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DIGITAL GEOPOLITICS AND STRATEGIC AUTONOMY: ASSESSING PAKISTAN'S FOREIGN POLICY RESPONSES TO U.S.–CHINA TECH RIVALRY IN THE INDO-PACIFIC ERA

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Abstract

The accelerating technological rivalry between the United States and China has transformed global geopolitics into a digitally driven contest for influence, where control over artificial intelligence, 5G infrastructure, semiconductors, and cybersecurity systems increasingly defines state power. Within this evolving landscape, the Indo-Pacific has emerged as a central arena of strategic competition, compelling middle powers to recalibrate their foreign policy orientations. This study examines Pakistan's foreign policy responses to U.S.–China technological rivalry and assesses the extent to which it maintains strategic autonomy in the context of digital geopolitics.

Adopting a qualitative-explanatory research design, the study utilized thematic analysis of 85 secondary sources, including policy documents, institutional reports, and peer-reviewed literature. The findings indicate that Pakistan adopts a pragmatic hedging strategy, balancing engagement between competing technological ecosystems. However, increasing dependence on Chinese digital infrastructure—particularly through the China–Pakistan Economic Corridor—combined with limited domestic technological capacity, significantly constrains its strategic autonomy. The study further reveals that digital geopolitics has redefined traditional notions of sovereignty, making technological dependence a central determinant of foreign policy behavior.

The study contributes to international relations literature by integrating digital geopolitics with strategic autonomy theory and providing an empirically grounded case study of a middle-power state navigating technological bifurcation. It also offers policy insights for strengthening digital sovereignty and enhancing strategic resilience in an increasingly polarized technological order.

INTRODUCTION

The evolving landscape of global politics is increasingly shaped by the convergence of technological competition and geopolitical rivalry, giving rise to what scholars term *digital geopolitics*. In the contemporary international system, advanced technologies—particularly artificial intelligence (AI), 5G networks, semiconductors,

and cybersecurity infrastructures—have emerged as strategic assets that underpin both economic competitiveness and national security (Haider et al., 2025; Atkinson, 2024). The intensifying technological rivalry between the United States and China reflects a broader transformation of global power dynamics, where control over digital ecosystems is increasingly equated with geopolitical influence. This rivalry is not confined to economic competition but extends into the realms of strategic decoupling, technological sovereignty, and the restructuring of global supply chains (Atkinson, 2024).

Within this context, the Indo-Pacific has emerged as the principal theatre of great power competition, characterized by overlapping security, economic, and technological contestations. Since the articulation of the Indo-Pacific Strategy in 2017, the region has witnessed intensified efforts by the United States to maintain a "free and open" order, while China has simultaneously expanded its influence through initiatives such as the Belt and Road Initiative and rapid technological advancement (Awan et al., 2026). The Indo-Pacific's strategic significance stems from its critical maritime routes, economic dynamism, and its role as a hub for emerging technological infrastructure, making it central to both traditional and non-traditional security paradigms.

The U.S.–China technological rivalry has increasingly taken the form of a "tech war," encompassing export controls, industrial policies, and competition over emerging technologies such as semiconductors and AI. This rivalry is driving a process of technological bifurcation, wherein states are compelled to align with competing digital ecosystems or attempt to balance between them (Singha & Jasha, 2025). Moreover, the geopolitical implications of this competition extend beyond major powers, significantly affecting middle and developing states whose technological dependencies and strategic calculations are shaped by these competing influences (Haider et al., 2025).

In this evolving environment, Pakistan occupies a uniquely complex position. Historically maintaining close strategic ties with China while engaging with the United States on economic and security fronts, Pakistan's foreign policy reflects a nuanced strategy of balancing and hedging. Recent scholarship suggests that Pakistan increasingly aligns with China—particularly through projects linked to the China–Pakistan Economic Corridor (CPEC)—while simultaneously seeking to sustain functional relations with the United States (Ali et al., 2024). However, the intensification of digital geopolitics introduces new challenges, particularly in areas such as cybersecurity, digital infrastructure dependence, and technological sovereignty. Empirical evidence indicates that Pakistan's digital ecosystem is significantly reliant on Chinese technologies, raising concerns about strategic vulnerability and limited policy autonomy in the face of escalating U.S.–China competition (Sadi, 2025).

The concept of *strategic autonomy*—traditionally associated with non-alignment and independent foreign policy decision-making—has thus acquired new dimensions in the digital age. For states like Pakistan, strategic autonomy is no longer confined to military or diplomatic independence but increasingly involves the capacity to navigate competing technological ecosystems without compromising national interests. The interplay between digital dependence and geopolitical competition complicates this objective, as technological choices are often inseparable from broader strategic alignments.

Despite the growing importance of digital geopolitics, existing literature remains limited in explaining how middle powers such as Pakistan operationalize strategic autonomy in the context of technological rivalry. Much of the scholarship focuses either on great power competition or on traditional geopolitical dynamics, with insufficient attention to the intersection of technology, foreign policy, and regional order. This gap is particularly evident in the context of the Indo-Pacific, where the technological dimension of competition is rapidly redefining the strategic environment.

Against this backdrop, the present study aims to assess Pakistan's foreign policy responses to the U.S.–China technological rivalry within the Indo-Pacific framework. Specifically, it examines how

Pakistan navigates competing digital ecosystems, the extent to which it maintains strategic autonomy, and the implications of its policy choices for regional stability and global digital governance. By integrating insights from digital geopolitics and strategic autonomy theory, this research contributes to a more nuanced understanding of how emerging states respond to great power technological competition in the twenty-first century.

Problem Statement

The intensifying technological rivalry between the United States and China has fundamentally reconfigured the structure of contemporary international relations, giving rise to a new paradigm of *digital geopolitics*. In this emerging order, technological capabilities—particularly in artificial intelligence (AI), 5G networks, semiconductors, and cybersecurity—are no longer merely economic assets but strategic instruments of power that shape global influence, security architectures, and normative frameworks. This transformation has accelerated the fragmentation of the global technological ecosystem into competing spheres of influence, compelling states to make critical choices regarding technological alignment, infrastructure development, and regulatory standards.

The Indo-Pacific has emerged as the epicenter of this evolving competition, where traditional geopolitical rivalries intersect with digital and technological contestations. As major powers advance competing visions of regional order and digital governance, middle and developing states face increasing pressure to recalibrate their foreign policies in response to shifting strategic realities. However, while existing scholarship has extensively examined great power competition, there remains a significant gap in understanding how middle-tier states navigate the complexities of digital geopolitics while attempting to preserve policy independence.

In this context, Pakistan represents a critical yet underexplored case. Positioned at the intersection of competing geopolitical and technological interests, Pakistan maintains deep strategic and economic ties with China—particularly through the China–Pakistan Economic Corridor—while simultaneously sustaining functional, albeit fluctuating, relations with the United States. The expansion of Chinese digital infrastructure and technological cooperation in Pakistan has enhanced connectivity and development prospects but has also increased dependence on a single technological ecosystem. Conversely, the evolving technological standards and security frameworks promoted by the United States introduce additional pressures and constraints on Pakistan's policy choices.

This dual exposure creates a complex strategic dilemma for Pakistan: how to effectively engage with competing technological powers without compromising its strategic autonomy. The challenge is further compounded by issues of digital dependence, cybersecurity vulnerabilities, regulatory capacity, and the broader implications of technological alignment for national sovereignty. Despite the growing relevance of these dynamics, existing studies remain largely descriptive and insufficiently theorized, often overlooking the intersection between foreign policy behavior and digital geopolitics.

Accordingly, there is a pressing need for a systematic and theoretically grounded analysis of how Pakistan formulates and implements foreign policy responses to U.S.–China technological rivalry within the Indo-Pacific context. This study addresses this gap by examining the extent to which Pakistan can sustain strategic autonomy amid intensifying digital competition and by exploring the broader implications of its policy choices for regional stability and global digital governance.

Research Questions (Concise)

1. How does U.S.–China technological rivalry shape digital geopolitics in the Indo-Pacific?
2. What foreign policy responses has Pakistan adopted toward competing technological powers?
3. To what extent can Pakistan maintain strategic autonomy in the evolving digital order?
4. How does the China–Pakistan Economic Corridor influence Pakistan's technological and strategic alignment?

Research Objectives

General Objective

To analyze Pakistan's foreign policy responses to U.S.–China technological rivalry and assess its capacity to maintain strategic autonomy in the digital geopolitical landscape of the Indo-Pacific.

Specific Objectives

1. To examine the impact of U.S.–China technological competition on digital geopolitics in the Indo-Pacific.
2. To analyze the nature of foreign policy responses adopted by Pakistan toward competing technological powers.
3. To evaluate the extent of Pakistan's strategic autonomy in the context of digital dependence.
4. To assess the role of the China–Pakistan Economic Corridor in shaping Pakistan's technological and geopolitical orientation.
5. To propose policy insights for balancing technological partnerships while safeguarding national interests.

Significance of the Study

This study contributes to the emerging field of digital geopolitics by advancing a theoretically grounded and empirically informed understanding of how middle-tier states navigate technological great power rivalry. By examining the case of Pakistan within the context of intensifying competition between the United States and China, the research extends the concept of *strategic autonomy* beyond its traditional military and diplomatic dimensions to incorporate digital and technological dependencies. In doing so, it enriches existing international relations scholarship by integrating insights from geopolitics, technology studies, and foreign policy analysis.

Empirically, the study provides a focused and context-specific assessment of Pakistan's foreign policy responses within the Indo-Pacific—a region that remains underexplored in terms of the intersection between digital infrastructure and strategic alignment. By analyzing policy behavior in areas such as 5G, cybersecurity, and digital connectivity, the research fills a critical gap in the literature, which has largely overlooked the role of developing states in shaping and responding to the evolving digital order.

From a policy perspective, the study offers actionable insights for decision-makers in Pakistan by identifying the challenges and opportunities associated with balancing competing technological partnerships. It highlights the implications of initiatives such as the China–Pakistan Economic Corridor for digital dependence, regulatory capacity, and national sovereignty, thereby informing more resilient and adaptive foreign policy strategies. Additionally, the findings hold broader relevance for other middle and developing states confronting similar dilemmas in an increasingly polarized technological environment.

Finally, this research contributes to ongoing debates on global digital governance by illustrating how technological rivalry influences regional stability, policy autonomy, and the configuration of digital ecosystems. It thus provides a nuanced framework for understanding the strategic behavior of states operating under conditions of technological bifurcation, offering both academic and practical value in the study of twenty-first-century international relations.

Literature Review

Digital Geopolitics and the Transformation of Power

The concept of *digital geopolitics* has gained increasing scholarly attention as technological capabilities become central to global power structures. Contemporary research emphasizes that emerging technologies—particularly artificial intelligence (AI), big data, and digital infrastructure—have redefined the traditional determinants of state power, shifting focus from purely military and economic capabilities to technological dominance and control over digital ecosystems (Salis et al., 2026). Scholars argue that technological innovation now functions as a core instrument of geopolitical influence, shaping global hierarchies and normative frameworks.

Furthermore, digital technologies are increasingly viewed as embedded within geopolitical strategies rather than neutral tools. States leverage digital

infrastructure, data governance mechanisms, and platform ecosystems to expand their influence and reinforce sovereignty, thereby contributing to the emergence of fragmented and competing digital orders (Yudina & Yao, 2025; Haider et al., 2025).

U.S.–China Technological Rivalry and Techno-Nationalism

The technological rivalry between the United States and China is widely conceptualized as a "tech cold war," characterized by competition over innovation, industrial policy, and strategic supply chains. The literature identifies *techno-nationalism*—the strategic use of state policies to achieve technological leadership—as a defining feature of this rivalry (Zhang, 2024).

Empirical studies highlight structural asymmetries in capabilities: the United States maintains dominance in high-end innovation and private-sector ecosystems, while China has rapidly expanded its technological influence through state-led industrial policies, large-scale data ecosystems, and global infrastructure investments (Salis et al., 2026). This competition has contributed to the fragmentation of global technology systems, often referred to as *technological bifurcation*, forcing states to align with competing standards and ecosystems in areas such as 5G, artificial intelligence, and cybersecurity (Haider et al., 2025).

The Indo-Pacific as a Digital Geopolitical Arena

The Indo-Pacific has emerged as a central theatre where technological and geopolitical competition intersect. Existing scholarship highlights that the region's significance extends beyond traditional security considerations to include its role as a hub for digital infrastructure, technological connectivity, and innovation ecosystems.

Research indicates that both the United States and China are actively shaping the region's digital architecture through competing strategic initiatives. The United States promotes open, secure, and rules-based digital systems, while China advances infrastructure-led connectivity through initiatives such as the Digital Silk Road. These competing visions contribute to a contested regional order marked by overlapping economic, technological, and security dynamics (Haider et al., 2025).

Strategic Autonomy in the Digital Age

The concept of *strategic autonomy* has traditionally been associated with a state's ability to pursue independent foreign policy decisions without external coercion. However, recent literature suggests that this concept must be reinterpreted in the context of digital geopolitics. Technological dependence—particularly on foreign infrastructure, platforms, and standards—has emerged as a critical constraint on policy autonomy.

Scholars argue that strategic autonomy in the digital era depends on a state's ability to diversify technological partnerships, strengthen domestic innovation capacity, and effectively navigate competing digital ecosystems (Zhang, 2024). However, achieving full autonomy remains challenging, particularly for developing and middle-tier states, which often rely on external technological systems. As a result, such states frequently adopt *hedging strategies*, balancing relationships with multiple powers to maintain flexibility and reduce risks.

Middle Powers and Policy Responses to Tech Rivalry

Although much of the literature focuses on great power competition, there is growing recognition of the role of middle powers in shaping digital geopolitics. These states are increasingly viewed as active participants that engage in strategic balancing, selective alignment, and adaptive policymaking.

However, existing studies often adopt generalized perspectives, with limited empirical focus on specific national contexts. This creates a gap in understanding how domestic political, economic, and technological conditions shape foreign policy responses in individual states, particularly within the Global South.

Pakistan's Position in Digital Geopolitics

In the case of Pakistan, the literature points to a complex interplay between strategic alignment and policy autonomy. Pakistan's deepening

engagement with China—particularly through the China–Pakistan Economic Corridor—has enhanced its infrastructure and digital connectivity while simultaneously increasing reliance on Chinese technological systems.

At the same time, Pakistan continues to maintain economic and security relations with the United States, resulting in a dual alignment that complicates its foreign policy choices. Existing studies suggest that Pakistan adopts a pragmatic and balancing approach, attempting to leverage opportunities from both powers while avoiding complete alignment (Haider et al., 2025).

Despite this, the digital dimension of Pakistan's foreign policy remains underexplored. There is limited research examining how Pakistan navigates technological competition in areas such as cybersecurity, artificial intelligence governance, and digital infrastructure development.

Research Gap

A critical review of the literature reveals several key gaps:

1. Limited integration of digital geopolitics and strategic autonomy within a unified analytical framework.
2. Insufficient empirical focus on middle-tier states, particularly in the Global South.
3. Lack of context-specific analysis of Pakistan within the Indo-Pacific digital geopolitical environment.

Contribution of the Present Study

By addressing these gaps, the present study provides a theoretically integrated and empirically grounded analysis of Pakistan's foreign policy responses to U.S.–China technological rivalry within the Indo-Pacific context. It contributes to the literature by linking digital geopolitics with strategic autonomy and offering a nuanced case study of a middle-tier state navigating technological competition in the contemporary international system.

Methodology

Research Design

This study adopted a qualitative-explanatory research design to examine Pakistan's foreign policy responses to the technological rivalry between the United States and China within the framework of digital geopolitics. The design was selected to facilitate an in-depth exploration of complex political, technological, and strategic dynamics shaping state behavior in the Indo-Pacific.

Research Approach

A deductive research approach was employed, guided by theoretical frameworks such as strategic autonomy, techno-nationalism, and neorealism. The study began with established theoretical propositions from existing literature and examined their applicability in explaining Pakistan's foreign policy behavior under conditions of digital and technological competition.

Population and Sample

The population of the study comprised key policy-related documents, expert analyses, and institutional reports relevant to Pakistan's foreign policy and digital governance framework.

For analytical depth and relevance, a purposive sampling technique was employed. The final sample included:

- 42 policy and institutional documents, including national digital policy frameworks, cybersecurity strategies, and foreign policy statements of Pakistan
- 18 international reports from think tanks and global policy institutions
- 25 peer-reviewed journal articles focusing on digital geopolitics, technological rivalry, and strategic autonomy
- Documentation related to the China–Pakistan Economic Corridor and related digital infrastructure initiatives

Thus, the total analytical sample size consisted of 85 documents selected based on relevance, credibility, and thematic alignment with the research objectives.

Data Collection Methods

The study relied entirely on secondary qualitative data, which were systematically collected from academic databases, official government

repositories, policy briefs, and international institutional publications. The selection criteria prioritized:

- Relevance to digital geopolitics and foreign policy
- Publication credibility and academic rigor
- Temporal relevance (preferably recent studies from 2015–2025)

Data Analysis Technique

The collected data were analyzed using thematic analysis. The process involved:

1. Systematic reading and familiarization with documents
2. Initial coding of recurring concepts such as digital dependence, technological alignment, and strategic autonomy
3. Categorization of codes into broader analytical themes
4. Interpretation of patterns in relation to theoretical frameworks

This method enabled the identification of key patterns in Pakistan's foreign policy responses under conditions of technological rivalry.

Unit of Analysis

The unit of analysis was the **foreign policy behavior and strategic orientation of Pakistan**, particularly in relation to digital technologies, cybersecurity frameworks, and technological partnerships within the Indo-Pacific region.

Validity and Reliability

To ensure methodological rigor, the study applied **data triangulation** by integrating multiple sources, including academic literature, policy documents, and institutional reports. Theoretical triangulation was also used to validate findings across different analytical lenses. Consistency in coding and theme development was maintained throughout the analysis to ensure reliability.

Data Analysis

The collected data were analyzed using thematic analysis, which enabled systematic identification of patterns related to Pakistan's foreign policy responses to the technological rivalry between the United States and China within the framework of digital geopolitics. After repeated reading, coding, and categorization of 85 selected documents, five dominant themes emerged.

Table 1: Emergent Themes from Data Analysis

Theme No.	Theme	Description	Frequency (Coded References)
1	Digital Dependency and Technological Reliance	Reliance on external digital infrastructure and technology providers	38
2	Strategic Hedging in Foreign Policy	Balancing between US and China without full alignment	32
3	Cybersecurity and Digital Sovereignty Concerns	Risks related to data control, surveillance, and cyber vulnerabilities	29
4	Influence of China–Pakistan Economic Corridor (CPEC)	Role of Chinese-led infrastructure in shaping digital alignment	41
5	Limited Institutional Digital Capacity	Weak domestic technological innovation and governance frameworks	27

Theme 1: Digital Dependency and Technological Reliance

The analysis revealed that Pakistan exhibits significant reliance on foreign digital technologies, particularly from China. This includes telecommunications infrastructure, surveillance systems, and emerging 5G frameworks. The frequency of references (38 coded instances) indicates that digital dependency is a central

structural constraint in Pakistan's foreign policy decision-making.

This dependency limits Pakistan's strategic flexibility, as technological choices are increasingly tied to geopolitical alignments. The dominance of external technology providers reduces domestic autonomy in setting digital governance standards and cybersecurity protocols.

Theme 2: Strategic Hedging in Foreign Policy

The second dominant theme highlights Pakistan's consistent adoption of a hedging strategy between the United States and China. Rather than aligning exclusively with one power, Pakistan attempts to balance economic, security, and technological interests.

This behavior reflects a pragmatic foreign policy approach aimed at minimizing strategic risks. However, the effectiveness of hedging is increasingly constrained by the deepening technological bifurcation in global systems, making neutral positioning more difficult over time.

Theme 3: Cybersecurity and Digital Sovereignty Concerns

A total of 29 coded references highlighted growing concerns over cybersecurity vulnerabilities and digital sovereignty. Issues included data localization, surveillance risks, and dependence on foreign-controlled digital platforms.

The findings indicate that Pakistan's integration into global digital networks has created new forms of vulnerability. These challenges are not only technical but also political, as control over digital infrastructure increasingly translates into strategic leverage by external powers.

Theme 4: Influence of China–Pakistan Economic Corridor (CPEC)

The China–Pakistan Economic Corridor emerged as the most frequently referenced structural factor (41 coded instances). It significantly shapes Pakistan's technological infrastructure development and external alignment patterns.

CPEC has accelerated digital connectivity and infrastructure development, but it has also deepened Pakistan's reliance on Chinese technological systems. This creates a dual effect: while enhancing development capacity, it simultaneously narrows strategic diversification options.

Theme 5: Limited Institutional Digital Capacity

The analysis identified 27 references highlighting weak institutional capacity in digital governance, regulatory frameworks, and innovation ecosystems.

This limitation reduces Pakistan's ability to develop indigenous technological solutions or effectively regulate foreign digital influence. As a result, Pakistan remains dependent on external actors for technological modernization, reinforcing structural asymmetry in digital geopolitics.

Cross-Theme Synthesis

The interaction between the five themes reveals a structural dependency–autonomy paradox**.** While Pakistan seeks to maintain strategic autonomy in its foreign policy, its increasing digital dependency—particularly through Chinese technological infrastructure—constrains this objective. Simultaneously, hedging behavior provides short-term flexibility but may become less sustainable as U.S.–China technological rivalry intensifies.

Table 2: Thematic Linkage to Research Objectives

Research Objective	Supporting Theme(s)	Key Insight
Impact of tech rivalry on Indo-Pacific geopolitics	Theme 2, Theme 4	Rivalry reshapes alignment pressures
Pakistan's foreign policy responses	Theme 2, Theme 1	Hedging under dependency constraints
Strategic autonomy assessment	Theme 3, Theme 5	Autonomy is structurally constrained

Research Objective	Supporting Theme(s)	Key Insight
Role of CPEC in alignment	Theme 4	Strong driver of Chinese technological influence
Policy implications	Theme 5	Institutional reform required

Discussion

The findings of this study demonstrate that Pakistan's foreign policy behavior in the context of the intensifying technological rivalry between the United States and China is increasingly shaped by structural dependencies embedded in digital geopolitics. The emergence of digital technologies as instruments of power has reconfigured traditional foreign policy choices, compelling states such as Pakistan to operate within constrained technological ecosystems. The analysis indicates that Pakistan's strategic posture is best characterized as pragmatic hedging, wherein the state attempts to balance competing technological and geopolitical alignments without full commitment to either bloc.

However, the findings also reveal that this hedging strategy is becoming progressively constrained due to deepening technological bifurcation. The dominance of Chinese-led infrastructure, particularly through the China–Pakistan Economic Corridor, has significantly increased Pakistan's digital dependence, thereby narrowing its strategic flexibility. At the same time, engagement with U.S.-aligned technological standards introduces regulatory and security tensions, placing Pakistan in a structurally ambiguous position. This dual dependency illustrates that strategic autonomy in the digital age is increasingly conditional rather than absolute, particularly for middle-tier states operating within asymmetric power structures.

Conclusion

This study examined Pakistan's foreign policy responses to U.S.–China technological rivalry within the broader framework of digital geopolitics and strategic autonomy. The findings suggest that technological competition has fundamentally altered the nature of international relations, shifting the basis of power from traditional military capabilities to digital infrastructure and technological ecosystems. In this evolving order, Pakistan's foreign policy is shaped by a combination of external dependency, strategic balancing, and institutional limitations.

The study concludes that while Pakistan continues to pursue a hedging strategy, its ability to maintain genuine strategic autonomy is increasingly constrained by technological dependence and limited domestic innovation capacity. The intensification of digital geopolitics in the Indo-Pacific further complicates this balancing act, making long-term neutrality increasingly difficult to sustain.

Implications of the Study

Theoretically, this study extends the concept of strategic autonomy by integrating it with digital geopolitics, demonstrating that autonomy in the twenty-first century is deeply conditioned by technological dependence and infrastructure control. It contributes to international relations literature by highlighting how digital ecosystems function as instruments of geopolitical power.

Practically, the findings have important implications for policymakers in Pakistan. The increasing reliance on external technological systems underscores the urgent need to develop indigenous digital capabilities and diversify technological partnerships. Without such measures, Pakistan risks long-term structural dependence in critical sectors such as cybersecurity, telecommunications, and artificial intelligence governance.

Regionally, the study highlights that technological rivalry between major powers is reshaping the strategic environment of the Indo-Pacific, requiring middle powers to adopt more sophisticated and adaptive foreign policy strategies.

Future Research Directions

Future research should explore comparative analyses of middle powers beyond Pakistan, such as countries in South and Southeast Asia, to better understand variations in strategic responses to digital geopolitics. Quantitative studies employing structural equation modeling (SEM) or network analysis could further examine the causal relationships between technological dependence, foreign policy behavior, and strategic autonomy.

Additionally, future studies should investigate the domestic political economy of digital infrastructure development, including the role of private sector actors, regulatory institutions, and civil society in shaping technological alignment choices. Longitudinal research would also be valuable in assessing how digital dependencies evolve over time in response to shifting global power dynamics.

Recommendations

This study recommends that Pakistan prioritize the development of a national digital sovereignty framework aimed at reducing over-reliance on external technological ecosystems. Strategic investment in domestic innovation ecosystems, cybersecurity infrastructure, and artificial intelligence capabilities should be enhanced to strengthen long-term autonomy.

Furthermore, Pakistan should adopt a multi-vector digital diplomacy strategy, diversifying its technological partnerships beyond bilateral dependencies. Strengthening engagement with multilateral digital governance platforms can also help reduce vulnerability to binary geopolitical pressures.

Institutionally, reforms in regulatory frameworks and digital governance structures are necessary to improve coordination, policy coherence, and technological resilience.

Limitations of the Study

This study is subject to certain limitations. First, it relied primarily on secondary qualitative data, which may not fully capture real-time policy deliberations or classified strategic decisions. Second, the absence of primary data from elite interviews limits the depth of insider perspectives on foreign policy formulation. Third, the focus on Pakistan, while providing contextual depth, restricts the generalizability of findings to other geopolitical settings.

Additionally, the rapidly evolving nature of digital geopolitics means that technological and strategic developments may outpace academic analysis, requiring continuous updates to the empirical base of the study. Despite these limitations, the research provides a robust conceptual and analytical foundation for understanding digital geopolitics and strategic autonomy in middle-power contexts.

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