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Institutional Syncretism in the Digital Age: The Adaptive Institutional Fusion (AIF) Framework

Dijital Çağda Kurumsal Sinkretizm: Uyarlanabilir Kurumsal Birleşme (AIF) Çerçevesi

Syed Shahnawaz MOHSIN

South Asian Institute for Policy and Governance (SIPG), Dhaka, Bangladesh

Güney Asya Politika ve Yönetişim Enstitüsü, Dakka, Bangladeş

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ABSTRACT

This paper introduces the adaptive institutional fusion (AIF) framework, a mid-range sociological theory explaining how formal and informal institutions interact under conditions of digital exposure. Research question: How do offline–online hybrid institutional arrangements form, adapt, and influence governance, education, labor, and social norms in transitional societies? Theoretical gap: The existing literature treats informal practices primarily as governance deficits, while digital sociology examines platform governance in isolation. Neither approach explains how hybrid systems evolve when locally embedded authority intersects with global digital visibility. AIF conceptualizes "fusion nodes" where formal regulations and informal practices converge, shaped by adaptive legitimacy, elasticity versus rigidity, and feedback loops generated by online exposure. Propositions: (1) Greater online visibility heightens legitimacy contests around hybrid institutions; (2) elastic hybrids with open digital interfaces formalize faster than rigid, patronage-bound systems; (3) digital exposure reinforces positive feedback in responsive institutions but amplifies dysfunction under elite capture; (4) hybrid nodes are durable, not transitional anomalies, and can be deliberately shaped by policy. Drawing on Bangladesh cases—madrasa digital curricula, shalish arbitration on Facebook, online labor markets, and activism campaigns—and global parallels such as M-Pesa, Brazilian favela leadership, and the gig economy, the paper argues that hybrid systems can deliver public value if recognized and governed rather than eradicated. The AIF framework offers a basis for rethinking institutional reform strategies and future research on algorithmic governance and cross-national validation.

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***Sorumlu yazar / Corresponding author**
*E-mail address: shahnawaz.mohsin@northsouth.edu

ÖZ

Bu makale, dijital görünürlük koşullarında biçimsel ve biçimsel olmayan kurumların nasıl etkileşime girdiğini açıklayan orta düzey bir sosyolojik kuram olan uyarlanabilir kurumsal kaynaşma (AIF) çerçevesini tanıtmaktadır. Araştırma sorusu şudur: Geçiş toplumlarında çevrim dışı–çevrim içi hibrit kurumsal düzenlemeler nasıl oluşur, uyum sağlar ve yönetişim, eğitim, emek ve toplumsal normları nasıl etkiler? Kuramsal boşluk: Mevcut literatür, biçimsel olmayan uygulamaları çoğunlukla yönetişim eksiklikleri olarak ele alırken, dijital sosyoloji platform yönetişimini ayrı olarak incelemektedir. Her iki yaklaşım da yerel olarak yerleşik otoritenin küresel dijital görünürlükle kesiştiği durumlarda hibrit sistemlerin nasıl evrildiğini açıklamamaktadır. AIF, biçimsel düzenlemeler ile biçimsel olmayan uygulamaların birleştiği "kaynaşma düğümleri"ni kavramsallaştırır; bunlar uyarlanabilir meşruiyet, esneklik ile katılık ve çevrim içi görünürlüğün oluşturduğu geri bildirim döngüleriyle şekillenir. Önermeler: (1) Daha fazla çevrim içi görünürlük, hibrit kurumlar etrafındaki meşruiyet mücadelelerini artırır; (2) açık dijital arayüzlere sahip esnek hibrit yapılar, katı ve patronaj temelli sistemlerden daha hızlı biçimselleşir; (3) dijital görünürlük, duyarlı kurumlarda olumlu geri bildirimi güçlendirirken, elit kontrolü altında işlev bozukluğunu artırır; (4) hibrit düğümler geçici anomaliler değil, kalıcı yapılardır ve politika yoluyla bilinçli olarak şekillendirilebilir. Bangladeş örneklerine —medreselerde dijital müfredatlar, Facebook'ta şaliş tahkimi, çevrim içi emek piyasaları ve aktivizm kampanyaları— ve M-Pesa, Brezilya favela liderliği ve gig ekonomisi gibi küresel paralelliklere dayanarak, makale hibrit sistemlerin ortadan kaldırılmak yerine tanınması ve yönetilmesi durumunda kamusal değer üretebileceğini savunmaktadır. AIF çerçevesi, kurumsal reform stratejilerini yeniden düşünmek ve algoritmik yönetişim ile ülkeler arası doğrulama üzerine gelecekteki araştırmalar için bir temel sunmaktadır.

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1. INTRODUCTION

In transitional societies such as Bangladesh, there exists a dynamic interplay between formal institutions—including governmental bodies, bureaucratic frameworks, and codified legal systems—and informal networks, which encompass kinship ties, cultural norms, moral codes, and everyday patterns of social reciprocity (North, 1990; Minbaeva et al., 2023). Informal institutions function as vital extensions or intermediaries for formal structures when official mechanisms are incomplete, insufficiently enforced, or misaligned with lived realities (North, 1990; Minbaeva et al., 2023). These culturally embedded networks often operate through unwritten rules, forging trust-based connections that shape interpersonal and organizational behavior in contexts where formal channels fall short (Helmke & Levitsky, 2004; Ledeneva, 2006; Minbaeva et al., 2023). Informal networks are frequently the social mechanisms through which informal institutions are enacted and reproduced in everyday life ((Horak & Suseno, 2022; Minbaeva et al., 2023).

Over the past decade, Bangladesh has witnessed a rapid infusion of digital platforms—notably social media networks such as Facebook and WhatsApp—that serve as quasi-regulatory arenas, accelerating institutional interactions and modifying power dynamics (Castells, 2000; Suri, 2025). In crisis and activism contexts, for instance, Facebook has been used to mobilize public sentiment, reshape collective identity, and exert pressure on formal authorities—as seen in events such as the Monsoon Uprising of July 2024 (Abir, Chowdhury, & Rahman, 2025). These online spaces frequently blur the divide between formal policy channels and informal social discourse, enabling community members to sanction behavior, share grievances, or organize collectively—sometimes eliciting rapid official responses.

However, the existing literature tends to approach informal institutional practices as deficits—viewing them primarily through a lens of dysfunction or corruption—and to attribute resilience in informal modalities to state failure rather than to adaptation (Nason, 2023; Giménez-Jiménez et al., 2020). Meanwhile, digital sociology interrogates the effects of technology on social identity, power structures, and collective behavior in increasingly networked societies, but typically lacks a holistic account of how informal and formal institutions fuse across both offline and online arenas. Existing scholarship has focused primarily on platform governance, networked communication, digital activism, and platform effects rather than on the interaction between digital systems and legacy institutional arrangements (van Dijck et al., 2025; van Dijck et al., 2021).

This leads us to the central research question of this study:

How do hybrid institutional arrangements—those that arise from the fusion of formal and informal systems, both offline and online—form, evolve, and influence governance,

education, and social norms in transitional societies such as Bangladesh?

To address this, the paper introduces the Adaptive Institutional Fusion (AIF) Framework, a middle-range theory that foregrounds:

- the genesis of *fusion nodes*—sites where formal and informal modalities intersect,
- the role of *digital exposure* in shaping adaptive legitimacy,
- the elasticity or rigidity of hybrid arrangements in response to change,
- and how *feedback loops*, amplified by digital virality, can either propel institutional reform or fortify entrenched dysfunction.

To ground the theoretical development, this study adopts a qualitative comparative approach that synthesizes evidence from Bangladesh alongside selected global parallels. The main text focuses on conceptual implications, while detailed case narratives, stakeholder accounts, and coding schemas are presented in an annex. This design ensures that empirical illustrations inform the AIF framework without constraining it to a single country or sector.

2. LITERATURE REVIEW AND GAP

2.1. Formal vs. Informal Institutional Theories

The dichotomy between formal and informal institutions lies at the heart of institutional sociology and political economy. Douglass North (1990) emphasized that institutions consist of both codified rules (formal) and routines, norms, and shared understandings (informal), all of which systematically shape economic and social behavior, including the persistence of informal mechanisms in contexts where formal rules are absent or inadequately enforced.

Building on this foundation, Helmke and Levitsky (2006) developed a typology of interactions between formal and informal institutions: complementary, accommodating, competing, and substitutive. For example, informal practices may complement formal rules by filling gaps left by enforcement weaknesses or enhancing bureaucratic coordination; alternatively, they can substitute defective formal structures altogether (Helmke & Levitsky, 2004). They clarify that informal institutions should not be simplistically equated to institutional weakness or dysfunction—they can also reflect adaptive, contextually embedded mechanisms that maintain social order, especially in transitional settings (Batlle, 2008).

Postcolonial and development sociology critiques this binary, arguing that formal and informal practices are often deeply intertwined in postcolonial contexts and cannot be understood through rigid institutional distinctions (Scott, 1998; Bayart, 1993; Chatterjee, 2004). It notes that labeling informal practices as merely "corruption" flattens their sociocultural role and obscures their strategic and adaptive value (e.g., in patronage networks or solidaristic community coping strategies). Informal arrangements—kinship-mediated access to services, non-legal dispute-resolution mechanisms, or locally enforced norms—can serve as pragmatic alternatives when formal structures fail. However, such practices are frequently dismissed as evidence of institutional weakness or governance failure rather than evaluated as adaptive mechanisms that enable coordination and survival in weakly institutionalized environments (Hart, 1973; Roy, 2005; Chatterjee, 2004).

A growing body of research has highlighted the importance of informal institutions, relational governance, and digitally mediated forms of coordination in shaping contemporary organizational and societal outcomes (Horak & Yang, 2016; Ledeneva, 2006; Minbaeva et al., 2023). Therefore, it seeks to reframe the informal-formal interface not as a pathology but as an adaptive architecture—particularly in developing nations where formal institutions are nascent or under-resourced. However, many of these accounts remain primarily descriptive, focusing on documenting platform practices, digital participation, and online network formation without developing broader institutional frameworks that explain how formal and informal institutions interact and co-evolve (van Dijck et al., 2021). Thus, lacking the structural theorization needed for generalizable analysis across contexts.

While North (1990) and Helmke & Levitsky (2004) distinguish formal from informal institutions, neither addresses how digital platforms are reshaping these dynamics in transitional societies. This omission leaves unclear how informal practices evolve when they gain visibility and public validation through online media.

2.2. Digital Sociology and Institutional Change

The digital transformation of social life has generated a robust field of digital sociology, focused on how platform architectures, social media, and networked communication reshape power, identity, and collective action. Manuel Castells (2000) introduced the concept of the "network society," where societal organization is fundamentally structured through interconnected digital flows linking individuals, institutions, and networks (Castells, 2000). Meanwhile, José van Dijck (2024; 2025) and colleagues have examined the cultural and governance implications of platformization. They explore how digital platforms—Facebook, YouTube, Wikipedia—have become embedded sites for public discourse, governance, and identity formation (van Dijck, 2024; van Dijck et al., 2025).

Van Dijck and co-authors emphasize that platforms both reflect and shape public values, norms, and forms of au-

thority. The governance structures embedded within platforms—moderation algorithms, networked data aggregation, content visibility—affect democratic exchange, institutional transparency, and social mobilization (van Dijck et al., 2025). However, this literature essentially treats digital spaces in isolation—examining how individuals interact with platforms—but rarely interrogates how these digital interactions fuse with preexisting formal and informal institutions.

Similarly, research on digital activism, gig economies, and platform-mediated service delivery has generated substantial insights into online mobilization, digital labor relations, platform governance, and digitally mediated service provision (Gerbaudo, 2012; Srnicek, 2017; Dijck et al, 2018). Much of this work focuses on how individuals use digital tools to organize protests, find informal work, or challenge authority—but often stops short of analyzing how these practices redefine institutional legitimacy or how they interact with state infrastructure.

For instance, discussions on deplatformization reveal how platform gatekeepers can shape public discourse and marginalize certain actors (van Dijck, de Winkel, & Schäfer, 2021). However, while this points to the power of digital platforms, it does not explicitly integrate how these digitally mediated powers fuse with informal networks or formal governance to create institutional hybrids.

Hence, digital sociology richly unpacks the architecture and social effects of platforms but does not systematically theorize the fusion of digital, informal, and formal institutional spheres—leaving a key analytical gap, especially in transitional societies where digital exposure both transforms and relies on local, informal mechanisms.

Similarly, Castells (2000) and Dijck et al. (2018) examine digital networks and platform governance but do not analyze how these interact with legacy institutions. The literature on digital activism, gig economies, and platform governance remains disconnected from studies of institutional adaptation and resilience.

2.3. Hybrid Governance and Institutional Resilience

The concept of "hybrid governance" or "hybrid orders" has grown prominent in fields analyzing governance in fragile or transitional contexts. Boege et al. (2008) describe how authority in post-conflict or weak-state environments often emerges from amalgamated repertoires—blending state symbols, customary law, charismatic leadership, and community norms—that provide legitimacy and social stability (Wenner, 2020). Scholars such as Lund (2006) conceptualize these as "twilight institutions," existing in the liminal space between formal and informal authority.

However, critiques from Meagher (2012) and others caution against overly romanticizing the embeddedness of hybrid orders. They underscore that such systems can be violent, contradictory in their legitimacy, and prone to legitimacy erosion when integrated into formal systems (Meagher, 2012). Furthermore, governance studies often emphasize hybrid legitimacy but rarely interrogate the role of online exposure or digital amplification in shaping these hybrid systems.

Moreover, definitions of hybrid institutional forms at the global governance level—such as Abbott and Faude's concept of "hybrid institutional complexes"—portray contemporary governance as an overlay of formal interstate institutions, private transnational bodies, and informal networks, yet usually at the macro scale and lacking attention to digitally mediated processes (German & Keeler, 2010; Abbott & Faude, 2021). These frameworks, while illuminating the complexity of governance beyond the state, still tend to abstract away from the granular mechanisms by which hybrid authority becomes visible, contested, or consolidated via local and digital practices.

Thus, the existing literature on hybrid governance recognizes the amalgamation of diverse sources of legitimacy and authority, especially in contexts with weak formal institutions. However, they rarely incorporate digital exposure—how online visibility, viral content, and social media discourse interact with and reshape hybrid institutional configurations. This absence leaves a critical theoretical lacuna.

Taken together, these strands of research fail to explain how hybrid institutional arrangements form, adapt, and persist under conditions of digital exposure. This dual gap—between institutional theory and digital sociology—justifies the need for an integrative framework such as AIF.

2.4. Identified Gap

Synthesizing the above literature reveals a clear and pressing theoretical gap. While North (1990), Helmke & Levitsky (2006), and others have charted the interplay between formal and informal institutions, most accounts reduce informal practices to corruption or dysfunction, missing their potential as adaptive mechanisms in weak-state contexts. Meanwhile, digital sociology offers nuanced insights into platform effects, networked communication, and digital activism—but often treats digital systems as separate from traditional institutional forms. Similarly, hybrid governance theories surface how informal and formal authorities coalesce in transitional spaces—but seldom theorize digital exposure as a constitutive element of these arrangements.

What is missing is an integrated framework that:

1. Explains how formal–informal institutional fusion occurs not only in physical space but also through digital interactions;
2. Accounts for how digital exposure affects the legitimacy of hybrid systems—either reinforcing or delegiti-

mizing them;

3. Differentiates between elastic hybrid nodes (capable of integrating reform) and rigid ones (that ossify into dysfunction);
4. Traces how feedback loops—accelerated by digital virality—can either catalyze institutional reform or entrench entrenched clientelism.

This gap is particularly salient in Bangladesh, where blended offline-online governance, education, economic coordination, and activism are already emerging—but remain insufficiently theorized. Bridging this gap requires a novel, middle-range theory that combines institutional sociology, digital sociology, and hybrid governance into a coherent analytical architecture—the AIF Framework.

3. THE ADAPTIVE INSTITUTIONAL FUSION (AIF) FRAMEWORK

3.1. Core Concepts

The AIF Framework centers on how formal and informal institutions merge—both offline and online—to produce hybrid social orders. It introduces four core concepts:

Fusion Nodes

Fusion nodes are points where formal regulations and informal practices converge, creating hybrid institutional spaces. For instance, in rural Bangladesh, traditional dispute resolution systems like the **shalish** (an informal village arbitration mechanism) persist even after the introduction of formal **village courts**—underscoring how informal justice persists alongside, and often mediates through, formal structures (Mattsson & Mobarak, 2023; Islam, 2018). When such settlements are mediated via **WhatsApp groups**, where parties submit grievances or communicate judgments digitally, the convergence of traditional authority and digital communication forms a new hybrid node. This melding of offline and online modalities exemplifies how institutional logics can blend to create emergent, adaptive governance mechanisms.

This concept resonates with institutional logic theory (ILA), which holds that multiple logics—such as community norms, state law, and digital ethos—coexist and interact (Friedland & Alford, 1991; Thornton & Ocasio, 2008). Fusion nodes represent situated sites where actors navigate overlapping logics under specific cultural and political conditions.

Adaptive Legitimacy

Adaptive legitimacy refers to the socially constructed acceptance of these hybrid arrangements. It builds on Suchman's (1995) typology of legitimacy: *pragmatic* (based on self-interest), *moral* (normative approval), and *cognitive* (taken-for-grantedness). In the AIF context, digital exposure can reshape all three dimensions, as when viral videos of citizen action online either reinforce or challenge legitimacy.

Digital platforms amplify institutional visibility, making hybrid practices emergent or problematic—visible to broader audiences and open to rapid legitimization or de-legitimization (Gümüsay et al., 2022). This dynamic transforms legitimacy from a slow, context-bound process into a highly reactive, contested terrain.

Elasticity vs. Rigidity

Hybrid institutional nodes exhibit varying capacities to adapt. Elastic fusion nodes stretch—incorporating reforms, responding to critique—and can evolve into formalized structures (e.g., informal online marketplaces migrating toward registered SME status). Conversely, rigid nodes ossify—anchored in clientelism or elite capture—remaining impervious to transformation. Digital exposure plays a dual role: it can propel nodes toward elasticity when institutions are responsive, yet, when dominated by entrenched elites, it reinforces rigidity by crowding out dissenting voices through curated narratives or platform manipulation (Ahmed, 2025b).

Feedback Loops

Hybrid nodes operate within complex feedback loops:

- Positive loops emerge when digital visibility triggers institutional correction—for example, when viral social media images of police misconduct (e.g., a viral image of a policeman suppressing a student's voice) prompt rapid institutional response or denial, exposing frictions in state legitimacy (TBS, 2025).
- Negative loops unfold when online exposure reinforces dysfunction—for instance, digital spaces may be weaponized to conduct media trials, mobilize mob violence, or suppress critical voices, thereby deepening existing dysfunctions instead of resolving them (Ahmed, 2025a).

These loops are accelerated in digital environments, where visibility and virality shorten the time between action and response (Gümüsay et al., 2022). Feedback loops are therefore central to understanding whether hybrid systems evolve adaptively or regressively.

3.2. Visual Model *(Conceptual Diagram)*

Explanation:

- **Offline Layer**: Traditional formal institutions (government bodies, courts) and informal networks (kinship, customary norms).
- **Online Layer**: Digital platforms—social media, messaging apps, digital marketplaces.

- **Fusion Nodes**: Intersection points where offline and online institutional logics merge.
- **Outcomes**: Depending on institutional responsiveness and digital dynamics, outcomes bifurcate into *Resilient* (adaptive, formalizing) or *Dysfunctional* (ossified, corrupt).
- **Feedback Loops**: Arrows from outcomes back into layers mediated via digital visibility—public scrutiny accelerates adaptation or reinforces dysfunction.

This model visually underscores the dynamic interplay between offline/online domains, institutional fusion, and the digital acceleration of change or entrenchment (Fig. 1).

3.3. Propositions (Theory Building)

Grounded in the concepts above, the AIF framework advances four core propositions:

- **P1: Online Visibility and Legitimacy Contestation**

  The higher the online visibility of hybrid arrangements, the greater the contestation over their legitimacy. Digital platforms magnify hybrid practices, exposing them to broader critique or affirmation, thereby intensifying legitimacy contests.

- **P2: Elastic Digital Interfaces and Formalization Speed**

  Hybrid systems with elastic digital interfaces (e.g., open marketplaces) formalize faster than rigid, patronage-based ones. Digital openness enables transparency, regulatory engagement, and proactive formalization; closed, patronage networks resist such evolution.

- **P3: Digital Exposure Differentially Amplifies Feedback**

  Digital exposure enhances positive feedback in responsive institutions (promoting reform) but amplifies negative feedback in elite-captured systems. Institutional capacity and accountability mediate whether digital exposure leads to inefficiency or improvement.

- **P4: Hybrid Nodes as Enduring and Policy-Shapeable**

  Hybrid nodes are not fleeting transitional anomalies but enduring social arrangements that can be proactively shaped by policy. Rather than aiming to abolish informal-formal overlaps, policy can harness fusion nodes for inclusion and reform.

4. METHODOLOGICAL STRATEGY

This study employs a qualitative comparative approach, combined with conceptual theory-building, to explore how hybrid institutional arrangements—blending offline informal practices with online digital platforms—emerge, adapt, and shape governance, education, labor markets, and social norms in transitional societies such as Bangladesh. By situating empirical cases within a structured comparative framework, the research both refines and tests the AIF framework as a middle-range theory.

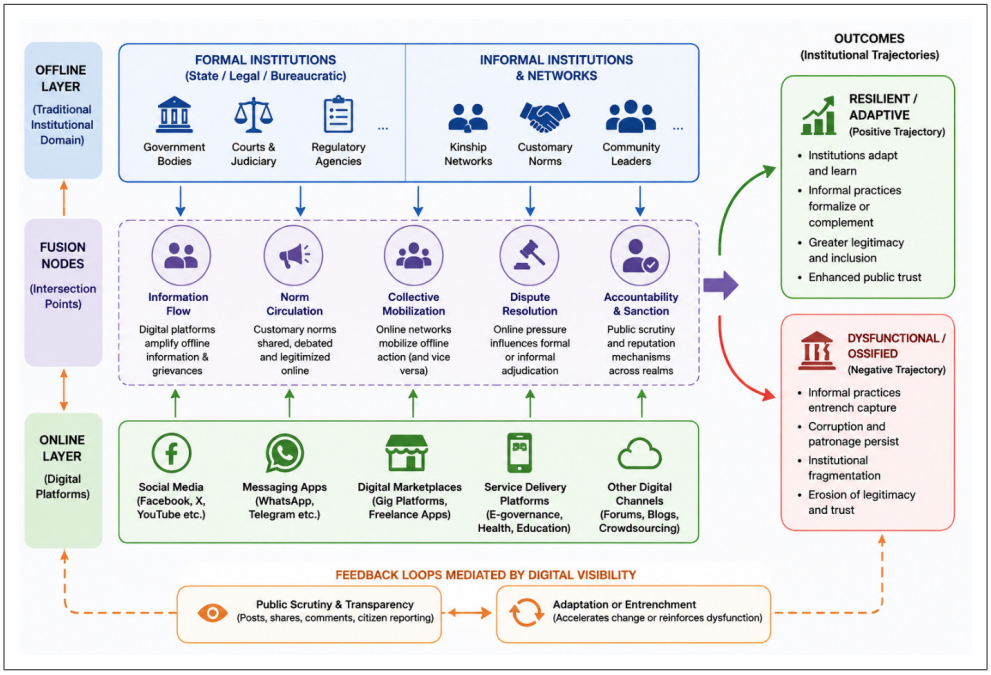

Figure 1. EAdaptive institutional fusion framework showing how formal and informal institutions interact with digital platforms through fusion nodes, producing either resilient/adaptive or dysfunctional/ossified institutional trajectories.
Source: Author own compilation

4.1. Research Design

This study employs a comparative case analysis approach to examine how AIF operates across diverse institutional contexts. The selected cases are used to identify recurring mechanisms, patterns of interaction between formal and informal institutions, and the role of digital platforms in shaping institutional adaptation. The objective is theory development and illustrative comparison rather than formal causal inference through set-theoretic methods. This approach is suited to analyzing configurational causation, in which different combinations of factors yield similar institutional outcomes. Bangladesh serves as the primary case cluster, while selected global parallels—including Kenya, Brazil, and the United States—function as contrastive cases to probe the broader applicability of findings (George & Bennett, 2005).

Alongside comparative analysis, the research employs conceptual theory-building to refine the AIF framework. As noted by Swedberg (2014), combining empirical observation with abductive reasoning helps generate new theoretical insights while avoiding premature closure around existing categories.

4.2. Data Sources

The empirical foundation of this study is built upon a triangulated research design that integrates four complementary data streams to ensure robustness and validity (Denzin, 2012). First, it draws on extensive archival research, examining government records, NGO reports, and media coverage to document formal institutional reforms and the parallel existence of informal practices (Yin, 2017). Second, first-hand narratives are captured through semi-structured interviews with key stakeholders, including policymakers, educators, community leaders, and digital platform users in Bangladesh. Third, the study incorporates a digital dimension through systematic social media content analysis of Facebook, YouTube, and WhatsApp networks, tracing how informal governance practices diffuse into online communicative spaces (Marwick, 2013). Finally, comparative insights are derived from secondary case literature on hybrid institutional phenomena in other global contexts (Mahoney & Thelen, 2009).

4.3. Sampling Strategy

Sampling followed a purposive logic (Patton, 2015). The Bangladesh cases were chosen because they demonstrate clear examples of offline-online institutional fusion:

1. Education: Madrasa and formal schooling integrated through YouTube curricula.
2. Governance: Village shalish decisions gaining visibility on Facebook and influencing formal court behavior.
3. Labor markets: Informal job brokerage shifting to WhatsApp and Facebook, circumventing state boards.
4. Norm negotiation: Online anti-harassment movements pressuring police to act.

Global parallels—such as Kenya's M-Pesa mobile money system, Brazilian favela leaders' Instagram mediation, and regulatory gray zones in U.S./European gig economies—were selected as contrastive samples to test whether similar fusion mechanisms occur across contexts with different institutional capacities.

4.4. Coding and Analytical Framework

The data were analyzed using thematic coding, both inductively and deductively (Lungu, 2022). Coding focused on:

1. Identifying fusion nodes: where offline practices intersect with online platforms.
2. Assessing adaptive legitimacy: by analyzing whether hybrid arrangements gain public trust, using narratives from interviews and social media discourse.
3. Classifying elasticity vs. rigidity: measuring whether these arrangements adapt flexibly to institutional pressures or reinforce entrenched dysfunction.

This process generated structured case summaries that informed the conceptual refinement of the AIF framework, consistent with guidelines for mid-range theory development (Merton, 1968).

4.5. Ethical Considerations

Conducting digital ethnography raises specific risks concerning privacy, surveillance, and participant consent (Markham & Buchanan, 2012). To mitigate these risks, all personal identifiers were removed from interview transcripts and social media data. Publicly available online content was analyzed in aggregate, and any quotes used in the study were paraphrased unless explicit permission was granted. These steps align with the Association of Internet Researchers (AoIR) recommendations for ethical research in digital contexts.

4.6. Annex Placement

To maintain theoretical coherence in the main text, empirical details—including full case descriptions, data tables, and coding schemas—are presented in the annex. This structure enables the main paper to emphasize conceptual insights, while allowing complete methodological transparency for scholarly review (Miles et al., 2014).

5. CASE IMPLICATIONS (CASE STUDIES IN ANNEX)

This section synthesizes the **implications** of the emerging hybrid institutional modalities identified in Bangladesh and globally. Detailed empirical case studies—featuring narrative depth, timelines, stakeholder perspectives, and digital

interaction data—are housed in the Annex. The main text emphasizes cross-cutting insights that inform institutional theory and policy design. To maintain compliance with journal word limits, detailed case descriptions, supplementary contextual information, and supporting materials are provided in the Annex. The case discussions in the main text present only the evidence most directly relevant to illustrating the AIF framework, while the Annex provides additional documentation and contextual detail for interested readers.

5.1. Bangladesh Cases

The cases are intended as illustrative applications of the AIF framework rather than exhaustive empirical studies. Additional contextual information, supporting observations, and source materials for each case are presented in the Annex.

5.1.1. Education

Madrasas represent one of the largest parallel educational systems in Bangladesh. The sector is broadly divided into Alia madrasas, which are regulated by the Bangladesh Madrasa Education Board and combine religious instruction with general education subjects, and Qawmi madrasas, which operate independently and focus primarily on Islamic scholarship and Arabic studies (Roy et al., 2020). The madrasa system serves several million students nationwide and has expanded significantly since independence, particularly in rural and economically disadvantaged areas (Riaz, 2008). While Alia madrasas provide pathways into higher education and public-sector employment, Qawmi institutions play an important role in producing religious scholars and community leaders (Asadullah & Chaudhury, 2009). Consequently, madrasas function not only as educational institutions but also as important social and cultural organizations that shape local authority structures, community norms, and patterns of social interaction in Bangladesh (World Bank, 2016).

Madrasas in Bangladesh have historically lagged in offering modern subjects due to infrastructure shortages and a scarcity of ICT-equipped classrooms (e.g., only 25% of Aliya madrasas have computer labs) (Rohit, 2025). However, platforms like **Madrasa** and **10 Minute School** have created digital curricula, disseminating thousands of videos via YouTube, WhatsApp, and websites, dramatically increasing educational reach and blending religious and formal instruction (Zaywa, 2021; Islam & Sakib, 2024). This convergence illustrates a **fusion node**: the offline madrasa and formal education system meld with online platforms to deliver curricula in new digital modalities (Shumshunnahar et al., 2025).

The madrasa–digital platform convergence exemplifies more than an incremental improvement in curriculum delivery—it marks a structural shift in how hybrid institutions gain legitimacy. When informal or semi-formal education providers (such as Qawmi and Aliya madrasas) engage with widely accessible digital platforms, they not only enhance reach but also signal professionalization to both state regulators and social constituencies. The infusion of structured curricula, modern pedagogical content, and standardized assessment materials on platforms like Madrasa and 10 Minute School demonstrates that religious education can evolve beyond rote instruction to include market-relevant knowledge (Zaywa, 2021; Islam & Sakib, 2024).

Digital presence works as a legitimacy amplifier. Online content archives create visible, auditable evidence of quality improvement—something that bureaucratic regulators, donors, and even skeptical parents can observe. The increased visibility afforded by digital platforms has the potential to make aspects of religious schooling more transparent and accessible to external audiences, allowing educational activities, institutional performance, and student achievements to become more visible and potentially comparable across institutions. Digital visibility may enhance institutional legitimacy where digital adoption is sufficiently developed and accepted by relevant stakeholders. However, existing studies also document significant technological, cultural, and ideological barriers to ICT diffusion within parts of the madrasa sector (Shumshunnahar et al., 2025), suggesting that such effects remain uneven and contingent. Rather than assuming a uniform process of digital transformation, the present case illustrates an emerging and contested process in which some madrasas adopt digital tools to enhance visibility and stakeholder engagement, while others remain constrained by resource limitations, organizational capacity, or resistance to technological change.

Elasticity is achieved through cultural compatibility. Because digital curricula are embedded in familiar religious frameworks, the hybrid institution remains culturally legitimate while absorbing modern STEM and language instruction. This elasticity—the ability to stretch institutional form without breaking community trust—illustrates why hybrid systems persist rather than dissolve into purely secular or purely religious categories. Instead of treating hybrid education as a "transition stage" toward fully formal systems, this case suggests that such models stabilize into durable equilibria that adapt to both policy constraints and community expectations (Rohit, 2025).

It has potential to reconfigure state policy. If regulators recognize the credibility of these digital–religious networks, policy frameworks could shift from binary recognition (formal vs. informal) to tiered accreditation, where hybrid programs receive partial certification tied to content standards rather than institutional origin. This could encourage state–civil society co-production of curricula, reduce the stigma attached to religious schooling, and help governments meet Sustainable Development Goal 4, which seeks to ensure inclusive, equitable, and quality education and

promote lifelong learning opportunities for all (United Nations, 2015), while achieving these targets without building massive new infrastructure (Islam & Sakib, 2024).

In short, digital exposure may create conditions under which hybrid institutions become more visible to policymakers, communities, and external stakeholders, potentially facilitating their recognition as adaptive educational actors and increasing opportunities for integration into broader educational planning processes (Shumshunnahar et al., 2025; Dijck et al., 2018). Rather than fading as formal systems expand, these elastic nodes may become templates for inclusive governance in education—balancing cultural legitimacy with developmental imperatives.

Digital exposure can legitimize hybrid educational arrangements that fill institutional voids—especially when formal systems are constrained—by providing culturally compatible, accessible learning. Such hybrid models hold potential for formal recognition if policy frameworks adapt to integrate them.

The madrasa sector in Bangladesh is neither institutionally uniform nor uniformly digitalized. It encompasses state-regulated Alia madrasas and largely autonomous Qawmi madrasas, each characterized by distinct governance structures, curricular orientations, and relationships with state institutions (Riaz, 2008; Asadullah & Chaudhury, 2009). Existing research further suggests that the adoption of information and communication technologies (ICTs) remains uneven across the sector, shaped by disparities in resources, infrastructure, institutional priorities, and attitudes toward technological change. While some institutions have incorporated digital platforms for administration, communication, and educational activities, others continue to face technological constraints and cultural or ideological reservations regarding ICT adoption (World Bank, 2016; Shumshunnahar et al., 2025). Consequently, the present case should not be interpreted as representative of the entire madrasa sector but rather as an illustration of how digital engagement may emerge within specific institutional contexts.

The madrasa case can be interpreted as an emerging fusion node in which digital tools create opportunities for greater visibility, stakeholder engagement, and pedagogical innovation. While the evidence does not establish that digitalization has produced widespread formal legitimacy or institutional integration, it illustrates how online platforms may facilitate processes through which hybrid educational institutions seek recognition and broader societal engagement. The case therefore serves primarily as an illustrative example of the AIF framework, demonstrating how digital technologies may influence interactions between formal and informal educational institutions while also highlighting the constraints, uneven adoption patterns, and resistance documented in existing studies of madrasa digitalization.

5.1.2. Governance

Informal justice via *shalish* (village arbitration) persists even with the presence of formal village courts. While formal courts may offer more structured justice, *shalish* remains faster, more accessible, and contextually trusted—especially for the disadvantaged (e.g., poor villagers) (Alim & Ali, 2023; Sutradhar, 2023). When *shalish* outcomes are shared on Facebook or WhatsApp, they enter public and official discourse more quickly, effectively influencing state court behavior through digital scrutiny or symbolic pressure. This mediated convergence forms a potent **fusion node** in rural governance.

The digital mediation of *shalish* outcomes magnifies the permeability between informal and formal governance mechanisms. When arbitral decisions are uploaded to Facebook or WhatsApp, they transition from being purely local, discretionary practices into visible events subject to broader social commentary, NGO monitoring, and even judicial attention. This online exposure can accelerate institutional learning within the formal justice system by highlighting community demands for speed, cultural relevance, and procedural fairness. From an AIF perspective, digital scrutiny may function as a mechanism through which local dispute-resolution institutions become more publicly visible and accountable. Under favorable institutional conditions, such visibility could encourage reforms that more closely align judicial practices with community expectations, although the present case does not provide direct evidence of these outcomes (Fung, 2013; Fritzen, 2016).

However, this same visibility also risks reinforcing entrenched power asymmetries when elite actors dominate *shalish* proceedings. Public validation through likes, shares, or supportive comments may cloak clientelistic or coercive rulings in a veneer of legitimacy, discouraging state oversight. In such cases, the hybrid governance node becomes rigid rather than adaptive, allowing informal authority to harden rather than integrate with formal accountability systems.

This duality underscores a critical policy lesson - digital transparency is not inherently democratizing. For convergence to produce institutional synergy rather than distortion, policymakers must pair digital openness with targeted investments in village court capacity, community legal awareness, and mechanisms for independent review. When these safeguards are present, *shalish*–court interaction can evolve into an elastic fusion node, where informal authority is disciplined and formal authority becomes more responsive. Absent these safeguards, digital exposure risks becoming a tool for performative justice rather than substantive reform.

Publicizing *shalish* decisions online can exert dual influence—forcing formal courts to improve responsiveness while also risking informal validation beyond state oversight. Thus, digital visibility may spur reforms if institution-

al capacity exists, or entrench informal authority if formal institutions remain unresponsive. This case demonstrates a tension between rigidity and elasticity. When Facebook visibility prompts procedural improvements in village courts, a positive feedback loop emerges. Conversely, when elite-controlled shalish decisions are broadcast without accountability checks, the hybrid node solidifies clientelistic authority.

5.1.3. Labor Markets

Bangladesh's informal labor sector is extensive, with nearly 85% of the workforce engaged outside formal employment and facing significant wage penalties compared to their formal-sector counterparts (Dallakoti, 2024; Rahman et al., 2019). In parallel, an expanding digital freelance economy—comprising more than 650,000 freelancers generating nearly USD 1 billion annually—has integrated informal labor into the global marketplace via platforms such as Upwork and Fiverr (Hasan, 2025). Additionally, job brokerage and recruitment activities increasingly occur through informal channels like WhatsApp and Facebook, bypassing state-regulated labor boards and oversight mechanisms.

These digitally mediated labor practices exemplify the elasticity of hybrid labor markets. Digital exposure enables informal work to achieve global visibility and partial legitimacy; however, equitable benefits depend on the existence of formal regulatory and worker protection frameworks. In the absence of such safeguards, these digital brokerage networks function as "fusion nodes" that are simultaneously innovative and fragile. While they expand labor market inclusion, they also heighten vulnerability to fraud, wage suppression, and other exploitative practices. This dual dynamic underscores the tension between flexibility and institutional accountability in Bangladesh's evolving labor governance.

5.1.4. Social Norms

Online activism campaign against harassment has compelled police and political institutions to respond to previously neglected public grievances. These movements exemplify hybrid nodes that combine social norms with formal law enforcement through digital exposure (see Annex for details). When institutional responsiveness aligns with online pressure, digital visibility becomes a tool of reform. These movements illustrate hybrid governance nodes, where digital platforms intersect with formal law enforcement and political accountability structures. When institutional responsiveness aligns with online mobilization, digital visibility becomes a catalytic mechanism for reform, validating public protest as a legitimate input into governance processes (Phillips, 2024).

Implication: Digital visibility can legitimize civil resistance and protest norms, incentivizing formal institutions to act. Hybrid nodes here reinforce institutional elasticity when state actors are accountable—but if exposure triggers repression, they risk forgiveness being reversed, leading to rigidity and enforcement crackdowns. Digital visibility can legitimize civil resistance and embed social norms of accountability into formal institutions. These hybrid nodes strengthen institutional elasticity when state actors respond constructively, but they remain fragile. If heightened exposure instead provokes repression, protest norms risk being delegitimized and replaced by punitive crackdowns, converting elasticity into rigidity.

5.2. Global Parallels

5.2.1. M-Pesa (Kenya)

The mobile money platform M-Pesa merged formal banking regulations with long-standing trust-based informal savings networks in rural Kenya. Its digital reach extended economic inclusion through a hybrid institutional model that combined formal financial frameworks with informal trust—a fusion that drew on adaptive legitimacy in underbanked areas. By integrating regulatory oversight with community-based trust, digital finance can achieve institutional elasticity, broadening access while maintaining credibility. However, sustaining this fusion requires vigilance against fraud and regulatory overreach that could undermine local legitimacy.

5.2.2. Favela Leadership (Brazil)

In Brazil, favela leaders have used Instagram to negotiate with municipal authorities, blending informal community governance autonomy with visible online engagement and formal political interaction. These hybrid nodes function as mediation points—with digital visibility enhancing legitimacy and negotiating power. Digital platforms can empower informal governance actors to gain formal recognition and bargaining capacity. However, if municipal authorities shift from cooperation to suppression, these nodes risk losing adaptive legitimacy and reverting to rigid confrontation.

5.2.3. Gig Economy (U.S. & Europe)

Platforms like Uber operate in regulatory gray zones, mixing informal gig labor practices with formal economic regulations. The digital interface, though ostensibly formal, accommodates informal work patterns—creating elastic hybrid systems that resist complete formalization while delivering economic function. Hybrid gig platforms show how partial regulation can maintain labor market flexibility and economic efficiency. However, without robust protections, these systems may entrench precarity, demonstrating that elasticity without safeguards can harden into institutional fragility.

Implication (Global): These examples suggest that fusion-node dynamics can be observed across diverse insti-

tutional settings. When digital engagement complements existing formal and informal mechanisms, it may contribute to greater institutional adaptability and resilience; conversely, where formal systems remain weak or poorly aligned with digital processes, dysfunction may persist. Although the limited number of cases does not permit claims of universality, the observed parallels indicate that the AIF framework may offer a useful analytical lens for examining interactions between digital, formal, and informal institutions across different contexts.

5.3. Key Implications Synthesized

This study identifies three key dynamics governing the relationship between digital visibility and hybrid institutional arrangements. First, legitimation occurs through public value delivery: when hybrid, digitally exposed nodes generate tangible public benefits—such as improved access to education, cash flow, or justice—their digital visibility can confer legitimacy, effectively transforming informal options into recognized alternatives. Second, digital exposure carries a dual-edged potential for delegitimizing patronage networks by opening new accountability channels; however, this dynamic only yields meaningful reform if formal institutions are both equipped and willing to harness the resulting pressure. In the absence of such institutional readiness, exposure risks amplifying dysfunction rather than curbing it. Third, the findings point toward a strategy of policy integration over eradication: hybrid institutional arrangements should not be eliminated but rather incorporated into formal frameworks. Policies that co-design with existing mash-ups—for instance, by recognizing digital madrasa credentials or facilitating freelance regulation—can leverage these fusion nodes to advance more inclusive and responsive governance.

6. DISCUSSION

6.1. Revisiting the Propositions

Proposition 1 (P1): *Higher online visibility intensifies legitimacy contention around hybrid institutional arrangements.*

The Bangladesh cases support this: for example, when shalish decisions were shared on Facebook, formal courts faced heightened public scrutiny and, in some cases, adjusted practices to avoid reputational damage. Conversely, in digital job marketplaces, widespread visibility led both to emergent self-regulation and backlash from established intermediaries.

Proposition 2 (P2): *Hybrid systems with elastic digital interfaces formalize more quickly than rigid patronage-based ones.*

For instance, digital madrasa curricula via YouTube expanded reach and gradually gained acceptance in formal education policymaking. In contrast, elite-driven shalish systems, even when digitally visible, resisted formal integration due to clientelistic control.

Proposition 3 (P3): *Digital exposure amplifies positive feedback in responsive institutions but negative feedback in elite-captured systems.*

Bangladeshi police responding to viral harassment hashtags illustrate a positive loop, triggering policy responsiveness. On the other hand, in rural governance, when local elites harnessed online platforms to reinforce undemocratic norms, exposure reinforced dysfunction—negative feedback loops took hold.

Proposition 4 (P4): *Hybrid nodes are enduring institutional features that can be shaped through policy rather than eliminated.*

The proliferation of digital labor platforms and online madrasa teaching suggests that hybrid nodes are not transitional; they are durable and serve functional needs. Policymakers acknowledging and integrating such nodes—for instance, by accrediting digital madrasa learning or formalizing gig work via registration—affirm their lasting presence and potential leverage points for reform.

In sum, the Bangladesh and global cases suggest that the AIF framework captures important dynamics of institutional adaptation in digital contexts. While the cases are illustrative rather than definitive, they indicate the potential analytical value of the framework for understanding interactions among digital, formal, and informal institutions.

6.2. Comparative Analysis: AIF vs. Existing Theoretical Frameworks

6.2.1. Modernization Theory

Classic modernization theory posits that as societies develop economically and educationally, they transition toward rational-legal governance structures (Gwynne, 2009). However, these cases reveal a more complex reality: informal mechanisms persist and often hybridize with formal systems through digital mediation. The AIF framework challenges the linear progression model of modernization by highlighting how modern digital technologies may reinforce informal practices—even as formal institutions exist—rather than simply displacing them.

6.2.2. Institutional Isomorphism

DiMaggio and Powell's concept of institutional isomorphism identifies coercive, mimetic, and normative pressures leading organizations to converge (DiMaggio & Powell, 1983). In digital hybrid spaces, similar pressures emerge—for instance, religious schools mimicking successful digital learning platforms (mimetic isomorphism), or government mandates pushing digital registration (coercive isomorphism). However, AIF goes further by focusing not on or-

ganizational convergence per se, but on fusion nodes where formal/informal and offline/online logics blend—adding nuance to homogenization dynamics.

6.2.3. Hybrid Governance / Hybrid Institutional Complexes (HICs)

HIC theory describes governance involving formal state, private, and informal institutions operating together (Abbott & Faude, 2021). AIF parallels this in concept but differs in scale and mechanism: HICs operate at global regulatory levels; AIF centers on local fusion nodes where digital platforms mediate institutional convergence. The AIF framework adds the dimension of **digital visibility** and the resulting feedback loops—absent in HIC literature—emphasizing how platform dynamics shape institutional legitimacy and adaptation.

6.3. Normative Implications

The AIF framework posits that reform strategies should pivot from suppressing informal practices toward integrating and shaping hybrid systems, advancing three core principles. First, it calls for acknowledgement over suppression: denying informal–digital fusion—for instance, by forbidding WhatsApp-based job brokering—fails to eliminate such practices, whereas integration through recognition, training, or formal channels offers greater efficacy. Second, the framework advocates for policy design through hybridity, exemplified by accrediting digital madrasa instruction or regulating gig platforms to ensure labor protections, thereby transforming fusion nodes into regulated innovations. Third, it emphasizes leveraging digital visibility responsibly, proposing that institutional mechanisms can be established to route digital complaints to officials efficiently, turning viral exposure into structured accountability rather than chaotic backlash. In short, reform should treat hybrid institutions as assets to be integrated, not obstacles to be eliminated.

6.4. The Digital Dimension: Platform Architecture Matters

Platform architecture shapes how fusion nodes function and evolve:

- **Facebook** emphasizes broad public visibility and algorithmic amplification of content, increasing the potential for mass scrutiny—but also enabling reputational capture by elites able to manipulate narratives.
- **WhatsApp**, by contrast, supports closed, encrypted group communication, which facilitates coordination but limits public oversight, lending itself to both grassroots resilience and elite gatekeeping.
- **TikTok**, with its sensational, short-form videos, can ignite rapid mobilization but may induce superficial engagement or misinterpretation—affecting legitimacy cycles differently from subtler platforms.

This differentiation echoes platform governance scholarship showing that technical design influences decentralized authority, deliberation, and accountability (Jhaver et al., 2021). Accordingly, AIF posits that platform features—visibility mechanics, community moderation, data governance—critically affect whether feedback loops become reformist or retrogressive.

Facebook, WhatsApp, and TikTok are selected as illustrative examples rather than an exhaustive list of platforms. They represent distinct platform architectures—public networked visibility (Facebook), private group-based communication (WhatsApp), and algorithmically driven short-video dissemination (TikTok)—allowing the framework to demonstrate how different technological affordances may influence institutional fusion processes in different ways.

7. CONCLUSION

This study advances a conceptual framework of adaptive informal–formal (AIF) fusion to explain how institutions evolve in response to both historical constraints and digital acceleration. Rather than viewing informal practices as transient pathologies to be eradicated, this framework argues that hybrid institutional arrangements are enduring features of governance systems. They reflect pragmatic accommodations to context-specific pressures—including colonial legacies, uneven state capacity, and rapidly shifting socio-technical environments—rather than failures of modernization.

The AIF framework integrates three dimensions rarely combined in prior research: (1) the fusion of formal and informal institutions, drawing on insights from institutional economics and postcolonial sociology; (2) the digitally mediated transformation of legitimacy contests, informed by digital sociology; and (3) the concept of elasticity versus rigidity as a way to assess institutional resilience over time. Together, these elements offer a lens that explains why informal norms persist even when formal reforms are enacted, and why attempts to "purify" governance by eliminating informality often generate perverse effects.

This approach departs from modernization theory, which typically assumes a linear progression from informality to formality (Gwynne, 2009), and from institutional isomorphism, which emphasizes convergence under global pressure but downplays local adaptations (DiMaggio & Powell, 1983). It also extends hybrid governance literature (Boege et al., 2008; Meagher, 2012), which documents coexisting authority systems but seldom explains their dynamism under conditions of digital exposure. By foregrounding legitimacy negotiations across online and offline domains, this study shows that hybrid institutions are not static compromises but evolving ecosystems.

The findings challenge the persistent assumption in policy discourse that informal practices are transitional defects to

be eliminated through technocratic reform. Instead, informality operates as a stabilizer, filling gaps left by under-resourced formal systems and buffering shocks in moments of institutional stress. Whether in local governance, education systems, or labor regulation, informal norms often provide the "glue" that keeps systems functioning when formal mechanisms falter. Far from signaling failure, this hybridity demonstrates institutional resilience—albeit at the cost of transparency and predictability.

The cases analyzed in this study demonstrate that attempts to forcibly suppress informal practices—through legal crackdowns, donor-imposed reforms, or algorithmic surveillance—often weaken rather than strengthen institutions. When informal mechanisms are delegitimized without being replaced by viable alternatives, the result is institutional rigidity: formal systems that cannot adapt to changing social or economic demands. Conversely, systems that acknowledge and strategically integrate informal practices—rather than pretending they do not exist—tend to show greater elasticity, absorbing pressures without collapse.

The digital sphere has amplified these dynamics by exposing institutional negotiations to broader audiences. Social media platforms—whether Facebook, WhatsApp, or TikTok—differ not only in reach but also in architecture, shaping how legitimacy is constructed, contested, or eroded.

- **Facebook's open network structure** enables broad-based campaigns that can challenge formal authority but also trigger rapid state repression.
- **WhatsApp's encrypted, closed groups** allow informal actors to coordinate quietly, reinforcing hybrid governance networks away from public scrutiny.
- **TikTok's algorithmic virality** privileges short bursts of emotional legitimacy rather than sustained debate, reshaping how institutions respond to public pressure.

This variation underscores the need to consider platform governance as a mediating factor in institutional evolution. Digital technologies are not neutral tools; they actively structure which informal practices gain legitimacy and which are stigmatized or suppressed.

The theoretical contribution of this study opens three main pathways for further inquiry:

1. **Quantitative validation.** While this study relies on qualitative comparative analysis, future research could develop cross-country datasets to measure the degree of formal–informal fusion, track its evolution over time, and assess its impact on governance outcomes. Such an approach would test whether elasticity—as conceptualized here—correlates with developmental performance, conflict resilience, or citizen trust.
2. **Algorithmic governance as a new fusion layer.** As states and corporations increasingly deploy algorithmic tools to regulate behavior—whether through surveillance, credit scoring, or automated compliance checks—informal actors are already adapting. This emerging domain of "algorithmic informality" deserves systematic study: How do informal norms reshape or bypass automated rule enforcement? Does digital governance produce new forms of hybrid authority rather than replacing older ones?
3. **Policy applications.** The AIF framework offers practical insights for reformers in education, urban governance, and labor regulation. Rather than imposing rigid formal schemes that disregard context, policymakers can design systems that harness informal capacities while gradually strengthening formal rules. For example, community-based education monitoring networks, informal housing regularization programs, or hybrid labor inspection systems could provide flexible pathways for institutional improvement without triggering backlash or collapse.

In conclusion, this study reframes the debate on governance in developing and postcolonial contexts. Hybrid institutions are not signs of arrested development but adaptive responses to historical legacies and contemporary pressures. The fusion of formal and informal mechanisms, far from being a temporary stage, is a permanent structural feature of modern governance. Recognizing and theorizing this fusion—notably as digital platforms reshape it—can lead to more nuanced academic models, more realistic international reform agendas, and more resilient public institutions.

The challenge ahead is to build theories and policies that work with hybridity rather than against it. By doing so, scholars and practitioners can move beyond the sterile binary of "formal versus informal," toward an understanding of institutions as living systems—flexible, contested, and capable of evolution in an increasingly interconnected world.

ANNEX

Case Study 1: Digital Madrasa Education—YouTube and the AIF Fusion in Learning

Digital platforms like **10 Minute School**, initiated in 2015 as a YouTube channel, now provide complete academic curricula, including madrasa subjects, to Bangladeshi students across generations (10 Minute School, 2019). Simultaneously, the Gurukul Online Learning Network (GOLN) offers branded content hubs such as "Islamia Gurukul" that cater explicitly to madrasa education, reaching hundreds of thousands through free video lectures on YouTube and Facebook (Shams, 2021).

Digital Artifacts & Stakeholder Quotes

A student from *Islamia Gurukul* commented, "There has not been such professional initiative for students of madra-

sa curriculum in Bangladesh," underscoring both legitimacy and digital reach (Shams, 2021).

These platforms present hybrid "fusion nodes": offline religious schooling meets formal educational goals through digital dissemination.

Timeline
2015: 10 Minute School launches as YouTube-only initiative (10 Minute School, 2019).

2019: GOLN begins specialized content delivery, including madrasa subjects (Shams, 2021).

2023–2024: Adoption of digital portal tools for madrasas (notably in Indonesia, but indicative of regional parallels) suggests a growing institutional acceptance of hybrid digital–formal pedagogy (Bahari & Mukarramah, 2023).

Case Study 2: Village Shalish and Facebook Publicity—Governance in Digital Hybridization
Shalish, a traditionally informal village arbitration system, remains prevalent despite the introduction of formal village courts in 2006 (Islam, 2019). Public distrust stems from perceptions of bias and lack of accessibility, while village courts tower over slow, costly formal systems (Islam, 2019).

Digital Artifacts & Stakeholder Insights
In several villages, decisions from shalish are posted or shared on **Facebook groups**, enabling public visibility and prompting formal courts or local officials to respond or adjust behavior.

A village court official was quoted (within local media): "The decision of the court… is accepted later on after serious consultation by the village court authority," suggesting a hybrid institutional interplay (Siddiqi, 2019).

Timeline
2006: Village courts formalized alongside traditional shalish (Islam, 2019).

2020–2025: Increasing use of WhatsApp and Facebook to share grievance outcomes and arbitral resolutions.

Case Study 3: Informal Job Brokerage via Digital Channels in Bangladesh

Narrative Context
Bangladesh's informal labor market is vast—comprising over 85% of employment—and is characterized by significant wage disparities between formal and informal workers (Hossain Mohammad Yeasin, 2022). In response, digital platforms and apps like **Kormo**, developed in partnership with Google's Area 120, now match job seekers to informal work, offering résumés, job listings, and digital profiles (HRM Asia Newsroom, 2018).

Digital Artifacts & User Accounts
Job seekers connect via **digital platforms** to access the informal job market beyond state-regulated channels.

Timeline
2018: Launch of Kormo job app in Dhaka (HRM Asia Newsroom, 2018).

2022–2025: Growth of WhatsApp and Facebook–mediated job groups and reports of scams in digital job brokerage circles.

Case Study 4: Social Norms: Online Activism in Bangladesh
Digital activism campaigns emerged in Bangladesh to confront harassment and gender-based violence and to illustrate how social norms intersect with formal law enforcement through digital visibility (ActionAid Bangladesh, 2024). These movements function as hybrid nodes, where offline social expectations are amplified by online platforms, compelling police, local authorities, and political institutions to respond to grievances that previously received little attention.

Implications:

When institutional responsiveness aligns with online pressure, digital exposure legitimizes civil resistance, incentivizes policy or enforcement action, and reinforces institutional elasticity (Helmke & Levitsky, 2004).

Conversely, if state actors respond with repression—e.g., censorship or punitive policing—digital exposure can exacerbate rigidity, hardening institutional resistance to reform (Roy, 2023).

These dynamics exemplify how hybrid nodes can both accelerate reform and highlight governance vulnerabilities when formal institutions are unevenly responsive.

Cases on Global Parallels

M-Pesa (Kenya)

The mobile money platform M-Pesa combined formal banking regulations with trust-based informal savings networks in rural Kenya, demonstrating an adaptive hybrid institution (Jack & Suri, 2011). By providing digital access to financial services for populations historically excluded from formal banking, M-Pesa created a fusion node where informal trust systems and formal regulatory frameworks coexisted and reinforced one another. Its success reflects elasticity, with digital exposure expanding both legitimacy and uptake.

Favela Leadership (Brazil)
Community leaders in Brazilian favelas have used Instagram to negotiate with municipal authorities, blending informal community governance with formal political

processes (Cuvi, 2012; Medrado et al., 2020). These hybrid nodes leverage digital visibility to enhance legitimacy and negotiation power, serving as mediators between marginalized populations and official institutions. Visibility through social media also increases public scrutiny, incentivizing authorities to consider informal actors as legitimate stakeholders.

Gig Economy (U.S. & Europe)

Platforms such as Uber operate in regulatory gray zones, mixing informal gig labor practices with formal economic frameworks (Wood et al., 2019). Although the digital interface appears formalized, it accommodates informal work patterns—including flexible scheduling, rating-based regulation, and decentralized labor coordination—creating elastic hybrid systems that resist complete formalization while delivering economic function. These nodes illustrate the global resonance of fusion mechanisms, in which formal rules and digital-mediated informal practices coexist and adaptively respond to market and social pressures.

Effective alignment between online engagement and institutional responsiveness drives resilience, whereas misalignment or fragility in formal institutions fosters dysfunction (Helmke & Levitsky, 2004; Jack & Suri, 2011; Wood et al., 2019).

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