices unfold in settings where formal and informal institutions collide and intermingle through platform governance and other digital architectures. Second, it distils a set of cross-cutting mechanisms that run through the four clusters identified in the analysis, including tactical formalisation, reliance on community-based legitimacy, navigation of platform rules and intensive informal learning.

Beyond its specific conceptual contributions, the study provides a stepping stone towards a more pluralistic and context-sensitive entrepreneurship scholarship. It invites researchers to move away from exclusively formal and Global North-centric notions of entrepreneurial legitimacy and to pay closer attention to how legitimacy is negotiated through social, digital and informal infrastructures. At the same time, the analysis underlines that formal institutions remain significant, especially in domains such as high technology and formal finance where incubators, public programmes and regulatory frameworks shape the scope and direction of bricolage. For policy makers and ecosystem builders, the findings suggest that support for hybrid entrepreneurs should not be reduced to a linear agenda of rapid formalisation. Instead, flexible and layered pathways to advancement, finance and recognition are needed, designed to complement and work with existing informal and digital arrangements rather than to displace them.



As with any literature review, this research has limitations. The bibliometric design is constrained by database coverage and the focus on English-language publications, which may underrepresent region-specific perspectives and work published in local outlets. Despite a theory-driven keyword strategy, some relevant studies that engage related phenomena but use different terminology may not have been captured, particularly general work on innovation or small firms that does not explicitly reference informality or digital platforms. In addition, while the thematic analysis offers interpretive depth, it cannot fully encompass the diversity of informal entrepreneurial experiences across sectors, regions and social identities. Finally, the study is based on secondary data and calls for empirical research that can test, refine and extend the proposed framework through longitudinal, comparative and ethnographic designs, including in contexts where formal institutions are stronger, in order to clarify the boundary conditions and explanatory reach of Digital-Informal Institutional Bricolage.

The ambition of this review has not been solely to trace the evolution of a field, but also to offer guidance on where scholarship might go next. As hybrid entrepreneurship becomes an increasingly common mode of economic participation in digitally mediated and institutionally fragmented environments, the need for theoretically grounded and empirically attentive work will only intensify. This inquiry contributes to that agenda by demonstrating how four major strands of literature can be brought into a coherent dialogue and by proposing Digital-Informal Institutional Bricolage as an interpretive and generative lens for future theorising. In doing so, it helps to make informal practices analytically visible, situates the digital within concrete institutional contexts and places hybridity at the centre of forthcoming debates in entrepreneurship research.

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Authors declare no conflict of interest

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**Table 1: Future Research Agenda**

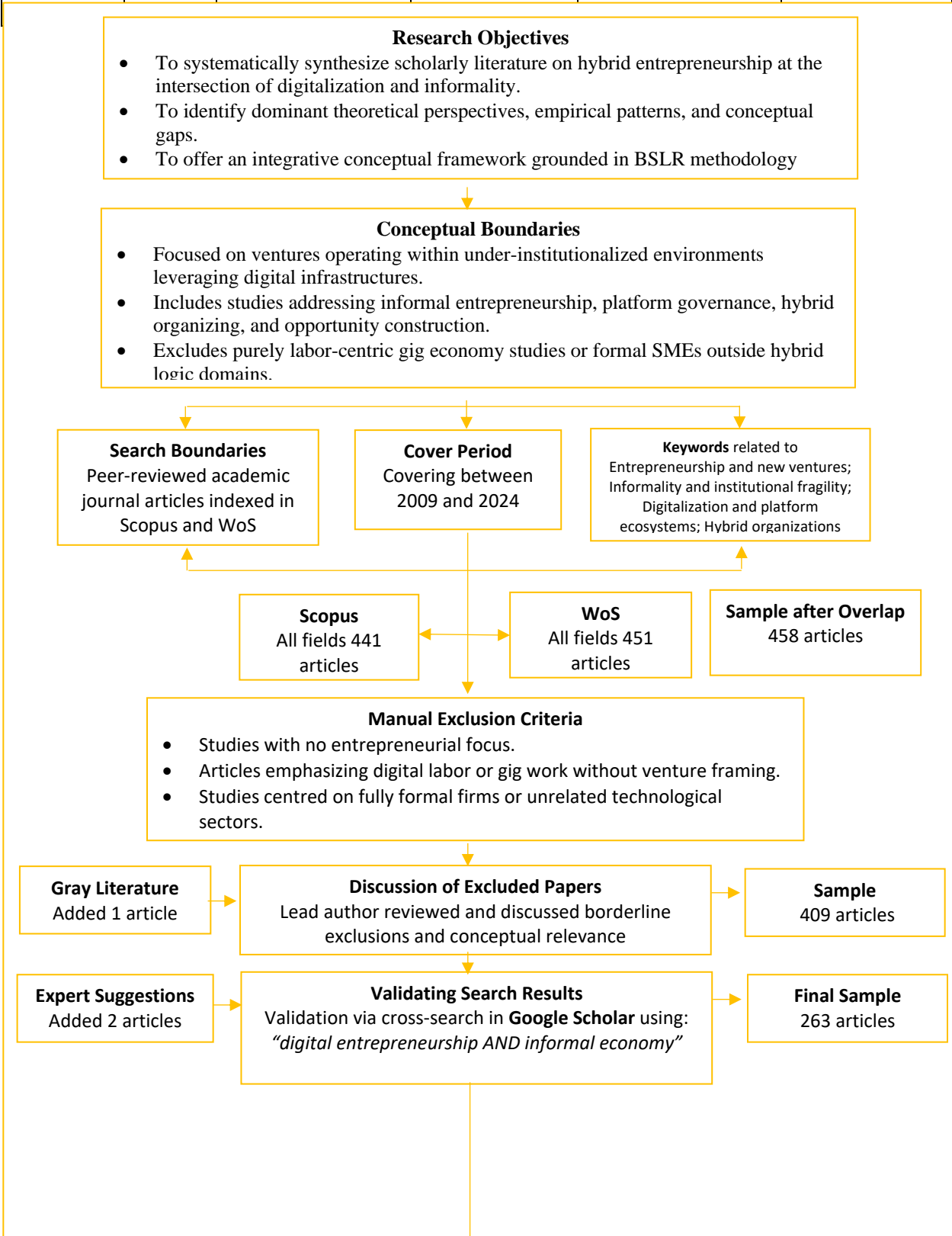
<b>Thematic Area</b>	<b>Identified Gap</b>	<b>Future Research Directions</b>	<b>Key Supporting Sources</b>
<b>Platform Governance in Informal Settings</b>	Limited theorization of platforms as institutional actors in hybrid ecosystems	How do platform governance mechanisms evolve in informal markets? How do entrepreneurs negotiate platform asymmetry?	Cutolo & Kenney (2021); Prasetyo (2024); Graham et al. (2017)
<b>Hybrid Organizing as Dynamic Practice</b>	Hybridity often viewed as static organizational structure	How do hybrid entrepreneurs perform hybridity across time and shifting contexts?	Reuter (2022); Mair et al. (2015); Besharov & Smith (2014)
<b>Opportunity Construction via Informal Channels</b>	Limited research on culturally embedded digital opportunity construction	How do informal narratives, peer networks, and social norms shape opportunity construction in hybrid ventures?	Garud & Giuliani (2013); Roundy (2019); Bangun et al. (2022); Garud et al. (2014)
<b>Digital Exclusion and Algorithmic Invisibility</b>	Lack of research on algorithmic barriers to visibility for informal entrepreneurs	What are the systemic mechanisms that marginalize informal actors on digital platforms?	Herlina et al. (2024); Acosta-Enriquez et al. (2024); Foster et al. (2018)
<b>Intersectionality in Digital Informality</b>	Gendered and migrant experiences remain under-theorized	How do intersecting identities mediate access to entrepreneurial legitimacy and digital infrastructures?	Gardner et al. (2022); Martin et al. (2019); George et al. (2021)
<b>Temporal Dynamics of Hybrid Ventures</b>	Cross-sectional dominance in current research	What are the lifecycle trajectories of hybrid entrepreneurs in digital-informal spaces?	Soluk et al. (2021); Autio et al. (2018)

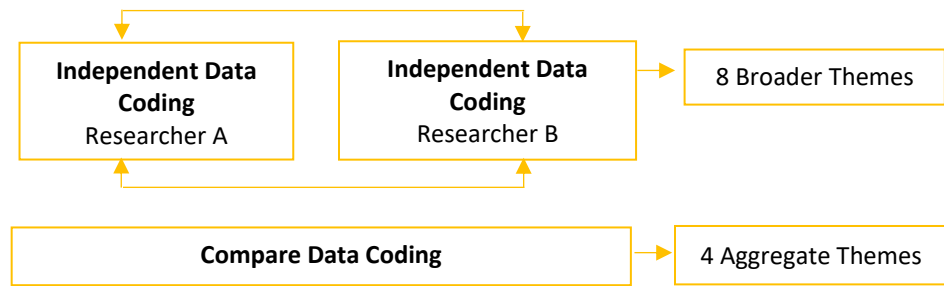
**Table 2:** Comparative Analysis with previous studies

<b>Study</b>	<b>Time Frame</b>	<b>Scope</b>	<b>Methodology</b>	<b>Unique Contribution</b>	<b>Gaps Left Unexplored</b>
Bruton et al. (2010)	1990–2010	Informal entrepreneurship in emerging markets	Narrative review	Highlights institutional constraints and the resilience of informal ventures	Does not incorporate digital infrastructure or platform governance
Nambisan (2017)	2000–2016	Digital entrepreneurship and technological affordances	Conceptual integration	Frames digital entrepreneurship through affordance theory	Assumes institutional formality; no coverage of informal ecosystems
Autio et al. (2018)	2005–2016	Entrepreneurial ecosystems and digitalization	Conceptual theory-building	Introduces spatial and digital dimensions of entrepreneurial ecosystems	Lacks theorization of informality and institutional bricolage
Palmié et al. (2025)	2000–2023	Digital-sustainable business models	Systematic literature review	Synthesizes digital sustainability and business model transformation	Focuses on sustainability and green transitions; lacks engagement with informal logics
Bejjani et al. (2023)	2010–2020	Digital entrepreneurial ecosystems (DEE)	Structured literature review	Integrates governance, infrastructure, and resource configuration in DEEs	Does not examine informal market dynamics or bricolage-based agency



<b>This Study (2024)</b>	2009–2024	Hybrid entrepreneurship in digitally informal economies	BSLR combining bibliometrics + thematic synthesis	Synthesizes four core theories; reconceptualizes institutional voids, hybridity, and platform governance	Calls for more empirical, longitudinal, and intersectional studies of digitally informal
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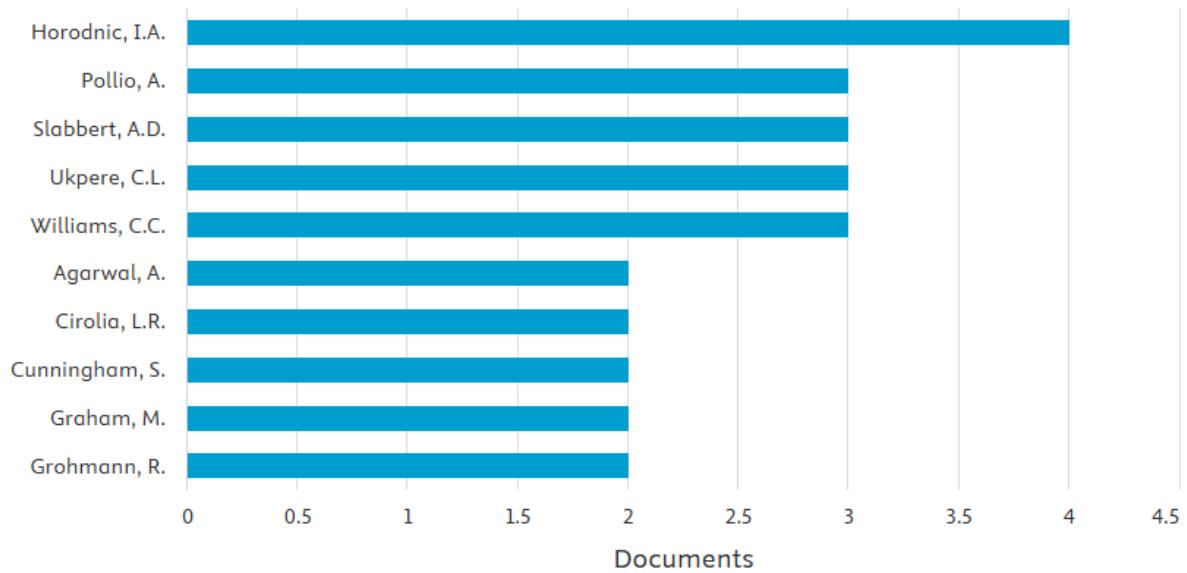




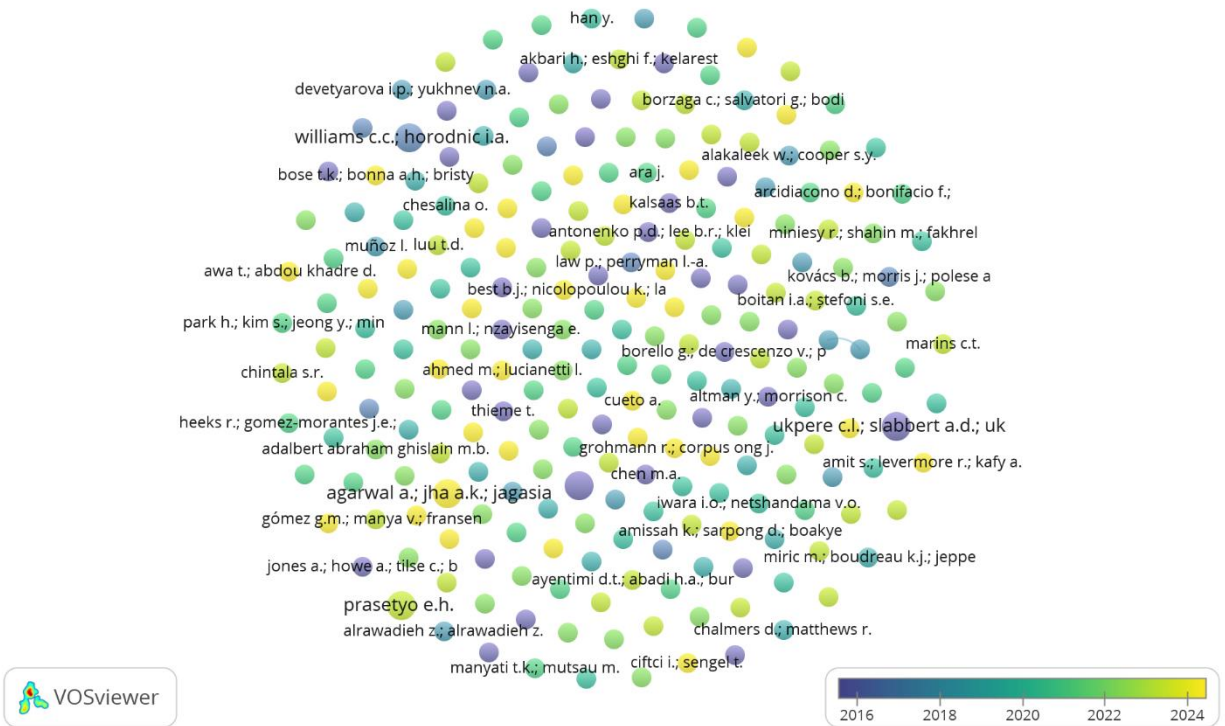
**Figure 1:** Flowchart of the article selection process; by authors

## Documents by author

Compare the document counts for up to 15 authors.



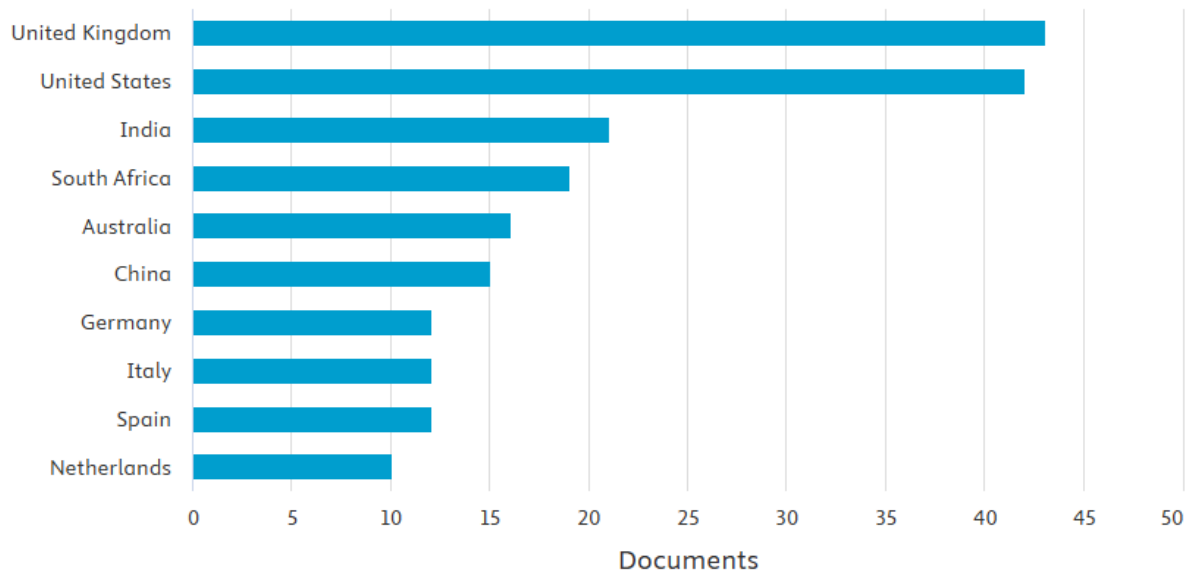
**Figure 2:** Documents by Author; (Scopus)



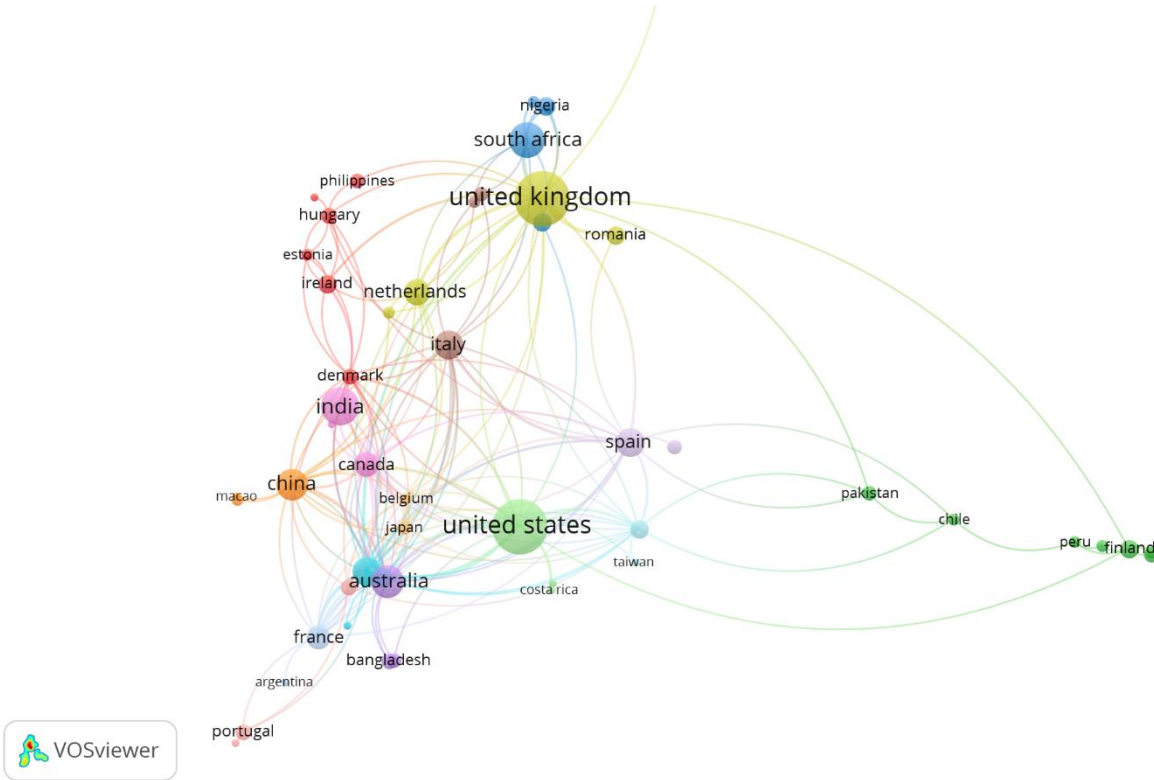
**Figure 3: Author Density Map; (VOSviewer)**

## Documents by country or territory

Compare the document counts for up to 15 countries/territories.

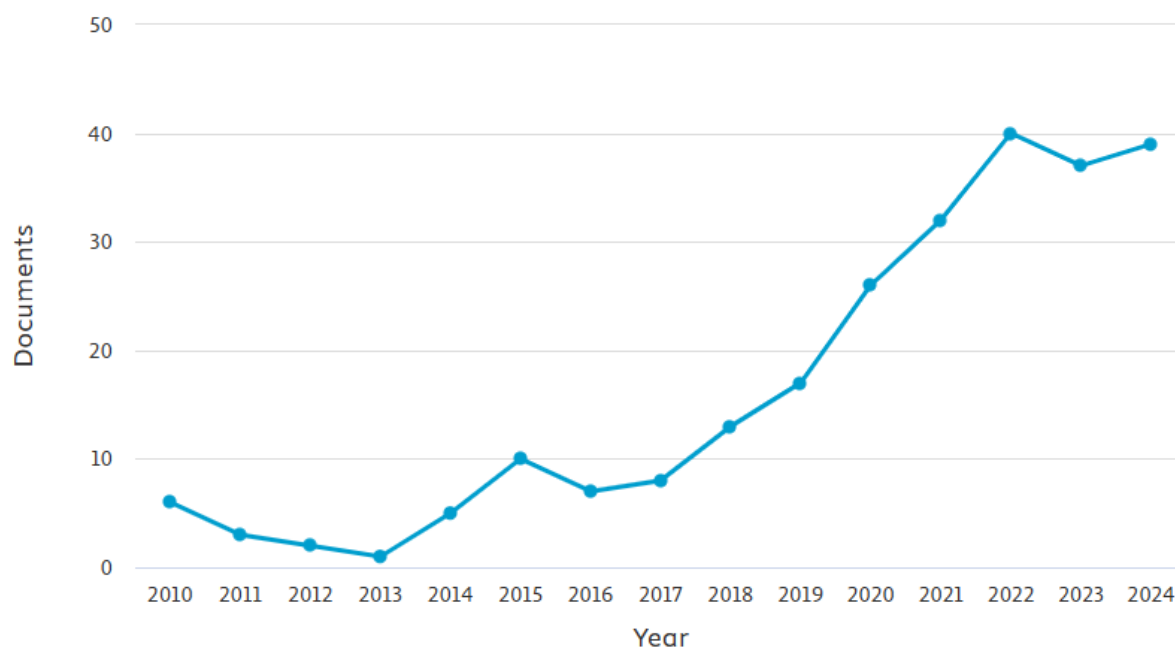


**Figure 4:** Documents by Country; (Scopus)



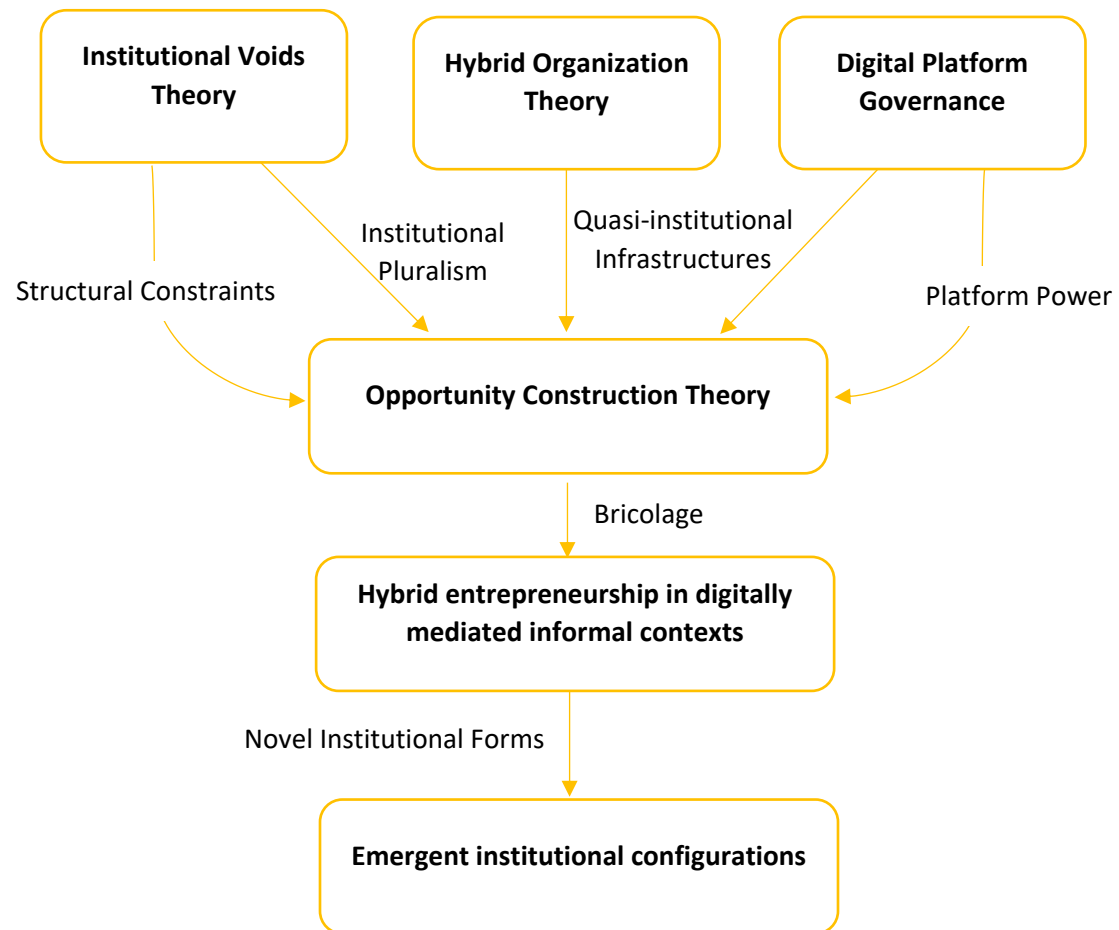
**Figure 5:** Geographical Density Map; (VOSviewer)

Documents by year



**Figure 6:** Documents by Year; (Scopus)





**Figure 8:** Integrated Theoretical Framework



**Figure 1:** Flowchart of the article selection process; by author

**Figure 2:** Documents by Author; (Scopus)

**Figure 3:** Author Density Map; (VOSviewer)

**Figure 4:** Documents by Country; (Scopus)

**Figure 5:** Geographical Density Map; (VOSviewer)

**Figure 6:** Documents by Year; (Scopus)

**Figure 7:** Keyword Co-occurrence Map; (VOSviewer)

**Figure 8:** Integrated Theoretical Framework; by author