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Startups in the Shadows: Compliance, Licensing, and Capital Challenges for Fintech in KP

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Abstract

This study examines the regulatory barriers affecting fintech adoption in Khyber Pakhtunkhwa (KP), Pakistan, using a qualitative, Interpretivist approach. Semi-structured interviews with fintech founders and executives, along with officials from the State Bank of Pakistan (SBP) and the Securities and Exchange Commission of Pakistan (SECP), were triangulated with document analysis of regulatory texts and policy reports. The findings highlight systemic barriers, including prohibitive licensing thresholds, disproportionate compliance costs, regulatory ambiguity around emerging technologies, and weak institutional presence in KP. While regulations such as the Electronic Money Institution (EMI) framework were designed to ensure financial stability, their centralized and rigid application disproportionately disadvantages early-stage fintech in peripheral regions. Compliance burdens, particularly anti-money laundering (AML) and know-your-customer (KYC) mandates, were found to consume a large share of operational budgets, with no tiered or phased models available. Additionally, unclear regulatory positions on blockchain, crypto currency, and decentralized finance (DeFi) deter innovation, while limited regional engagement exacerbates KP's marginalization within Pakistan's fintech ecosystem. The discussion integrates institutional theory and regulatory scholarship to demonstrate a misalignment between regulatory intent and practice, leading to a two-tier fintech environment. The study concludes that proportionate, region-sensitive, and phased regulatory frameworks, combined with clearer guidance on emerging technologies, are essential for inclusive fintech growth. Future research should further explore comparative regulatory models and the role of regional ecosystems in driving financial inclusion.

Keywords: Fintech adoption, regulatory barriers, compliance costs, licensing requirements, regulatory ambiguity, financial inclusion

1. Introduction

Financial technology (fintech) is transforming financial systems worldwide, offering innovative solutions that increase efficiency, accessibility, and transparency (Arner et al., 2016; Zetzsche et al., 2020). Beyond merely digitizing traditional banking services, fintech is reshaping how financial products are conceived, delivered, and consumed. Globally, innovations such as mobile wallets, digital payments, peer-to-peer lending, and blockchain-based applications have expanded access to financial services, particularly for populations historically excluded from formal banking systems (Demirgüç-Kunt et al., 2018; Ozili, 2018). By lowering transaction costs, enabling real-time payments, and providing user-centric solutions, fintech fosters economic participation and promotes financial literacy. Developing countries, in particular, stand to gain from these advancements, as fintech offers a means to overcome infrastructural and geographic limitations that have traditionally restricted access to formal financial services, thereby addressing long-standing inequities in financial inclusion (Fatima, 2023).

In Pakistan, fintech has emerged as a dynamic but unevenly distributed sector. Regulatory authorities, primarily the State Bank of Pakistan (SBP) and the Securities and Exchange Commission of Pakistan (SECP), have sought to promote digital financial innovation through instruments such as the Electronic Money Institution (EMI) Regulations (2019) and regulatory sandbox frameworks (SBP, 2019; SECP, 2019). These initiatives aim to balance the dual imperatives of systemic stability and market innovation, offering a controlled environment in which new financial products can be tested without jeopardizing the broader financial system. However, the centralized design and uniform application of these policies often fail to consider local economic conditions, infrastructural disparities, and limited investor networks in peripheral regions, inadvertently privileging established urban fintech hubs over emerging provincial ecosystems (Buckley et al., 2018; Rana et al., 2023). As a result, while regulatory frameworks may appear progressive on paper, their practical implementation frequently overlooks contextual realities that are critical to enabling equitable growth.

Khyber Pakhtunkhwa (KP) exemplifies the challenges faced by peripheral regions. While major urban centers such as Karachi, Lahore, and Islamabad host thriving fintech ecosystems supported by investor networks, incubators, and institutional guidance, KP startups encounter multiple barriers. High licensing thresholds, stringent anti-money laundering (AML) and know-your-customer (KYC) compliance requirements, and unclear regulatory positions on emerging technologies such as cryptocurrency and decentralized finance (DeFi) limit both the entry and operational capacity of fintech ventures (Zhang et al., 2023; Fatima, 2023). These structural hurdles are further compounded by limited regional engagement and a weak institutional presence, resulting in delays in regulatory guidance, fewer opportunities for capacity building, and reduced access to formal financial networks. Consequently, fintech startups in KP experience both structural and geographic disadvantages, which impede scalability, constrain innovation, and diminish their potential contribution to broader financial inclusion objectives (Karandaaz, 2024; World Bank, 2022).

Despite a growing body of research on fintech adoption, much of the literature remains concentrated on national trends or urban hubs, providing limited insight into how regulatory frameworks interact with regional contexts (Nadeem, 2021). There is, therefore, a pressing need to examine how specific regulatory provisions, particularly licensing, compliance, and capital requirements, shape the growth trajectories and innovation potential of fintech startups in peripheral provinces like KP. Understanding these dynamics is critical because regional disparities in regulatory support influence not only the inclusivity and reach of digital financial services but also their efficiency, sustainability, and alignment with broader development goals.

This study addresses this gap by investigating the lived experiences of fintech entrepreneurs in KP, complemented by perspectives from regulatory officials at SBP and SECP. It explores how regulatory barriers, ranging from high entry thresholds and compliance burdens to ambiguity in emerging technologies and centralized oversight, affect fintech adoption, scalability, and financial inclusion. By situating the analysis in KP, the research provides a nuanced regional lens, highlighting the disconnect between national policy intent and local implementation realities. Through this lens, the study contributes to the scholarly discourse on fintech regulation in emerging economies and offers evidence-based insights for designing inclusive, context-sensitive policies capable of fostering equitable fintech growth across diverse regional landscapes

2. Literature Review

This study employs a narrative, thematic literature review approach to analyze the evolving landscape of financial technology (fintech) and its regulation, with a specific focus on regional disparities in adoption and governance. The purpose of this review is twofold: first, to situate the research within the broader body of existing scholarship on fintech, regulation, and financial inclusion, and second, to identify specific gaps in the literature that justify the current investigation into fintech adoption in Khyber

Pakhtunkhwa (KP), Pakistan. By drawing on diverse sources, the review synthesizes findings across global, regional, and national levels, while critically evaluating the challenges faced by fintech ecosystems in emerging economies. The analysis is structured thematically around three interconnected areas: fintech and financial inclusion, regulatory frameworks and challenges in emerging economies, and regional disparities with a specific focus on the case of Pakistan.

- **Fintech and Financial Inclusion**

The relationship between fintech and financial inclusion has been the central focus of a growing body of research. Globally, fintech innovations, particularly mobile payments, digital wallets, peer-to-peer lending, and blockchain applications, have been heralded as mechanisms for improving financial access for underserved populations. Scholars argue that fintech reduces transaction costs, increases accessibility, and promotes efficiency in financial systems that are often exclusionary (Ozili, 2018). For developing countries, this potential is especially significant, as traditional banking infrastructure tends to be inadequate in rural or low-income areas (Demirgüç-Kunt et al., 2018). Mobile money solutions in Sub-Saharan Africa, such as M-Pesa, are frequently cited as emblematic cases of fintech enabling large-scale financial inclusion (Jack & Suri, 2011). Despite these advances, challenges remain. Studies highlight persistent barriers related to digital literacy, uneven technological infrastructure, and affordability (Sarma & Pais, 2011; Gabor & Brooks, 2017). Moreover, while fintech expands access, it does not automatically ensure equitable use or meaningful inclusion, as marginalized groups may still be excluded due to structural inequalities (Arner et al., 2020). This underscores the importance of evaluating fintech adoption not simply in terms of technological availability but also in relation to the regulatory and institutional contexts that shape its outcomes.

- **Regulatory Frameworks and Challenges in Emerging Economies**

The regulatory environment is widely acknowledged as one of the most significant determinants of fintech success or failure in emerging economies. Scholars emphasize that financial regulation, particularly in contexts with fragile institutions, tends to lag behind technological innovation, creating both risks and opportunities (Zetzsche et al., 2020). On one hand, poorly designed regulations can stifle innovation by imposing disproportionately high barriers to entry for startups (Philippon, 2016). On the other hand, the absence of regulatory clarity can increase uncertainty, discourage investment, and expose consumers to fraud or systemic risks (Bains, 2020). In many developing economies, regulators struggle to strike a balance between enabling innovation and ensuring consumer protection. Research suggests that key regulatory bottlenecks typically fall into three categories: licensing requirements, compliance obligations (such as AML/KYC rules), and capital thresholds (Buckley et al., 2019). For instance, restrictive licensing regimes often favor established players, leaving fintech startups at a disadvantage. Similarly, stringent compliance obligations, while necessary for safeguarding against financial crime, may disproportionately burden small firms that lack the resources of larger incumbents. High capital requirements further exacerbate these inequalities, effectively narrowing the range of potential entrants into the fintech sector (Zavolokina et al., 2016).

Another critical issue is regulatory ambiguity in emerging technologies such as crypto currencies and decentralized finance (DeFi). While some countries have introduced sandboxes and pilot programs to encourage experimentation, others have adopted more restrictive approaches, creating uncertainty for fintech entrepreneurs (Arner et al., 2017). This tension between innovation and control reflects broader debates about the role of the state in managing technological disruption. In contexts where legal frameworks are either absent or inconsistently applied, fintech adoption is often fragmented and localized rather than systemic.

- **Regional Disparities and the Case of Pakistan**

Although global and comparative studies provide valuable insights, the literature on fintech adoption remains limited in addressing regional disparities within countries, particularly in developing contexts. In Pakistan, fintech has received significant attention in urban hubs such as Karachi, Lahore, and Islamabad, where regulatory institutions, financial infrastructure, and entrepreneurial ecosystems are more developed (SBP, 2020). However, much less is known about adoption in peripheral regions such as Khyber Pakhtunkhwa (KP).

Research highlights that regional disparities are shaped by a combination of structural, institutional, and cultural factors (World Bank, 2019). In KP, financial access remains constrained by lower levels of banking penetration, infrastructural challenges, and a reliance on informal economic practices (Ahmed & Naveed, 2021). Moreover, regulatory outreach by national bodies such as the State Bank of Pakistan (SBP) and the Securities and Exchange Commission of Pakistan (SECP) is often concentrated in major cities, leaving peripheral regions underserved (KPMG, 2021). This uneven distribution of regulatory support raises concerns about the inclusivity and scalability of fintech adoption across Pakistan.

Existing literature further suggests that regulatory barriers are not experienced uniformly but interact with local contexts in ways that amplify or mitigate their effects. For example, while high capital requirements are a nationwide challenge, their impact is more severe in regions with limited investor networks and weak institutional capacity, such as KP. Similarly, compliance obligations and legal ambiguities around emerging technologies can disproportionately affect smaller markets, where firms lack direct channels of communication with regulators (Nadeem, 2022). These observations point to a critical gap in current scholarship: although fintech has been studied at the national level in Pakistan, there is little empirical research that examines how regulatory structures play out at the provincial or regional level, particularly in KP.

The literature highlights fintech's potential for financial inclusion, the central role of regulatory frameworks in enabling or constraining growth, and the importance of contextual factors in shaping outcomes. However, there are notable gaps. First, much of the existing research has focused on global success stories or urban fintech hubs, with limited attention to peripheral regions. Second, studies often analyze regulation in abstract terms without considering how specific mechanisms, such as licensing requirements, compliance obligations, capital thresholds, and regulatory outreach, affect adoption in localized contexts. Third, there is insufficient exploration of how legal clarity, particularly in emerging domains like crypto and DeFi, influences innovation in underdeveloped ecosystems.

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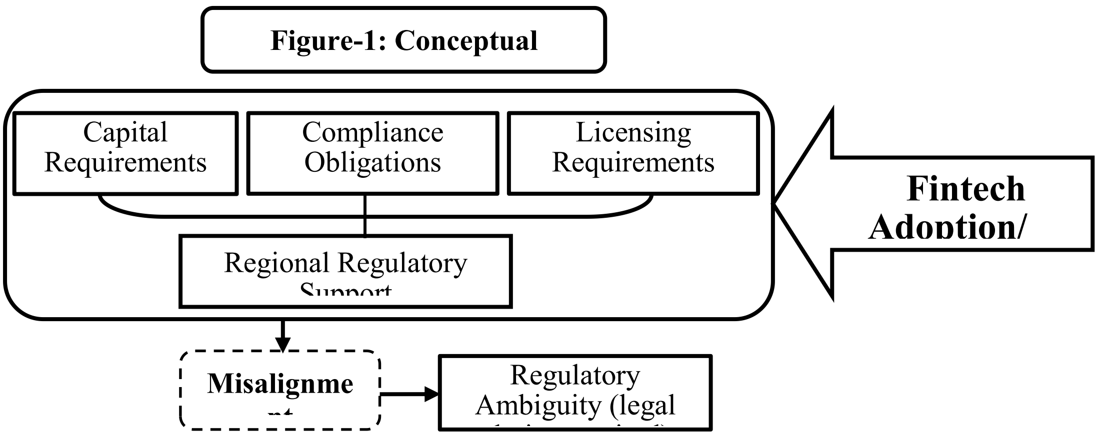
Collectively, these gaps underscore the need for research that situates fintech adoption within the specific regulatory and institutional dynamics of KP.

2.1. Conceptual Framework and Hypotheses

The conceptual framework provides an interpretive lens that integrates insights from the literature and directs the qualitative inquiry. Rather than presenting measurable variables, it emphasizes the relationships between regulatory barriers, institutional contexts, and fintech adoption in Khyber Pakhtunkhwa (KP). Key elements such as capital requirements, compliance obligations, licensing processes, legal clarity, and regional regulatory support are viewed as shaping the lived experiences of fintech startups in this peripheral region.

The framework serves two purposes: it offers a structured way to interpret the perspectives of fintech entrepreneurs, regulators, and stakeholders, and it aligns directly with the research questions, ensuring data collection and analysis remain anchored in the regulatory challenges and contextual realities identified in the literature. The focus is on exploration and explanation of the regulatory–fintech nexus in KP rather than prediction or hypothesis testing.



The framework is grounded in regulatory theory, which explains how policies impose entry barriers, compliance standards, and oversight mechanisms that determine market participation (Baldwin et al., 2012). It is complemented by economic constraint theory, which highlights how financial and institutional hurdles limit entrepreneurial scalability in resource-constrained environments (Schumpeter, 1934; Acs & Audretsch, 2003). Together, these perspectives explain how systemic regulatory and financial constraints restrict fintech growth in KP. By combining global insights on fintech regulation with these theoretical foundations, the framework clarifies how structural barriers interact with contextual moderators, such as institutional capacity, regional disparities, and legal clarity, to shape fintech adoption. It thus guides the empirical inquiry and positions the study within broader debates on regulation, entrepreneurship, and financial innovation.

Table-1: Alignment of Objectives and Research Questions

Research Objectives	Research Questions
1. To examine the provisions in SBP and SECP frameworks that create barriers for fintech startups in KP.	RQ1: What provisions in SBP and SECP frameworks create barriers to entry for fintech startups in KP?
2. To analyze the impact of compliance costs, licensing requirements, and regulatory ambiguity on fintech scalability.	RQ2: How do compliance costs, licensing requirements, and regulatory ambiguity affect the scalability of fintech ventures in KP?
3. To explore how regulatory challenges uniquely affect fintech startups in KP compared to other provinces.	RQ3: How do these challenges disproportionately affect early-stage fintechs in KP compared to other provinces?

3. Research Methodology

This study investigates regulatory barriers to fintech adoption in Khyber Pakhtunkhwa (KP), Pakistan, using a qualitative, interpretivist approach. The design was chosen to capture the lived experiences of fintech founders and executives alongside insights from officials at the State Bank of Pakistan (SBP) and the Securities and Exchange Commission of Pakistan (SECP). Using purposive sampling, 12 participants (8 fintech stakeholders and 4 regulators) were selected for their direct involvement in fintech operations or oversight, ensuring both entrepreneurial and institutional perspectives were represented.

Primary data were collected through semi-structured interviews, complemented by document analysis of SBP and SECP regulations, national policy reports, and financial inclusion studies. Interviews explored licensing requirements, compliance obligations, capital constraints, regulatory ambiguity, and regional disparities, while documents provided policy context. Data were analyzed thematically: interview transcripts were inductively coded to identify patterns aligned with the study's objectives and questions. Triangulating interviews and documents revealed gaps between regulatory intent and practice, clarifying how institutional and structural barriers affect fintech adoption in KP.

The analysis integrates both data types to examine the interaction between regulatory frameworks and stakeholder experiences. Secondary sources, regulatory texts, policy reports, and industry studies from SBP, SECP, Karandaaz, and the World Bank, illuminated the policy environment and financial inclusion dynamics. Interviews provided grounded accounts of how regulations are interpreted and applied in practice. Together, the findings point to core constraints: high licensing thresholds, costly compliance requirements, regulatory ambiguity around emerging technologies, and weak institutional presence in KP.

4. Results

The study examined how regulation shapes fintech adoption in KP, focusing on licensing, compliance, capital requirements, regulatory ambiguity, regional disparities, and inclusion dynamics. Insights from documents and interviews combine to provide a layered understanding of how regulatory frameworks both enable and constrain fintech development in the region.

- **Licensing Barriers and Capital Requirements**

Secondary analysis of the Electronic Money Institution (EMI) Regulations (2019) revealed the minimum paid-up capital requirement of PKR 200 million. While regulators defend this as a safeguard for financial stability, fintech founders consistently perceived it as prohibitive.

Seven out of eight founders raised this issue, often in strong terms. For instance, F1 described it as "an impossible wall, no one in KP has access to that kind of venture funding." Another (F4) stated: "We cannot even apply unless we already have what only established players can raise. It feels like a policy for banks, not startups."

Regulators acknowledged the difficulty but framed it differently. R1 emphasized: "We must prioritize stability over speed. If we lower thresholds too much, the risk to consumers increases." This highlights the tension between regulatory prudence and entrepreneurial feasibility.

Table-2: Licensing and Capital Barriers

Source	**Key Insight**
Secondary data	PKR 200M capital required; licensing centralized
Founders (n=8)	7 reported licensing delays; 6 cited unaffordable capital
Regulators	Framed threshold as stability safeguard

Together, these findings answer the first research question: licensing structures disadvantage KP fintechs by combining high entry thresholds with centralized procedures.

- **Compliance Burdens**

All founders cited compliance, particularly AML/KYC protocols, as a persistent drain on resources. F6 explained: "We spend more on compliance staff than on innovation. For a small startup, that kills creativity." Another (F2) quantified the strain: "Forty percent of our monthly operating costs go into compliance, PKR 800,000 that should be going into development."

Secondary documents confirmed uniform nationwide compliance requirements, with no phased or tiered system. Regulators were aware of this disproportionate impact. R2 admitted: "We know compliance is heavy for startups, but our mandate is system integrity. We cannot compromise on AML."

Table-3: Compliance Burdens

Source	**Insight**
Secondary data	AML/KYC applied uniformly nationwide
Founders	8/8 cited costs as unsustainable
Regulators	Acknowledged burden but defended uniformity

This evidence directly addresses the second research question by showing how compliance frameworks, while technically neutral, produce inequitable burdens for smaller firms.

- **Ambiguity in Emerging Technologies**

The regulatory stance on emerging technologies, particularly blockchain and crypto, is one of uncertainty. Secondary texts revealed no binding legal frameworks, only cautionary advisories.

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Three KP fintechs had experimented with blockchain pilots but abandoned them due to lack of clarity. F7 explained: "We tried a blockchain remittance tool, but investors pulled back when they saw there was no legal cover." Similarly, F3 described the environment as "a regulatory black hole, too risky to innovate in."

Regulators confirmed this cautious position. R3 noted: "Crypto is unstable; we prefer sandbox models for safer innovation." This ambiguity discourages firms from exploring transformative technologies, leaving KP fintechs in follower positions rather than leaders.

- **Regional Disparities in Regulatory Support**

Both documents and interviews highlighted the urban bias of regulatory engagement. Capacity-building initiatives and regulatory offices are concentrated in Karachi and Lahore, leaving KP without direct institutional presence.

All eight founders described this as a major barrier. F5 remarked: "If you're not in Karachi, you don't exist for them. We wait months for simple queries." F8 echoed: "Our emails go unanswered, unless you have a contact in Islamabad."

Regulators did not deny this gap. R4 conceded: "Our presence outside major cities is limited. It's a resource issue, not neglect, but it does create bottlenecks."

Table-4: Regional Disparities

Source	Insight
Secondary data	Engagement concentrated in Karachi/Lahore
Founders	8/8 reported lack of visibility, delayed responses
Regulators	Acknowledged limited KP presence

This finding responds to the third research question by showing that centralization of regulatory support structurally sidelines KP fintechs.

- **Inclusion Dynamics**

Financial inclusion in KP has improved, with rates rising from 5% in 2014 to 29% in 2024 (World Bank; Karandaaz data). Yet gender and regional gaps remain severe.

Female financial inclusion remains at 14%. F2 stressed: "Half the population is women, but regulations don't push inclusion hard enough. We can't innovate around these gaps without flexibility." Another (F6) noted: "The demand is real, people want mobile wallets, even in rural KP, but regulations keep us from scaling."

Regulators, however, pointed to national inclusion initiatives, with R1 noting: "Our policy framework is already inclusion-oriented. The challenge is execution in regions like KP." This highlights the misalignment between policy intent and lived experience.

The triangulated findings reveal a consistent pattern: regulations designed for uniformity and stability systematically disadvantage fintechs in KP.

Table-5: Triangulated Insights

Theme	Secondary Data	Primary Data (Quotes)	Interpretation
Licensing	PKR 200M capital; centralized	"An impossible wall" (F1)	Structural exclusion of startups
Compliance	Uniform AML/KYC	"We spend more on compliance than innovation" (F6)	Disproportionate burden on small firms
Emerging Tech	No formal policy	"A regulatory black hole" (F3)	Innovation blocked by uncertainty
Regional Support	Urban focus	"If you're not in Karachi, you don't exist" (F5)	Centralization sidelines KP
Inclusion	Rising but uneven	"Half the population is women, but…" (F2)	Policy intent vs. ground realities

The results demonstrate that KP fintech firms face structural exclusion: high entry thresholds and compliance burdens on one side, limited regulatory support and policy ambiguity on the other. While regulators emphasize stability and system integrity, entrepreneurs describe a system that locks them out before they can innovate. Regional disparities further reinforce this exclusion, undermining financial inclusion goals despite clear market demand.

Thus, fintech adoption in KP is not limited by entrepreneurial capacity but by a regulatory framework that prioritizes uniformity at the expense of equity and regional diversity.

5. Discussion

The findings of this study highlight how regulatory frameworks in Pakistan, while framed as enabling, often create barriers that hinder fintech adoption in peripheral regions such as Khyber Pakhtunkhwa (KP). Licensing emerged as one of the most significant obstacles. The State Bank of Pakistan's requirement of PKR 200 million in paid-up capital for Electronic Money Institution (EMI) licenses reflects a risk-averse institutional logic, but in practice, it excludes startups lacking strong investor networks. This is particularly problematic in KP, where venture capital and angel investment are scarce. As one fintech founder explained, "We simply cannot even think of applying for a license unless we are based in Karachi or backed by an international fund." Such experiences echo the broader literature on institutional rigidity, which emphasizes how globally inspired regulatory thresholds often fail to accommodate local entrepreneurial ecosystems (Fatima, 2023; Arner et al., 2016).

Compliance obligations present another significant challenge. While anti-money laundering (AML) and know-your-customer (KYC) requirements are intended to safeguard financial systems, the uniformity with which they are applied disproportionately burdens smaller firms. Participants noted that compliance costs consumed up to 40% of their operating budgets, leaving little room for innovation. A founder from Peshawar described the rules as "copy-pasted from big banks, not written for startups like us." Similar patterns have been documented in other emerging markets, where one-size-fits-all compliance frameworks reinforce incumbent advantages while stifling smaller players (Zhang et al., 2023; Buckley et al., 2018). This dynamic aligns with resource-dependence theory, which posits that organizations with fewer resources are most vulnerable to externally imposed demands.

Equally important is the regulatory ambiguity surrounding new technologies such as blockchain, cryptocurrency, and decentralized finance. The interviews revealed that at least three startups had shelved blockchain pilots out of fear of non-compliance and potential banking exclusion. A regulatory official admitted that "we know these technologies are the future, but the institution is not ready to take a position." This regulatory "black hole" discourages experimentation and mirrors findings in other developing-country contexts, where institutional voids constrain technological innovation (Khanna & Palepu, 2010; Rana et al., 2023).

Regional disparities emerged as a unique dimension in this study, distinguishing KP from more studied ecosystems in Karachi and Lahore. All founders interviewed agreed that there was little to no direct regulatory engagement in KP, which they perceived as evidence of geographic bias. One participant observed, "When SECP holds a workshop, it's always in Karachi or Islamabad; KP is invisible to them." This finding highlights a form of "regulatory distance" where formal rules exist but their implementation bypasses peripheral regions. The centralization of institutional support, coupled with limited local outreach, entrenches unequal opportunities for fintech growth across Pakistan.

Another theme concerns the interplay of regulatory frameworks with trust, literacy, and market readiness. While policy discourse often assumes latent demand for digital finance, participants emphasized that digital literacy in KP remains low, particularly among women. With female financial inclusion at only 14% in the province (K-FIS, 2024), the potential for fintech to close gaps is significant. Yet, regulatory frameworks remain silent on trust-building measures and literacy initiatives. This disconnect between market realities and policy priorities undermines financial inclusion goals and reflects what Lipsky (1980) describes as the "delivery gap" between institutional intent and ground-level outcomes.

Taken together, these findings suggest that fintech in KP operates within a two-tiered system: nationally, regulations are presented as progressive and innovation-friendly, but regionally, they are experienced as exclusionary and burdensome. The literature confirms this pattern in other developing contexts, where regulatory ambition often collides with institutional conservatism and structural centralization (Arner et al., 2016; Buckley et al., 2018). The combination of high entry thresholds, uniform compliance burdens, regulatory ambiguity, and geographic centralization creates a multi-layered exclusionary environment that limits KP's fintech potential.

6. Future Research Directions

Building on these insights, several directions for future research emerge. First, comparative studies across Pakistan's provinces could reveal how fintech ecosystems vary under the same national regulatory framework, shedding light on why KP remains disproportionately constrained. Second, given the sharp gender gap in financial inclusion, further inquiry into how fintech can empower women under current regulatory structures would extend both theoretical and policy debates. Third, focused evaluations of SECP's regulatory sandbox could clarify whether such tools are genuinely accessible to startups outside major urban centers. Fourth, institutional ethnographies of SBP and SECP could uncover how bureaucratic cultures and organizational logics shape regulatory behavior. Finally, consumer-side research in KP, particularly on trust and digital literacy, would complement supply-side insights and highlight adoption challenges from the user's perspective.

7. Conclusion

This research demonstrates that while Pakistan's fintech regulatory frameworks are formally designed to balance stability and innovation, their implementation systematically disadvantages peripheral regions such as Khyber Pakhtunkhwa. Licensing thresholds, compliance obligations, and regulatory ambiguity function as exclusionary mechanisms, while geographic centralization and weak institutional presence further entrench disparities. The triangulation of interviews and document analysis revealed that fintech founders in KP experience the regulatory system not as enabling but as restrictive, reinforcing incumbency and stifling regional innovation.

The study contributes to fintech regulation literature by foregrounding the regional dimension of institutional barriers, an aspect often overlooked in national-level analyses. It suggests that equitable fintech development requires proportionate licensing models, tiered compliance obligations, clear guidance on emerging technologies, and decentralization of regulatory engagement. Without such reforms, KP's fintech ecosystem risks remaining marginalized, undermining both financial inclusion and innovation potential.

By integrating participant narratives with institutional theory and policy analysis, this research underscores that regulatory barriers are not simply technical challenges but structural and contextual issues. Enabling fintech adoption in KP, and by extension in other peripheral regions, requires not only better policies but also their equitable and regionally responsive implementation.

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